v. *Antibacksliding.* The previous permit did not include effluent limitations for dioxin-TEQ; therefore, antibacksliding requirements are satisfied.

(4) Ammonia

i. *Ammonia WQC.* The Basin Plan contains WQOs for un-ionized ammonia of 0.025 milligrams per liter (mg/L) as an annual median, 0.16 mg/L as a maximum north of the Golden Gate Channel, and 0.4 mg/L as a maximum south of the Golden Gate Channel. The WQOs are translated from un-ionized ammonia objectives to equivalent total ammonia concentrations (as nitrogen), since sampling and lab methods are not available to analyze for un-ionized ammonia and because the fraction of total ammonia that is converted to the toxic un-ionized form is dependent on pH, salinity and temperature of the receiving water.

To translate the Basin Plan unionized ammonia objective, Regional Water Board staff used pH, salinity and temperature from March 1993 to August 2003 from the San Bruno Shoal station, the closest Regional Monitoring Program (RMP) station to the outfall. The following equations for estuarine and marine waters are used to determine the percentage of total ammonia in a discharge that will be converted to the toxic un-ionized phase in receiving waters (U.S. EPA. 1989. *Ambient Water Quality Criteria for Ammonia (Saltwater)–1989.* EPA Publication No. 440/5-88-004).

For salinity > 10 ppt: fraction of $NH_3 = 1/1+10^{(pk-pH)}$

Where:

pK = 9.245 + 0.116*(I) + 0.0324*(298-T) + 0.0415*(P)/(T+273)
I = the molal ionic strength of saltwater = 19.9273*(S)/(1000-1.005109*S)
S = Salinity (parts per thousand)
T = temperature in °C
P = Pressure (one atmosphere)

To convert the chronic un-ionized ammonia WQO to an equivalent total ammonia concentration, the median un-ionized ammonia fraction at the Richardson Bay station was used. To convert the acute un-ionized ammonia WQO to an equivalent total ammonia concentration, the 90th percentile un-ionized ammonia fraction at Richardson Bay station was used. Using the median and 90th percentile to translate the chronic and acute un-ionized ammonia WQOs for un-ionized ammonia to equivalent total ammonia concentrations is consistent with US Environmental Protection Agency (U.S. EPA) Guidance on translating dissolved metal WQOs to total recoverable metal WQOs (U.S. EPA. 1996. *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion*, EPA Publication Number 823-B-96-007). The

equivalent total ammonia acute and chronic criteria are 0.94 mg/L and 10.79 mg/L, respectively.

ii. *RPA Results.* The SIP methodology was used to perform the RPA and to calculate effluent limitations, which is consistent with the methodology to calculate WQBELs for other toxic pollutants in this Order. To set limits for toxic pollutants (section 4.5.5.2), the Basin Plan indicates that water quality-based effluent limits shall be calculated according to this SIP. As Section 3.3.20 of the Basin Plan refers to ammonia as a toxic pollutant, the use of the SIP to determine and establish limits for ammonia is consistent with the Basin Plan. This Order establishes effluent limitations for total ammonia, because the MEC of 36 mg/L exceeds the applicable water quality criteria for this pollutant, demonstrating reasonable potential by Trigger 1, as defined previously.

iii. *WQBELs.* The total ammonia WQBELs calculated according to SIP procedures are 134 mg/L as MDEL and 67 mg/L as AMEL. To calculate limits based on the chronic aquatic life criterion, statistical adjustments were conducted because the Basin Plan's value is based on an annual median instead of a 4-day average. For limits based on the chronic criterion, the SIP assumes a monthly sampling frequency of 4 days per month to calculate effluent limits. To use the SIP methodology to calculate effluent limits for a Basin Plan objective that is based on an annual median, an averaging period of 365 days and a monitoring frequency of 30 days per month are used. These statistical adjustments are supported by U.S. EPA's *Water Quality Criteria; Notice of Availability; 1999 Update of Ambient Water Quality Criteria for Ammonia;* published in the Federal Register on December 22, 1999.

Following SIP methodology as guidance, the maximum ambient background total ammonia concentration was used to calculate effluent limits based on the acute criterion. For the chronic criterion calculation, the median background total ammonia concentration was used because the Basin Plan's chronic un-ionized ammonia objective is an annual median. It is more representative to use the central tendency of ambient conditions than a daily maximum since the time-scale of this objective is over such a long period. The newly calculated limitations take into account the deep water nature of the discharge and the non-persistent nature of ammonia, and therefore, are based on an initial dilution of 74:1 as discussed previously.

iv. *Plant Performance and Attainability.* Statistical analysis of effluent data for total ammonia, collected over the period of January 2002 through April 2007, shows that immediate compliance with these final effluent limitations for total ammonia is feasible, and these final effluent limitations will become effective upon adoption of this Order.

5. **Whole Effluent Acute Toxicity**

a. **Permit Requirements.** The Basin Plan requires dischargers to either conduct flow-through effluent toxicity tests or perform static renewal bioassays (Chapter 4, Acute Toxicity) to measure the toxicity of wastewaters and to assess negative impacts upon water quality and beneficial uses caused by the aggregate toxic effect of the discharge of pollutants. This Order includes effluent limitations for whole effluent acute toxicity. Compliance evaluation is based on 96-hour flow-through bioassays. All bioassays shall be performed according to the USEPA-approved method in 40 CFR Part 136, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water, 5th Edition."

b. **Compliance History.** The Discharger's acute toxicity monitoring data show that there was no exceedance of the effluent limitations during 2002-2006, with fathead minnow survival rates ranging from 80-100%.

c. **Ammonia Toxicity.** If acute toxicity is observed in the future and the Discharger believes that it is due to ammonia toxicity, this has to be shown through a Toxicity Identification Evaluation (TIE) acceptable to the Executive Officer. If the Discharger demonstrates to the satisfaction of the Executive Officer that exceedance of the acute toxicity limits is caused by ammonia and the Discharger has not violated the permit limits for ammonia, then such toxicity does not constitute a violation of this effluent limit. If ammonia toxicity is verified in the TIE, the Discharger may utilize a pH adjustment protocol approved by the Executive Officer for the routine bioassay testing.

5. **Whole Effluent Chronic Toxicity**

a. **Permit Requirements.** This Order includes requirements for chronic toxicity monitoring based on the Basin Plan at Chapter 4 and in accordance with USEPA and State Water Board Task Force guidance. This Order includes the Basin Plan narrative toxicity objective as the applicable effluent limit, implemented via monitoring with numeric values as "triggers" to initiate accelerated monitoring and to initiate a chronic toxicity reduction evaluation (TRE) as necessary. The permit requirements for chronic toxicity are also consistent with the CTR and SIP requirements.

b. **Chronic Toxicity Triggers.** This Order includes chronic toxicity triggers of 10 chronic toxicity units (TUc) for a three-sample median and 20 TUc for single sample maximum, consistent with Table 4-6 of the Basin Plan for dischargers monitoring chronic toxicity quarterly.

c. **Monitoring History.** The Discharger's chronic toxicity monitoring data show that there were no exceedances of the trigger between 2002 and 2006.

d. **Screening Phase Study.** The Discharger completed a screening phase study in April 2003 and the results of this study have been incorporated herein.

e. **Permit Reopener.** The Regional Water Board will consider amending this Order to include numeric toxicity limits if the Discharger fails to aggressively implement all reasonable control measures included in any approved TRE workplan, following detection of consistent significant non-artifactual toxicity.

D. Compliance Schedule

The Discharger has shown the infeasibility of complying with final limitations for dioxin-TEQ and has demonstrated that a compliance schedule for dioxin-TEQ is justified based on the Discharger's source control and pollution minimization efforts in the past and continued efforts in the present and future.

1. The Discharger submitted a Feasibility Study for Monitoring Location E-001, dated March 19, 2007. The Feasibility Study asserts that the Discharger cannot immediately comply with final WQBELs for dioxin-TEQ. Regional Water Board staff used the Discharger's self-monitoring data from January 2002 through February 2006 to confirm the Discharger's assertion of infeasibility.

2. The Basin Plan authorizes compliance schedules in a permit if an existing Discharger cannot immediately comply with a new and more stringent effluent limitation. The Basin Plan requires the Discharger to demonstrate the infeasibility of achieving immediate compliance with the new limitation to qualify for a compliance schedule.

   The following documentation must be submitted to the Regional Water Board to support a finding of infeasibility:

   - Descriptions of diligent efforts the Discharger have 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.

   The Basin Plan provides for up to a 10-year compliance schedule to implement measures to comply with new standards as of the effective date of those standards. A compliance schedule for dioxin-TEQ until 10 years after the effective date of this Order is based on this Order putting into effect the current new interpretation of the narrative bioaccumulative WQO in the Basin Plan.

   A maximum compliance schedule is reasonable for dioxin-TEQ because of the considerable uncertainty in determining an effective measure (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits. In the Regional Water Board's view, 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."

During the compliance schedule period, the Regional Water Board may take appropriate enforcement actions if requirements are not met.

E. Land Discharge Specifications

Not Applicable.

F. Reclamation Specifications

Not applicable.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations are retained from the previous Order and reflect applicable water quality standards from the Basin Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a monitoring program by a Discharger 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
- 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 Regional Water Board's policies. The MRP also defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

A. Influent Monitoring

Influent monitoring requirements for BOD_5 and TSS allows determination of compliance with this Order's 85 percent removal requirement.

B. Effluent Monitoring

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

- Monitoring for settleable solids is no longer required, as the effluent limitation for this parameter has not been retained by the Order.
- Routine monitoring in effluent is required for ammonia, copper, cyanide, and dioxin-TEQ – those priority toxic pollutants with effluent limitations established by the Order. Monitoring for all other priority toxic pollutants must be conducted in accordance with frequency and methods described in the Regional Water Board's letter of August 6, 2001 – Requirements for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy.

C. Bypasses or Sewer Overflow Monitoring

The MRP retains monitoring requirements to record observations related to bypasses or sewer overflows.

D. 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 whole effluent toxicity testing is required annually in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

E. Receiving Water Monitoring

1. Regional Monitoring Program

On April 15, 1992, the Regional Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the San Francisco Bay Regional Monitoring Program (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 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.

2. Monitoring Location – Receiving Waters RSW-001

The Discharger shall monitor the receiving waters (Lower San Francisco Bay) as required by Section VIII. B of the MRP in order to determine compliance with receiving water limitations of this Order.

F. Other Monitoring Requirements

Not applicable.

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 H** of this Order.

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

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E), Standard Provisions and SMP, Part A (Attachment G) of the Permit. This provision requires compliance with these documents, and is based on 40 CFR 122.63. The Standard Provisions and SMP, Part A are standard requirements in almost all NPDES permits issued by the Regional Water Board, including this Order. They contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the CWC, and Regional Water Board's policies. The MRP contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs.

C. Special Provisions (Provision VI.C)

1. Reopener Provisions

These provisions are based on 40 CFR 123 and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.

2. Special Studies, Technical Reports and Additional Reporting Requirements

a. Effluent Characterization Study. This Order does not include effluent limitations for the selected constituents addressed in the August 6, 2001 Letter 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 of this Order. 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 WQO/WQC. This provision is based on the Basin Plan and the SIP.

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 the Order, this requirement may be met by participating in the collaborative BACWA study.

c. Optional Mass Offset Plan: This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to the Lower San Francisco Bay. If the Discharger wishes to pursue a mass offset program, a mass offset plan for reducing 303(d)-listed pollutants to the same receiving water body needs to be submitted for Regional Water Board approval. The Regional Water Board will consider any proposed mass offset plan and amend this Order accordingly.

3. Best Management Practices and Pollutant Minimization Program

This provision is based on Chapter 4 of the Basin Plan and Chapter 2 of the SIP.

Additionally, on October 15, 2003, the Regional Water Board adopted Resolution R2-2003-0096 in support of a collaborative working approach between the Regional Water Board and BACWA to promote Pollution Minimization Program development and excellence. Specifically, the Resolution embodies a set of eleven guiding principles that will be used to develop tools such as "P2 menus" for specific pollutants, as well as provide guidance in improving P2 program efficiency and accountability. Key principles in the Resolution include promoting watershed, cross-program and cross-media approaches to pollution prevention, and jointly developing tools to assess program performance that may include peer reviews, self-audits or other formats.

4. Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, Status Reports: This provision is based on the previous Order and the Basin Plan. See Section VI.4.a of this Order for specific requirements.

b. Operations and Maintenance Manual, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous Order. See Section VI.4.b of this Order for specific requirements.

c. Contingency Plan, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous Order. See Section VI.4.c of this Order for specific requirements.

5. Special Provisions for POTWs

a. Pretreatment Program. This provision is based on 40 CFR Part 403 (General Pretreatment Regulations for Existing and New Sources of Pollution). In 2005, the City of Burlingame declassified all of its Significant Industrial Users (SIUs) to Moderate Commercial Users. The users and the Regional Water Board were notified on this declassification in letters sent by the City in January and February 2005.

b. Sludge Management Practices Requirements: This provision is based on the Basin Plan (Chapter IV) and 40 CFR §§257 and 503 and the previous permit.

c. Sanitary Sewer Overflows and Sewer System Management Plan: This provision is to explain this Order's requirements as they relate to the Discharger's conveyance system, and to promote consistency with the State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow (SSO WDRs) and a related Monitoring and Reporting Program (Order No. 2006-0003-DWQ). The bases for these requirements are described elsewhere in this Fact Sheet. See Section VI.C.5.c of this Order for specific requirements.

6. Nearshore Outfall

This provision is based on Discharge Prohibition III.A and Chapter 4 of the Basin Plan, which prohibits discharges that do not receive an initial 10:1 dilution. During very high wet weather flows, secondary-treated wastewater is sometimes discharged from the nearshore outfall. The Discharger reported using the outfall four times between December 2002 and December 2005, with the duration of discharge ranging from 6 hours to approximately 12 hours. The Discharger's No Feasible Alternatives Analysis submitted on February 14, 2007, primarily addresses blending during wet weather conditions, but also identifies options for eliminating the need for the shallow water discharge. These options include use of an out-of- service and empty aeration basin during wet weather events and construction of a 660,000 gallon retention basin. A preliminary design has been developed for the retention basin and construction will be financed through a State Revolving Fund loan. This provision requires completion of the basin by September 1, 2011. The schedule to implement these alternatives has been established to ensure future discharges to the nearshore outfall do not occur; it does not allow discharges to the nearshore outfall at any time. Any discharge of wastewater from the nearshore outfall is a violation of Discharge Prohibitions III.A and C.

7. Wet Weather Blending

This provision is based on 40 CFR 122.41(m)(4) as detailed in section IV.A.4 of this Fact Sheet. According to the Discharger's No Feasible Alternatives Analysis submitted on February 14, 2007, 22 blending events occurred between January 2002 and March 2006. The duration of these events ranged from 3.5 hours up to 54 hours. The Discharger's infeasibility analysis also indicates that elimination or

reduction of blending is currently infeasible in the short-term. This provision is necessary to ensure the Discharger implements corrective measures to minimize or eliminate blending consistent with 40 CFR 122.41(m). This provision also requires the Discharger to submit a No Feasible Alternatives Analysis 180 days prior to the Order expiration date to provide a current assessment for the need to blend.

8. Compliance Schedule for Dioxin-TEQ

The compliance schedule and the requirement to submit reports on further measures to reduce concentrations of dioxin-TEQ to ensure compliance with final limits are based on the Basin Plan and 40 CFR 122.47(a)(3). As previously described, the Discharger submitted a Feasibility Study, and the Regional Water Board confirmed the Discharger's assertion of infeasibility to comply with final WQBELS for dioxin-TEQ. 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. The maximum allowable compliance schedule is granted to the Discharger for dioxin-TEQ because of the considerable uncertainty in determining an effective measure (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."

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. The previous permit did not include an effluent limit for dioxin-TEQ. Therefore, this Order grants the Discharger 10 years from the effective date of this Order to comply with final limits.

9. Action Plan for Cyanide

The proposed cyanide site-specific objectives, if approved, will require action plans for source control. Implementation of a similar action plan for cyanide at this time would ensure that any increase in cyanide limits would be consistent limits expected with the site-specific objectives. Therefore, the antidegradation analysis prepared for the site-specific objectives could also apply to these limits, which would therefore comply with antidegradation policies (i.e., increasing the limits would not degrade the quality of the receiving water).

10. Action Plan for Copper

Since the proposed SSO for copper has associated action plans for source control, this provision requires an action plan to implement source control requirements once the alternate limits become effective.

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 City of Burlingame Wastewater Treatment Facility. As a step in the WDR adoption process, the 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 Discharger 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 following: San Mateo 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 Officer at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on **November 14, 2007.**

C. Public Hearing

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

Date: January 30, 2008
Time: 9:00am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Heather Ottaway, (510) 622-2116, email Hottaway@waterboards.ca.gov

Interested persons will be 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 (RWD), 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., 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 Heather Ottaway at 510-622-2116 (e-mail at Hottaway@waterboards.ca.gov).

IX. APPENDICES

Appendix F-1: Effluent Data for Priority Pollutants (not attached due to large size)
Appendix F-2: RPA Results for Priority Pollutants (not attached due to large size)
Appendix F-3: Calculation of Final WQBELs
Appendix F-4: Discharger's Feasibility Analysis

Appendix F-3: Calculation of Final WQBELs

PRIORITY POLLUTANTS	Copper		Cyanide		Dioxin TEQ
Units	ug/L		ug/L		ug/L
Basis and Criteria type	BP & CTR SW Aquatic Life	Alternate limits using SSOs (December 2004)	NTR Criterion for the Bay	Alternate Limits Using Proposed SSOs	Basin Plan HH
CTR Criteria -Acute	5.5	-----	1.0	9.4	-----
CTR Criteria -Chronic	4.2	-----	1.0	2.9	-----
SSO Criteria -Acute (December 2004) (Diss.)	-----	3.9			
SSO Criteria -Chronic (December 2004) (Diss.)	-----	2.5			
Water Effects ratio (WER)	2.4	2.4			
Lowest WQO	4.2		1.0	1.0	1.4E-08
Site Specific Translator - MDEL	0.88	0.88			
Site Specific Translator - AMEL	0.74	0.74			
Dilution Factor (D) (if applicable)	9	9	73	9	0
No. of samples per month	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	N
HH criteria analysis required? (Y/N)	N	N	Y	Y	Y
Applicable Acute WQO	13.1	11	1	9.4	
Applicable Chronic WQO	10.1	8.1	1	2.9	
HH criteria			220,000	220,000	1.4E-08
Background (Maximum Conc for Aquatic Life calc)	2.55	2.55	0.4	0.4	7.1E-08
Background (Average Conc for Human Health calc)			0.4	0.4	5.0E-08
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	N	Y
ECA acute	108	83.4	44.8	90.4	
ECA chronic	77.6	58.1	44.8	25.4	
ECA HH			16279971	2199996	1.40E-08
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	N	Y
Avg of effluent data points	6.5	6.5	4.0	4.0	
Std Dev of effluent data points	2.2	2.2	4.8	4.8	
CV calculated	0.33	0.33	1.20	1.20	N/A
CV (Selected) - Final	0.33	0.33	1.20	1.20	0.60
ECA acute mult99	0.49	0.49	0.17	0.17	
ECA chronic mult99	0.69	0.69	0.32	0.32	
LTA acute	53.39	41.25	7.77	15.68	
LTA chronic	53.47	40.06	14.37	8.15	
minimum of LTAs	53.39	40.06	7.77	8.15	
AMEL mult95	1.30	1.30	2.14	2.14	1.55

MDEL mult99	2.02	2.02	5.76	5.76	3.11
AMEL (aq life)	69.20	51.92	16.60	17.41	
MDEL(aq life)	107.96	81.00	44.80	46.97	
MDEL/AMEL Multiplier	1.56	1.56	2.70	2.70	2.01
AMEL (human hlth)			16279971	2199996	1.4E-08
MDEL (human hlth)			43932691	5936851	2.8E-08
minimum of AMEL for Aq. life vs HH	69	52	16.6	17	1.4E-08
minimum of MDEL for Aq. Life vs HH	108	81	44.8	47	2.8E-08
Current limit in permit (30-day average)	27 (interim)	27 (interim)	-----	-----	-----
Current limit in permit (daily maximum)	-----	-----	10 (interim)	10 (interim)	-----
Final limit - AMEL	69	52	16.6	17	1.4E-08
Final limit - MDEL	108	81	44.8	47	2.8E-08
Max Effl Conc (MEC)	12	12	26	26	1.4E-09

AMMONIA (mg/L)	**Acute**	**Chronic**
Basis and Criteria type	BP & CTR SW Aquatic Life	BP & CTR SW Aquatic Life
CTR Criteria -Acute	10.79	
CTR Criteria -Chronic		0.94000
Water Effects ratio (WER)	1	1
Lowest WQO	10.79	0.94000
Site Specific Translator - MDEL		
Site Specific Translator - AMEL		
Dilution Factor (D) (if applicable)	73	73
No. of samples per month	4	30
Aquatic life criteria analysis required? (Y/N)	Y	Y
HH criteria analysis required? (Y/N)	N	N
Applicable Acute WQO	10.79	
Applicable Chronic WQO		0.94
HH criteria		
Background (Maximum Conc for Aquatic Life calc)	0.19	0.1
Background (Average Conc for Human Health calc)		
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N
ECA acute	784.59	
ECA chronic		62.2600
ECA HH		
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N
Avg of effluent data points	20.33	20.33

Std Dev of effluent data points	8.06	8.06
CV calculated	0.40	0.40
CV (Selected) - Final	0.40	0.40
ECA acute mult99	0.44	
ECA chronic mult99		0.95
LTA acute	346.99	
LTA chronic		59.34
minimum of LTAs	346.99	59.34
AMEL mult95	1.35	1.12
MDEL mult99	2.26	2.26
AMEL (aq life)	470.14	66.66
MDEL(aq life)	784.59	134.17
MDEL/AMEL Multiplier	1.67	2.01
AMEL (human hlth)		
MDEL (human hlth)		
minimum of AMEL for Aq. life vs HH	470.1431	66.6587
minimum of MDEL for Aq. Life vs HH	784.5900	134.1713
Current limit in permit (30-day average)		
Current limit in permit (daily maximum)	-----	-----
Final limit - AMEL	470.14	66.66
Final limit - MDEL	784.59	134.17
Max Effl Conc (MEC)	36.00	36.00

Appendix F-4: Discharger's Feasibility Analysis

City of Burlingame Wastewater Treatment Facility Infeasibility Analyses

Introduction

The City of Burlingame (City) received correspondence from the San Francisco Bay Regional Water Quality Control Board (Water Board) dated February 16, 2007 and March 15, 2007 regarding the Water Board's results of its reasonable potential analysis and containing a request for infeasibility analyses for cyanide and dioxin-TEQs, priority toxic pollutants subject to the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California* (known as the State Implementation Policy (SIP), effective 4/28/00 and amended 7/13/05). Infeasibility analyses for priority pollutants (constituents listed in the SIP) are required for the Water Board to issue interim limits and compliance schedules for these constituents. The infeasibility analyses contained herein for cyanide and dioxin-TEQs have been conducted in accordance with section 2.1 of the SIP. The analyses contained herein are submitted to the Water Board by the City to demonstrate the City's inability to comply with certain proposed water-quality based effluent limits for discharge from the Burlingame Wastewater Treatment Facility (WWTF).

Background

The SIP establishes statewide policy for National Pollutant Discharge Elimination System (NPDES) permitting. The SIP provides for the situation where an existing NPDES discharger cannot immediately comply with an effluent limitation derived from a California Toxics Rule (CTR) or more stringent Basin Plan criterion. The SIP allows for the adoption of interim effluent limits and a schedule to come into compliance with the final limit in such cases. To qualify for interim limits and a compliance schedule, the SIP requires that an existing discharger demonstrate that it is infeasible to achieve immediate compliance with the CTR based limit.

The term "infeasible" is defined in the SIP as "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

The SIP requires that the following information be submitted to the Water Board to support a finding of infeasibility:

(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and sources of the pollutant in the waste stream, including the results of those efforts;
(b) documentation of source control and/or pollution minimization efforts currently under way or completed;
(c) a proposed schedule for additional or future source control measures, pollutant minimization or waste treatment; and
(d) a demonstration that the proposed schedule is as short as practicable.

Pollutants to be Evaluated

Infeasibility analyses and a compliance schedule justification for cyanide and dioxin-TEQs were requested by the Water Board in its February 16, 2007 and March 15, 2007 correspondence.

Effluent Limit Attainability

The proposed final effluent limits calculated for cyanide and dioxin-TEQs are compared to the maximum observed effluent concentrations at the WWTF in Table 1.

Table 1. Proposed Effluent Limits for the City of Burlingame Wastewater Treatment Facility

Pollutant	Water Quality Based Effluent Limits		Effluent Quality
	AMEL [a]	MDEL [b]	MEC [c]
Cyanide (µg/L)	2.4	6.4	26
Dioxin-TEQs (pg/L)	0.014	0.028	J 0.0014

[a] AMEL: average monthly effluent limit
[b] MDEL: maximum daily effluent limit
[c] MEC: maximum effluent concentration found in the Water Board's dataset
[d] The maximum effluent concentration was J-flagged, or qualified as DNQ (Detected, Not Quantified)

The final effluent limits shown above are calculated using procedures described in Section 1.4 of the SIP. Background values were taken from the Regional Monitoring Program (RMP) at the Yerba Buena Station. The receiving water is classified as salt water with aquatic life and fish consumption beneficial uses. A dilution of 10:1 is allowed when calculating effluent limits for cyanide (deep water discharge). No dilution is allowed for dioxin-TEQs because dioxins are bioaccumulative. The dioxin-TEQ limit is required because ambient concentrations exceed the applicable water quality objective. The limit is not due to high effluent concentrations. Other variables in the effluent limit calculations included the pollutants' coefficients of variation.

Maximum observed (detected) effluent concentrations shown in Table 1 are based on recent WWTF effluent quality data collected between October 2002 and October 2006 for cyanide and dioxin-TEQ, as presented in the Water Board's datasets. The ambient concentrations for dioxin-TEQ are based on samples collected between January 2002 and August 2003, as found in the report *Dioxins in San Francisco Bay, Conceptual Model/Impairment Assessment* (Clean Estuary Partnership, November 2004). As shown in the table above, the City may not be able to comply with proposed effluent limits for cyanide. It is unknown whether the City's effluent quality will comply with the dioxin-TEQ limits. Dioxin-TEQ was undetected in the majority of samples analyzed, but two samples were detected below the lower calibration level of the analytical instrument. The reported values were "qualified" by the laboratory to indicate that there was limited confidence in these results. As such, there is an insufficient number of dioxin-TEQ datapoints (detected or quantified) to guarantee compliance. The infeasibility analyses and compliance schedule justifications for the cyanide and dioxin-TEQ are discussed below:

Source Control and Pollution Prevention Efforts

Pretreatment Program

The City's pretreatment program was initiated in 1990 to protect the treatment facility and environment from adverse impacts from hazardous or toxic wastes discharged to the sewage system. There are currently no industrial dischargers that can be considered Significant Industrial Users (SIUs) or Categorical Industrial Users (CIUs) within the treatment facility's collection area. The pretreatment program covers the City's commercial businesses, including vehicle service stations, restaurants, dental

offices, veterinarians, laboratories, printers/copiers, photo processing centers, dry cleaners, laundromats, and medical facilities.

The pretreatment program includes visits by the WWTF inspectors to educate local businesses about pollution prevention.

Pollution Prevention Program

The City's pollution prevention program includes the following activities:

- Sewer Science Outreach Program with local high school, implemented in 2002. Ten chemistry classes are instructed by Environmental Compliance Inspectors with a focus on metals and mercury.
- Safe Medicine Disposal Days, implemented April 2007. A protected permanent collection site in the City of Burlingame.
- Bay Front Clean Up for City of Burlingame, implemented in 1999. The Environmental Compliance Department hosts two sites in the City of Burlingame for participants on the third Saturday of every September.
- Residential Pesticide Outreach Program, initiated in 2002, educates residents about the correct use of pesticides and non-chemical pest control alternatives, through pamphlet stands in City Hall and the Department of Parks and Recreations.
- A thermometer exchange program was begun in September 2001, each Earth Day at City Hall, where residents exchange mercury thermometers for non-hazardous thermometers.
- Tours of the Wastewater Treatment Facility, with a focus on residential and commercial impacts on water quality.
- Participation in outreach booths for San Mateo County Fair for dissemination of pollution prevention material since before 1999, with a focus on stormwater pollution prevention information.
- Participation in the annual Jazz in the Park and Art in the Park information booths since 2000. Veolia Water sponsors Jazz in the park with a $5000 a year contribution to attract performers. A booth is set up to question residents regarding pollution prevention information.
- A website containing local recycling information has been available since 2000.
- A program for Dental Mercury Control to ensure proper amalgam waste disposal was implemented by the Environmental Compliance Office in 2002.
- Educational Stormwater Surveys educate residents about the difference between sanitary sewers and stormwater non-point source runoff since 2004.
- TMS Commute Program (revised in 2002) for employees of the City of Burlingame reduces gasoline consumption. Incentives are offered to employees who participate in the program.

Individual Constituent Analysis

Cyanide

The maximum observed effluent concentration for cyanide between October 2003 and October 2006 is 26 µg/L (measured in May 4, 2005, out of 43 data points) which would exceed the proposed final AMEL of 2.4 µg/L and MDEL of 6.4 µg/L. In addition, the four next highest cyanide concentrations would also exceed the proposed MDEL. The statistical probabilities of compliance with the AMEL and MDEL are 47% and 83%, respectively. The City is at risk of non-compliance with the proposed final

AMEL 53% of the time. Therefore, the City may not be able to consistently comply with the proposed final limits. The effluent data for cyanide are shown with the proposed final effluent limits in Figure 1.

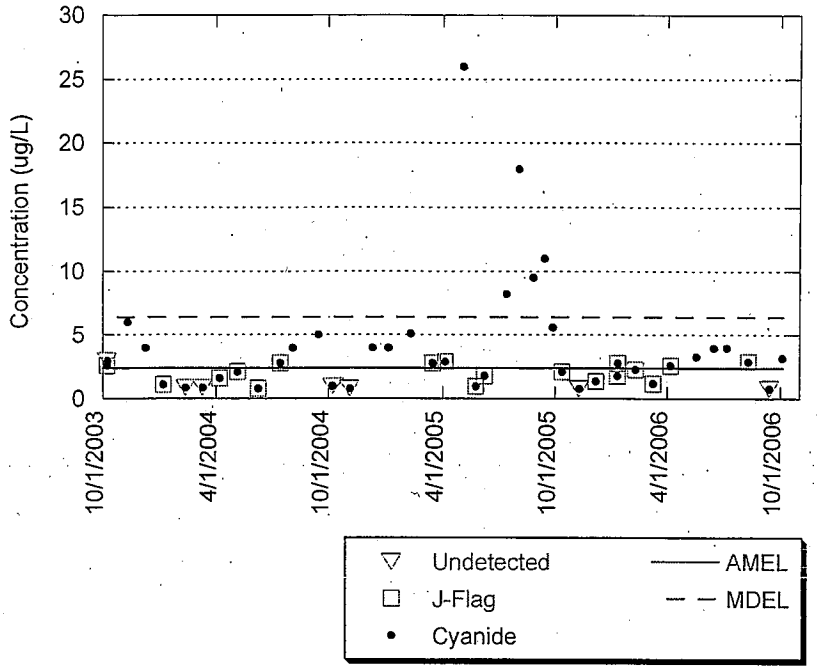

Figure 1. Effluent Cyanide Concentrations Compared to Proposed Final Effluent Limits

Cyanide has been identified as a constituent of concern, and is monitored in the influent, secondary effluent, and final effluent. Typically, cyanide is not present in wastewater influent but is generated in the treatment facility disinfection process, which would result in higher concentrations in the final effluent than the secondary effluent or influent.

Effluent monitoring for cyanide will continue as required by the City's NPDES permit, and monthly influent monitoring for cyanide will continue. The recently monitored influent data will be reviewed. If half of the influent data have been detected at levels exceeding the effluent during the previous monitoring year, source identification efforts will be initiated.

There is widespread evidence that the sampling techniques and EPA analytical method for cyanide are problematic and need to be adjusted. Currently, several special studies are being conducted by other wastewater agencies to determine if sample preservation plays a role in elevated cyanide levels being detected in effluent samples. The City considers that the maximum cyanide concentration of 26 ug/L is the result of an analytical error. Should cyanide continue to be detected in the effluent at levels that exceed the proposed final effluent limit, the City will coordinate with other wastewater agencies to determine appropriate sample preservation techniques to implement in order to avoid false readings.

Dioxin-TEQs

As shown in Table 1, the City may be capable of meeting the final effluent limits for dioxin-TEQs. However, there is limited, quantified data available to predict compliance. The City objects to use of qualified datapoints to determine effluent limits. Dioxin-TEQ data can be highly variable, due to sensitivity of the analytical procedures for dioxin congeners. The City's ability to comply with the

proposed effluent limits cannot be definitely determined. An interim limit or a maximum compliance schedule is requested in order to gather more information about dioxin and its presence in the City's wastewater.

The City has not previously identified dioxin as a pollutant of concern and, therefore, has not conducted pollution prevention activities that directly target this constituent. Effluent monitoring for dioxin will continue as required by the City's NPDES permit. If half of the effluent data are detected after 2 years of monitoring, influent bi-annual monitoring will commence. Should dioxins be detected consistently in the influent after two years of monitoring the City will evaluate potential dioxin sources in its service area and develop pollution prevention options as appropriate. Potential dioxin sources include bleached paper products, wood burning, diesel fuel vehicles, and 2,4-D (an herbicide).

Summary

This evaluation indicates that immediate compliance with proposed final effluent limits for cyanide is not feasible for the City. Immediate compliance with dioxin-TEQ limits cannot be determined at this time.

In accordance with the requirements of the SIP, the City requests that the Water Board refrain from the adoption of final effluent limits for cyanide and dioxin-TEQ. In lieu of final limits, the NPDES permit should include interim performance based limits (or a maximum compliance schedule) with which the City can comply. The City will continue monitoring and/or implement the source control actions listed in Table 2 for the constituents as appropriate. The schedules in Table 2 are as short as practicable.

Table 2. Proposed Source Control Actions

Pollutant	Proposed Action	Estimated Time to Complete
Cyanide	• Influent monitoring	• Ongoing
	• Source identification study	• If half of influent concentrations over the last year exceed effluent concentrations.
	• Refine sample preservation techniques	• In collaboration with other agencies, should effluent cyanide concentrations continue to exceed the proposed effluent limits
Dioxin-TEQs	• Potential influent monitoring	• Bi-annually, IF ½ of the effluent concentrations are detected after 2 additional years of effluent monitoring subsequent to permit adoption.
	• Source identification study	• After 2 years of influent monitoring, if the influent concentrations are consistently detected.

ATTACHMENT G – REGIONAL WATER BOARD ATTACHMENTS

The following documents are part of this Order but are not physically attached due to volume. They are available on the Internet at:
http://www.waterboards.ca.gov/sanfranciscobay/Download.htm.

- Self-Monitoring Program, Part A (August 1993)
- Standard Provisions and Reporting Requirements, August 1993
- Regional Water Board Resolution No. 74-10
- August 6, 2001 Regional Water Board staff letter, "Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy

ATTACHMENT H – PRETREATMENT PROGRAM REQUIREMENTS

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 their respective Approved Pretreatment Programs or modified Pretreatment Programs as directed by the Board's Executive Officer or the EPA. The EPA 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 the EPA Region 9, the State Board and the Board describing the Discharger's respective pretreatment program activities over the previous twelve months. In the event that the Discharger is not in compliance with any conditions or requirements of this permit, 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 the EPA Region 9, the State Board and the Board describing the status of their respective significant industrial users (SIUs). The report shall contain, but not is 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 31st (for the period January

through June) and January 31st (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 Board and EPA'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 31st 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 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 31st 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 City/ District/Agency, the POTW and/or the Industrial 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 Board or the EPA. 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 POTW 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 Board shall also be given.

8. Federal Categories

This section shall contain a list of all of the federal categories that apply to the POTW. 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 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 Resources Control Board and the 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 B
REQUIREMENTS FOR SEMIANNUAL PRETREATMENT REPORTS

The semiannual pretreatment reports are due on July 31st (for pretreatment program activities conducted from January through June) and January 31st (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 are 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 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 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 C
REQUIREMENTS FOR INFLUENT, EFFLUENT AND SLUDGE MONITORING

The Discharger shall conduct sampling of their respective treatment plant's influent, effluent and sludge at the frequency as shown in Tables 1and 3 of the Self Monitoring Program.

The monitoring and reporting requirements of the POTW's Pretreatment Program are in addition to those specified in the individual POTW's NPDES permit. Any subsequent modifications of the NPDES requirements 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 in both the Discharger's NPDES permit and Pretreatment Program. Monitoring reports required by this Order shall be sent to the Pretreatment Coordinator.

1. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required test methods listed in Table 3 of the Self Monitoring Program. Any test method substitutions must have received prior written Regional Water Board approval. In addition, unless instructed otherwise in writing, the Discharger shall continue to monitor for those parameters at the frequency stated in Table 1. Influent and Effluent sampling locations shall be the same as those sites specified in the POTW's Self-Monitoring Program as set forth in its NPDES permit.

The influent and effluent sampled should be taken during the same 24-hour period. All samples must be representative of daily operations. A grab sample 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 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.