

**Central Marin Sanitation Agency
Comments Regarding Tentative Order for Renewal of NPDES Permit**

March 26, 2012

Central Marin Sanitation Agency (CMSA) appreciates the opportunity to submit the following comments on the Tentative Order (TO) reissuing the National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038628 for the discharge of treated wastewater to Central San Francisco Bay. The sections being commented on are shown in roughly the same order as they first appear in the TO. Due to variations in formatting, page numbers listed are approximate. Specific revisions to the TO are included with each comment, with the exception that all requested revisions to Table F-8, Summary of Monitoring Requirements, are included together in one comment towards the end, for efficiency. In addition, some small comments are highlighted in yellow to make them easier to locate.

1. CMSA requests the effluent limits for silver be removed since there is no reasonable potential to cause or contribute to a water quality objective exceedance.

CMSA requests that the effluent limits for silver be removed for two reasons. First, CMSA provided a site-specific translator analysis in Attachment A to *Summary of Reasonable Potential Analysis and Water-Quality Based Effluent Limitations* (October 3, 2011), included with the Report of Waste Discharge (ROWD) on October 3, 2011. With this translator of 0.35, the lowest applicable water quality objective (WQO) is $1.9 \div 0.35 = 5.4 \mu\text{g/L}$, which is higher than the maximum effluent concentration of $2.7 \mu\text{g/L}$, and therefore reasonable potential is not triggered. Second, the maximum effluent concentration ($2.7 \mu\text{g/L}$) dates back to the summer of 2007, and is not consistent with data collected since then, all of which showed concentrations less than or equal to $0.95 \mu\text{g/L}$, and approximately 30% of which show no silver detected at all. The consistently low levels of silver in the effluent for the last five years, since 2007, may be attributable to the success of CMSA's dental amalgam program. Under this program, all dentists were required to install amalgam separators to control the discharges of metals to CMSA's treatment plant by the end of calendar year 2010. Dental amalgam is understood to be approximately 22% - 32% silver in composition. CMSA has inspected all dental offices in the service area since that date and 100% of dentists have complied with the amalgam separator requirements. For this reason, the older effluent concentrations should not be considered representative of current effluent quality, and should be removed from the data set. Reasonable potential would not be triggered as a result.

The requested changes to the TO are shown in the following paragraphs.

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Table 7. Toxic Pollutant Effluent Limitations

Constituent	Units	Effluent Limitations ^[1,2]	
		Average Monthly	Maximum Daily
Copper	$\mu\text{g/L}$	49	85
Cyanide	$\mu\text{g/L}$	21	41

Constituent	Units	Effluent Limitations ^[1,2]	
		Average Monthly	Maximum Daily
Silver	µg/L	7	22
Dioxin-TEQ	µg/L	1.4 x 10 ⁻⁸	2.8 x 10 ⁻⁸
Total Ammonia, as N	mg/L	60	120

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Table E-3. Effluent Monitoring at EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
CBOD ₅	mg/L	C-24	1/Week
TSS	mg/L	C-24	3/Week
CBOD and TSS % Removal ^[1]	%	Calculate	1/Month
Oil and Grease ^[2]	mg/L	Grab	1/Quarter
pH ^[3]	standard units	Grab	1/Day or Continuous/D
Temperature	°C	Grab	1/Day
Acute Toxicity ^[4]	% Survival	Flow through	1/Month
Chronic Toxicity ^[5]	TUc	C-24	2/Year
Ammonia	mg/L as N	C-24	1/Month
Copper ^[6]	µg/L	C-24	1/Month
Cyanide ^[6]	µg/L	Grab	1/Month
Silver ^[6]	µg/L	Grab	1/Month
Dioxin-TEQ	µg/L	Grab	2/Year

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Table E-5. Effluent Monitoring at EFF-001b

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow ^[1]	MGD	Continuous	Continuous/D
Volume of partially-treated wastewater	MG	Calculated	1/Blending Event
Duration of Blending Event ^[2]	hours	Calculated	1/Blending Event
TSS	mg/L	C-24	1/Day
CBOD ₅	mg/L	Grab	1/Year ^[3]
pH ^[4]	standard units	Grab	1/Day or Continuous/D
Temperature	°C	Grab	1/Year ^[3]
Enterococcus Bacteria	Colonies/100 mL	Grab	1/Year ^[3]
Total Coliform Bacteria	MPN/100 mL	Grab	1/Year ^[3]
Ammonia	mg/L as N	Grab	1/Year ^[3]
Copper ^[5]	µg/L	Grab	1/Year ^[3]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Cyanide ^[5]	µg/L	Grab	1/Year ^[3]
Silver ^[5]	µg/L	Grab	1/Year ^[3]
Total Residual Chlorine ^[6]	mg/L	Continuous	Continuous/D

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d. RPA for Toxic Pollutants

The MECs, most stringent applicable WQOs, and background concentrations used in the RPA are presented in the following table, along with the RPA results (yes or no) for each pollutant. Reasonable potential was not determined for all pollutants because there are not applicable WQOs for all pollutants and monitoring data are not available for others. Based on a review of the effluent data collected during the previous permit term from September 2007 through March 2011, the pollutants that exhibit reasonable potential at Discharge Point No. 001 are cyanide, silver, and total ammonia by Trigger 1; dioxin-TEQ by Trigger 3; and copper by Trigger 1 and Trigger 3.

Table F-6. Reasonable Potential Analysis Summary

CTR #	Priority Pollutants	Governing WQO (µg/L)	MEC or Minimum DL ^{[1][2]} (µg/L)	Maximum Background or Minimum DL ^{[1][2]} (µg/L)	RPA Results ^[3]
1	Antimony	4,300	0.8	1.8	No
2	Arsenic	36	4	2.5	No
3	Beryllium	No Criteria	<0.006	0.22	Ud
4	Cadmium	3.37	0.1	0.13	No
5a	Chromium (III)	644	Not Available	Not Available	No
5b	Chromium, Total	11	2.6	4.4	No
6	Copper	8.2	11	2.5	Yes
7	Lead	8.5	1	0.8	No
9	Nickel	13	7.1	3.7	No
10	Selenium (303(d) listed)	5.0	3	0.39	No
11	Silver	<u>5.4</u> 2.2	<u>0.95</u> 2.7	0.052	<u>No</u> Yes
12	Thallium	6.3	0.8	0.21	No

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~~(4) Silver~~

~~(a) WQOs. The CTR contains an acute marine WQO for silver of 2.2 µg/L.~~

~~(b) RPA Results. This Order establishes effluent limitations for silver because the MEC (2.7 µg/L) exceeds the governing WQO (2.2 µg/L), demonstrating reasonable potential by Trigger 1.~~

~~(c) WQBELs. WQBELs for silver, calculated according to SIP procedures with an effluent data CV of 2.45 and a dilution credit of D = 9, are an AMEL of 7 µg/L and an MDEL of 22 µg/L.~~

~~(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous permit did not include effluent limitations for silver.~~

(4)(5) Total Ammonia

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e. Effluent Limit Calculations

The following table shows the WQBEL calculations for copper, cyanide, dioxin-TEQ, **silver**, and total ammonia.

Table F-7. WQBEL Calculations

Pollutant	Copper	Cyanide	Dioxin-TEQ	Silver	Ammonia (acute)	Ammonia (chronic)
Units	µg/L	µg/L	µg/L	µg/L	mg/L-N	mg/L-N
Basis and Criteria Type	BP SSOs	BP SSOs	BP narrative	BP and CTR aquatic life	BP aquatic life	BP aquatic life
Criteria – Acute	3.9	9.4	---	2.2	5.28	
Criteria – Chronic	2.5	2.9	---	---	---	1.38
HH criteria	---	2.2E+05	1.4E-08	---	---	---
Water Effects Ratio	2.4	1	1	+	1	1
Lowest WQO	2.5	2.9	1.4E-08	2.2	5.28	1.38
Site Specific Translator - MDEL	0.87	---	---	---	---	---
Site Specific Translator – AMEL	0.73	---	---	---	---	---
Dilution Factor (D)	9	9	0	9	42	42
No. of samples per month	4	4	4	4	4	30
Aquatic life analysis required?	Y	Y	N	Y	Y	Y
HH analysis required?	N	Y	Y	N	N	N
Applicable Acute WQO	10.8	9.4	---	2.2	5.28	---
Applicable Chronic WQO	8.2	2.9	---	---	---	1.38
Background	2.6	0.4	5.32E-08	0.05	0.146	0.079
Is the pollutant on the 303(d) list?	N	N	Y	N	N	N
ECA acute	85	90.4	---	21.5	221	---
ECA chronic	53	25.4	---	---	---	56
ECA human health	---	2.2E+06	1.4E-08	---	---	---
No. of data points <10, or at least 80% non-detect	N	N	N	N	N	N
Average effluent concentration	4.4	2.7	1.4E-09	0.22	25.3	25.3
Standard Deviation	1.9	1.14	2.4E-09	0.54	10.3	10.3
CV calculated	0.43	0.43	0.6	2.45	0.41	0.41
CV selected	0.43	0.43	0.6	2.45	0.41	0.41
ECA acute mult99	0.42	0.42	---	0.10	0.43	---

ECA chronic mult99	0.62	0.62	---	0.17		0.95
LTA acute	35.4	37.6	---	2	96.1	---
LTA chronic	37.0	15.8	---	---	---	53.1
Minimum LTA	35.4	15.8	---	2	91.1	53.1
AMEL mult95	1.4	1.4	2.6	3.1	1.3	1.1
MDEL mult95	2.4	2.4	7.8	9.7	2.2	2.2
AMEL aquatic life	49	22	---	7	120	53
MDEL aquatic life	85	38	---	22	200	110
MDEL/AMEL multiplier	---	1.7	3.0	---	---	---
AMEL human health	---	2.2E+06	1.4E-08	---	---	---
MDEL human health	---	3.8E+06	2.8E-08	---	---	---
Current Permit - AMEL	13	21	1.4E-08	---	---	---
Current Permit - MDEL	22	41	2.8E-08	---	---	---
Final limit - AMEL	49	21	1.4E-08	7		60
Final limit - MDEL	85	41	2.8E-08	22		120

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B. Effluent Monitoring

- The MRP retains most effluent monitoring requirements at Monitoring Location EFF-001 from the previous permit. Changes in effluent monitoring are summarized as follows.
- A new monitoring location (EFF-001b) was established to monitor effluent discharges during blending events. During blending events, additional monitoring at EFF-001b will be required consistent with Attachment G, section III.A.3.b.6.
- Monitoring for ammonia nitrogen has been clarified to specify total ammonia, consistent with the ammonia effluent limitations.
- Monitoring for mercury has been removed; mercury is now covered under Order No. R2-2007-0077.
- ~~Monitoring for silver has been established to determine compliance with new effluent limitations.~~

2. CMSA requests that the threshold for a “significant cyanide discharge” in the Cyanide Action Plan be removed or revised.

CMSA notes that, while the required actions described in Task 2 of the Cyanide Action Plan are spelled out almost entirely in Section 4.7.2.2 of the Basin Plan, reference to a specific numeric trigger for a “significant cyanide discharge” is not at all indicated in the Basin Plan. CMSA staff consistently review influent and effluent data and are well aware of any inconsistent monitoring results. CMSA has also established and maintains a comprehensive pretreatment program and an

award-winning pollution prevention program. CMSA objects to the inclusion of the “significant cyanide discharge” threshold mandated in the permit because it is unnecessary policing, irrespective of CMSA staff competence. As it is neither required by the Basin Plan nor historically included with the Cyanide Action Plan in Bay Area NPDES permits, CMSA respectfully requests that this threshold be removed.

If for some reason the Regional Water Board is not willing to remove the threshold, it is imperative that the threshold be revised to a more reasonable value. Currently, the TO (page F-33) indicates that:

“the threshold for considering influent cyanide concentrations to indicate a possible “significant cyanide discharge” in the Discharger’s service area is set at 5 µg/L. This concentration is the cyanide ML set forth in the SIP. Because the Discharger has not observed influent cyanide concentrations above the ML, if such influent concentrations were observed, there could be a significant cyanide source.”

It is understood that the standard method used to measure cyanide in the wastewater matrix is prone to interference, and that it is common to see “noise” in the sample results, falsely indicating a low level of cyanide where none (or less) is present. Defining a “significant” discharge as a lower reporting limit is not appropriate, especially given the nature of the analytical method for this particular constituent. CMSA suggests that one half of the average monthly effluent limit (AMEL), or 11 µg/L, would be a more reasonable threshold (and actual cause for additional investigation), than a number so close to the ML itself.

The requested changes are shown below.

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Preferred option:

Table 10. Cyanide Action Plan

Task	Compliance Date
<p>1. Review Potential Cyanide Sources The Discharger shall submit an inventory of potential cyanide sources to the treatment plant. If no cyanide sources are identified, Tasks 2 and 3 are not required, unless the Discharger receives a request to discharge detectable levels of cyanide to the sewer. If so, the Discharger shall notify the Executive Officer and implement Tasks 2 and 3.</p>	<p>Completed</p>
<p>2. Implement Cyanide Control Program The Discharger shall submit a plan and begin implementation of a program to minimize cyanide discharges to its treatment plant consisting, at a minimum, of the following elements:</p> <ul style="list-style-type: none"> a. Inspect each potential source to assess the need to include that contributing source in the control program. b. Inspect contributing sources included in the control program annually. Inspection elements may be based on USEPA guidance, such as Industrial User Inspection and Sampling Manual for POTWs (EPA 831-B-94-01). c. Develop and distribute educational materials to contributing sources and potential contributing sources regarding the need to prevent cyanide discharges. 	<p>With annual pollution prevention report due February 28, 2013</p>

Task	Compliance Date
d. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. <u>For purposes of this Order, a “significant cyanide discharge” is occurring if cyanide is found in the plant’s influent above 5 µg/L.</u>	
3. Implement Additional Cyanide Control Measures If the Regional Water Board notifies the Discharger that ambient monitoring shows cyanide concentrations are 1.0 µg/L or higher in the main body of San Francisco Bay, then within 90 days of the notification, the Discharger shall commence actions to identify and abate cyanide sources responsible for the elevated ambient concentrations, and shall report on the progress and effectiveness of actions taken, together with a schedule for actions to be taken in the next 12 months.	With next annual pollution prevention report due February 28 (at least 90 days following notification)
4. Report Status of Cyanide Control Program The Discharger shall submit an annual report documenting cyanide control program implementation and addressing the effectiveness of actions taken, including any additional cyanide controls required by Task 3, above, together with a schedule for actions to be taken in the next 12 months.	With annual pollution prevention report due February 28 each year

Alternate request (if preferred option is not accepted):

Table 10. Cyanide Action Plan

Task	Compliance Date
1. Review Potential Cyanide Sources The Discharger shall submit an inventory of potential cyanide sources to the treatment plant. If no cyanide sources are identified, Tasks 2 and 3 are not required, unless the Discharger receives a request to discharge detectable levels of cyanide to the sewer. If so, the Discharger shall notify the Executive Officer and implement Tasks 2 and 3.	Completed
2. Implement Cyanide Control Program The Discharger shall submit a plan and begin implementation of a program to minimize cyanide discharges to its treatment plant consisting, at a minimum, of the following elements: e. Inspect each potential source to assess the need to include that contributing source in the control program. f. Inspect contributing sources included in the control program annually. Inspection elements may be based on USEPA guidance, such as Industrial User Inspection and Sampling Manual for POTWs (EPA 831-B-94-01). g. Develop and distribute educational materials to contributing sources and potential contributing sources regarding the need to prevent cyanide discharges. h. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. <u>For purposes of this Order, a “significant cyanide discharge” is occurring if cyanide is found in the plant’s influent above 11.5 µg/L.</u>	With annual pollution prevention report due February 28, 2013
3. Implement Additional Cyanide Control Measures If the Regional Water Board notifies the Discharger that ambient monitoring shows cyanide concentrations are 1.0 µg/L or higher in the main body of San Francisco Bay, then within 90 days of the notification, the Discharger shall commence actions to identify and abate cyanide sources responsible for the elevated ambient concentrations, and shall report on the progress and effectiveness of actions taken, together with a schedule for actions to be taken in the next 12 months.	With next annual pollution prevention report due February 28 (at least 90 days following notification)
4. Report Status of Cyanide Control Program The Discharger shall submit an annual report documenting cyanide control program	With annual pollution prevention report due

Task	Compliance Date
implementation and addressing the effectiveness of actions taken, including any additional cyanide controls required by Task 3, above, together with a schedule for actions to be taken in the next 12 months.	February 28 each year

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- c. **Cyanide Action Plan.** This provision is based on Basin Plan section 4.7.2.2. It is necessary to ensure that use of cyanide site-specific objectives is consistent with antidegradation policies. ~~The threshold for considering influent cyanide concentrations to indicate a possible “significant cyanide discharge” in the Discharger’s service area is set at 5 µg/L. This concentration is the cyanide ML set forth in the SIP. Because the Discharger has not observed influent cyanide concentrations above the ML, if such influent concentrations were observed, there could be a significant cyanide source.~~

3. CMSA requests several corrections to monitoring locations indicated for specific parameters in the Monitoring and Reporting Program (MRP).

Tables E-3 and E-4 of the TO include effluent monitoring requirements for monitoring locations at different points in the outfall before and after dechlorination, similar to current NPDES permit requirements in Order No. R2-2007-0007. However, it appears that the parameters assigned to each of these two locations were, for the most part, switched. It is important that the locations are corrected if meaningful data are to be collected.

In addition, it appears that the sampling frequency for dissolved oxygen and temperature was inadvertently and significantly increased. This change is not explained in the summary of changes in effluent monitoring included in Fact Sheet Section VI, Rationale for Monitoring and Reporting Requirements (page F-29).

The current NPDES permit (Order No. R2-2007-0007) indicates that dissolved oxygen and temperature are to be monitored once per day but, as specified by an applicable footnote, the requirement only applies at the beginning and during the course of conducting the monthly 96-hour flow-through bioassay for acute toxicity. The current requirement would therefore be equivalent to five samples per month for each parameter.

The TO simply indicates that dissolved oxygen and temperature are to be monitored daily, without the footnote limiting the requirement to the four days per month of the bioassay (although please note that the requirement to monitoring dissolved oxygen and temperature daily during bioassays for acute toxicity testing is also included on page E-6 of the TO, under V.A.5, Whole Effluent Acute Toxicity).

CMSA requests that the TO be revised to include a footnote for dissolved oxygen and temperature similar to that included in the current NPDES permit (Order No. R2-2007-0007), limiting this monitoring to the duration of the acute bioassay.

If the Regional Water Board is not willing to add the requested footnote, CMSA requests that effluent monitoring requirements in Tables E-3 and E-4 for dissolved oxygen and temperature be set at 3/Week. This request would result in an increase over current requirements, providing at least seven samples per month in addition to the daily monitoring that is still required during acute toxicity bioassays.

The requested revisions are shown below.

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Preferred option for Table E-3:

Table E-3. Effluent Monitoring at EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
<u>Flow^[1]</u>	<u>MGD</u>	<u>Continuous</u>	<u>Continuous/D</u>
<u>Dissolved Oxygen</u>	<u>mg/L</u>	<u>Grab</u>	<u>1/Day^[4]</u>
<u>Enterococcus Bacteria^[2]</u>	<u>Colonies/100 mL</u>	<u>Grab</u>	<u>5/Month^[5]</u>
<u>Total Coliform Bacteria^[2]</u>	<u>MPN/100 mL</u>	<u>Grab</u>	<u>3/Week</u>
<u>Standard Observations^[3]</u>	<u>---</u>	<u>---</u>	<u>1/Month</u>
<u>CBOD₅</u>	<u>mg/L</u>	<u>C-24</u>	<u>1/Week</u>
<u>TSS</u>	<u>mg/L</u>	<u>C-24</u>	<u>3/Week</u>
<u>CBOD and T-SS % Removal^[11]</u>	<u>%</u>	<u>Calculate</u>	<u>1/Month</u>
<u>Oil and Grease^[2]</u>	<u>mg/L</u>	<u>Grab</u>	<u>1/Quarter</u>
<u>pH^[3]</u>	<u>standard units</u>	<u>Grab</u>	<u>1/Day or Continuous/D</u>
<u>Temperature</u>	<u>°C</u>	<u>Grab</u>	<u>1/Day^[4]</u>
<u>Acute Toxicity^[4]</u>	<u>% Survival</u>	<u>Flow through</u>	<u>1/Month</u>
<u>Chronic Toxicity^[5]</u>	<u>TUc</u>	<u>C-24</u>	<u>2/Year</u>
<u>Ammonia</u>	<u>mg/L as N</u>	<u>C-24</u>	<u>1/Month</u>
<u>Copper^[6]</u>	<u>µg/L</u>	<u>C-24</u>	<u>1/Month</u>
<u>Cyanide^[6]</u>	<u>µg/L</u>	<u>Grab</u>	<u>1/Month</u>
<u>Silver^[6]</u>	<u>µg/L</u>	<u>Grab</u>	<u>1/Month</u>
<u>Dioxin-TEQ</u>	<u>µg/L</u>	<u>Grab</u>	<u>2/Year</u>

Unit Abbreviations:

- mg/L = milligrams per liter
- TUc = chronic toxicity units
- mg/L as N = milligrams per liter as nitrogen
- µg/L = micrograms per liter

Sample Type:

- C-24 = 24-hour composite

Sampling Frequency:

- Continuous/D = measured continuously, and recorded and reported daily
- 1/Week = Once per week
- 3/Week = Three times per week
- 1/Day = Once per day
- 1/Month = Once per month
- 1/Quarter = Once per quarter
- 2/Year = Twice per year

- ~~⁽¹⁾ The percent removal for CBOD and TSS shall be reported for each calendar month in accordance with Effluent Limitation IV.A.1. Samples for CBOD and TSS shall be collected simultaneously with influent samples.~~
- ~~⁽²⁾ Each oil and grease sampling and analysis event shall be conducted in accordance with USEPA Method 1664.~~
- ~~⁽³⁾ If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported in monthly Self Monitoring Reports (SMRs).~~
- ~~⁽⁴⁾ Acute bioassay tests shall be performed in accordance with section V.A of this MRP.~~
- ~~⁽⁵⁾ Critical life stage toxicity tests shall be performed and reported in accordance with the Chronic Toxicity Requirements of specified in section V.B of this MRP.~~
- ~~⁽⁶⁾ As total recoverable metal.~~

Unit Abbreviations:

MGD = million gallons per day
mg/L = milligrams per liter
MPN/100 mL = most probable number per 100 milliliters
Colonies/100 ml = colonies per 100 milliliters

Sampling Frequency:

Continuous/D = measured continuously, and recorded and reported daily
1/Week = Once per week
3/Week = Three times per week
2/Year = Twice per year
1/Month = Once per month
5/Month = Five times per month

- ⁽¹⁾ For effluent flows, the following information shall be reported monthly:
- Daily average flow (MGD)
 - Monthly average flow (MGD)
 - Maximum daily flow (MGD)
 - Minimum daily flow (MGD)
- ⁽²⁾ When replicate analyses are made of an enterococcus or total coliform sample, the reported result shall be the geometric mean of the replicate sample.
- ⁽³⁾ As described in Attachment G, section III.C.2.
- ⁽⁴⁾ These parameters shall be tested for only in the sample stream used for the flow-through bioassays, beginning at the start of the bioassay and then daily for the duration of the test (i.e., 0, 24, 48, 72, and 96 hours).
- ⁽⁵⁾ If after three months the Discharger has demonstrated full compliance with this enterococcus effluent limitation, the minimum monitoring frequency shall be reduced to twice per year. The two samples shall be collected in different calendar months.

Alternative request for Table E-3 (if preferred option is not accepted):

Table E-3. Effluent Monitoring at EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
<u>Flow^[1]</u>	<u>MGD</u>	<u>Continuous</u>	<u>Continuous/D</u>
<u>Dissolved Oxygen</u>	<u>mg/L</u>	<u>Grab</u>	<u>3/Week</u>
<u>Enterococcus Bacteria^[2]</u>	<u>Colonies/100 mL</u>	<u>Grab</u>	<u>5/Month^[4]</u>
<u>Total Coliform Bacteria^[2]</u>	<u>MPN/100 mL</u>	<u>Grab</u>	<u>3/Week</u>
<u>Standard Observations^[3]</u>	<u>---</u>	<u>---</u>	<u>1/Month</u>
<u>CBOD₅</u>	<u>mg/L</u>	<u>C-24</u>	<u>1/Week</u>
<u>TSS</u>	<u>mg/L</u>	<u>C-24</u>	<u>3/Week</u>
<u>CBOD and TSS % Removal^[1]</u>	<u>%</u>	<u>Calculate</u>	<u>1/Month</u>
<u>Oil and Grease^[2]</u>	<u>mg/L</u>	<u>Grab</u>	<u>1/Quarter</u>
<u>pH^[3]</u>	<u>standard units</u>	<u>Grab</u>	<u>1/Day or Continuous/D</u>
<u>Temperature</u>	<u>°C</u>	<u>Grab</u>	<u>3/Week-1/Day</u>
<u>Acute Toxicity^[4]</u>	<u>% Survival</u>	<u>Flow through</u>	<u>1/Month</u>
<u>Chronic Toxicity^[5]</u>	<u>TUc</u>	<u>C-24</u>	<u>2/Year</u>
<u>Ammonia</u>	<u>mg/L as N</u>	<u>C-24</u>	<u>1/Month</u>
<u>Copper^[6]</u>	<u>µg/L</u>	<u>C-24</u>	<u>1/Month</u>
<u>Cyanide^[6]</u>	<u>µg/L</u>	<u>Grab</u>	<u>1/Month</u>
<u>Silver^[6]</u>	<u>µg/L</u>	<u>Grab</u>	<u>1/Month</u>
<u>Dioxin TEQ</u>	<u>µg/L</u>	<u>Grab</u>	<u>2/Year</u>

Unit Abbreviations:

- mg/L = milligrams per liter
- TUc = chronic toxicity units
- mg/L as N = milligrams per liter as nitrogen
- µg/L = micrograms per liter

Sample Type:

- C-24 = 24 hour composite

Sampling Frequency:

- Continuous/D = measured continuously, and recorded and reported daily
- 1/Week = Once per week
- 3/Week = Three times per week
- 1/Day = Once per day
- 1/Month = Once per month
- 1/Quarter = Once per quarter
- 2/Year = Twice per year

^[1] The percent removal for CBOD and TSS shall be reported for each calendar month in accordance with Effluent Limitation IV.A.1. Samples for CBOD and TSS shall be collected simultaneously with influent samples.

^[2] Each oil and grease sampling and analysis event shall be conducted in accordance with USEPA Method 1664.

^[3] If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported in monthly Self Monitoring Reports (SMRs).

^[4] Acute bioassay tests shall be performed in accordance with section V.A of this MRP.

^[5] ~~Critical life stage toxicity tests shall be performed and reported in accordance with the Chronic Toxicity Requirements of specified in section V.B of this MRP.~~

^[6] ~~As total recoverable metal.~~

Unit Abbreviations:

MGD = million gallons per day

mg/L = milligrams per liter

MPN/100 mL = most probable number per 100 milliliters

Colonies/100 ml = colonies per 100 milliliters

Sampling Frequency:

Continuous/D = measured continuously, and recorded and reported daily

1/Week = Once per week

3/Week = Three times per week

2/Year = Twice per year

1/Month = Once per month

5/Month = Five times per month

^[1] For effluent flows, the following information shall be reported monthly:

- Daily average flow (MGD)
- Monthly average flow (MGD)
- Maximum daily flow (MGD)
- Minimum daily flow (MGD)

^[2] When replicate analyses are made of an enterococcus or total coliform sample, the reported result shall be the geometric mean of the replicate sample.

^[3] As described in Attachment G, section III.C.2.

^[4] If after three months the Discharger has demonstrated full compliance with this enterococcus effluent limitation, the minimum monitoring frequency shall be reduced to twice per year. The two samples shall be collected in different calendar months.

(Page E-4)

Table E-4. Effluent Monitoring at EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
<u>CBOD₅</u>	<u>mg/L</u>	<u>C-24</u>	<u>1/Week</u>
<u>TSS</u>	<u>mg/L</u>	<u>C-24</u>	<u>3/Week</u>
<u>CBOD and TSS % Removal^[1]</u>	<u>%</u>	<u>Calculate</u>	<u>1/Month</u>
<u>Oil and Grease^[2]</u>	<u>mg/L</u>	<u>Grab</u>	<u>1/Quarter</u>
<u>pH^[3]</u>	<u>standard units</u>	<u>Grab</u>	<u>1/Day or Continuous/D</u>
<u>Acute Toxicity^[4]</u>	<u>% Survival</u>	<u>Flow through</u>	<u>1/Month</u>
<u>Chronic Toxicity^[5]</u>	<u>TUc</u>	<u>C-24</u>	<u>2/Year</u>
<u>Ammonia</u>	<u>mg/L as N</u>	<u>C-24</u>	<u>1/Month</u>
<u>Copper^[6]</u>	<u>µg/L</u>	<u>C-24</u>	<u>1/Month</u>
<u>Cyanide^[6]</u>	<u>µg/L</u>	<u>Grab</u>	<u>1/Month</u>
<u>Dioxin-TEQ</u>	<u>µg/L</u>	<u>Grab</u>	<u>2/Year</u>
<u>Flow^[4]</u>	<u>MGD</u>	<u>Continuous</u>	<u>Continuous/D</u>
<u>Dissolved Oxygen</u>	<u>mg/L</u>	<u>Grab</u>	<u>1/Day</u>

Parameter	Units	Sample Type	Minimum Sampling Frequency
Enterococcus Bacteria ^[2]	Colonies/100 mL	Grab	5/Month ^[5]
Total Coliform Bacteria ^[2]	MPN/100 mL	Grab	3/Week
Standard Observations ^[2]	—	—	1/Month
Total Residual Chlorine ^[74]	mg/L	Continuous	Continuous/D

Unit Abbreviations:

mg/L = milligrams per liter

TUc = chronic toxicity units

mg/L as N = milligrams per liter as nitrogen

µg/L = micrograms per liter

Sample Type:

C-24 = 24-hour composite

Sampling Frequency:

Continuous/D = measured continuously, and recorded and reported daily

1/Week = Once per week

3/Week = Three times per week

1/Day = Once per day

1/Month = Once per month

1/Quarter = Once per quarter

2/Year = Twice per year

^[1] The percent removal for CBOD and TSS shall be reported for each calendar month in accordance with Effluent Limitation IV.A.1. Samples for CBOD and TSS shall be collected simultaneously with influent samples.

^[2] Each oil and grease sampling and analysis event shall be conducted in accordance with USEPA Method 1664.

^[3] If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported in monthly Self-Monitoring Reports (SMRs).

^[4] Acute bioassay tests shall be performed in accordance with section V.A of this MRP.

^[5] Critical life stage toxicity tests shall be performed and reported in accordance with the Chronic Toxicity Requirements of specified in section V.B of this MRP.

^[6] As total recoverable metal.

^[74] Daily maximum shall be reported. If a detectable amount of total residual chlorine is reported, the length of time that total residual chlorine was detected shall be reported. Alternatively, the Discharger may evaluate compliance with this requirement by recording discrete readings from the continuous monitoring every hour on the hour, or by collecting grab samples every hour, for a total of 24 samples or readings per day if the following conditions are met: (a) the Discharger shall retain continuous monitoring readings for at least three years; (b) the Discharger shall acknowledge in writing that the Regional Water Board reserves the right to use all other continuous monitoring data for discretionary enforcement; (c) the Discharger must provide in writing the brand names, model numbers, and serial numbers of the equipment used to continuously monitor dechlorinated final effluent chlorine residual.

Unit Abbreviations:

MGD = million gallons per day

mg/L = milligrams per liter

MPN/100 mL = most probable number per 100 milliliters

Colonies/100 ml = colonies per 100 milliliters

Sampling Frequency:

- ~~Continuous/D~~ = measured continuously, and recorded and reported daily
- ~~1/Day~~ = Once per day
- ~~3/Week~~ = Three times per week
- ~~2/Year~~ = Twice per year
- ~~1/Month~~ = Once per month
- ~~5/Month~~ = Five times per month

~~^{f1} For effluent flows, the following information shall be reported monthly:~~

- ~~• Daily average flow (MGD)~~
- ~~• Monthly average flow (MGD)~~
- ~~• Maximum daily flow (MGD)~~
- ~~• Minimum daily flow (MGD)~~

~~^{f2} When replicate analyses are made of an enterococcus or total coliform sample, the reported result shall be the geometric mean of the replicate sample.~~

~~^{f3} As described in Attachment G, section III.C.2.~~

~~^{f5} If after three months the Discharger has demonstrated full compliance with this enterococcus effluent limitation, the minimum monitoring frequency shall be reduced to twice per year. The two samples shall be collected in different calendar months.~~

4. CMSA requests several changes to Table E-6, Pretreatment and Biosolids Monitoring Requirements, consistent with current permitting practices.

Table E-6 of the TO, as written and as compared to the current NPDES permit (Order No. R2-2007-0007), includes increased monitoring frequencies for influent and effluent monitoring for base/neutrals and acids extractable organic compounds (BNAs) as well as the addition of a number of constituents (organophosphorous and carbamate and urea pesticides). Attachment H, Pretreatment Program Standard Provisions, was recently revised to allow Bay Area agencies to obtain *reduced* monitoring requirements where justifiable based on historic monitoring data. Increasing Pretreatment monitoring is contrary to these regional efforts. The additional monitoring requirements would also increase costs to CMSA, and no basis or rationale is included in the TO to explain their necessity or justify their expense.

Separately, grab samples are currently collected for mercury monitoring, whereas the TO indicates that 24-hour samples are to be collected for this constituent. CMSA requests a “grab” sample type for mercury, as allowed in Order No. R2-2007-0077, the Mercury Watershed Permit, and Order No. R2-2012-0004, the NPDES permit for the East Bay Dischargers Authority.

Lastly, CMSA requests that sample types are listed as “grab” rather than “grabs” for the applicable constituents, so there is no confusion regarding the sample type.

The requested revisions are shown below.

(Page E-10)

Table E-6. Pretreatment and Biosolids Monitoring Requirements

Constituents	Influent	Effluent ⁽¹⁾	Biosolids	Sample Type	
				INF-001 & EFF-002	Biosolids

Constituents	Influent	Effluent ⁽¹⁾	Biosolids	Sample Type	
				INF-001 & EFF-002	Biosolids
VOC ⁽²⁾	2/year	2/year	2/year	grabs ^(6a)	grabs ^(6be)
BNA ⁽³⁾	12/year	12/year	2/year	grabs ^(6a)	grabs ^(6be)
Organophosphorous Pesticides	2/year	2/year	2/year	24-hour composite ^(6a)	grabs ^(6e)
Carbamate and Urea Pesticides	2/year	2/year	2/year	24-hour composite ^(6a)	grabs ^(6e)
Metals ⁽⁴⁾	1/month	1/month	2/year	24-hour composite ^(6a)	grabs ^(6be)
Hexavalent Chromium ⁽⁵⁾	1/month	1/month	2/year	grabs ^(6a)	grabs ^(6be)
Mercury	1/month	1/month	2/year	grab-24-hour composite ^(6a,6b)	grabs ^(6be)
Cyanide	1/month	1/month	2/year	grabs ^(6a)	grabs ^(6be)

Footnotes for Table E-5:

- (1) The Discharger may elect to use the effluent monitoring conducted in accordance with Table E-4 to satisfy these pretreatment monitoring requirements.
- (2) VOC: volatile organic compounds
- (3) BNA: base/neutrals and acids extractable organic compounds
- (4) The metals are arsenic, cadmium, copper, lead, nickel, silver, zinc, and selenium.
- (5) The Discharger may elect to report total chromium instead of hexavalent chromium. Samples collected for total chromium measurements shall be 24-hour composites.
- (6) Sample types:
 - a. If an automatic compositor is used, the Discharger shall obtain 24-hour composite samples through flow-proportioned composite sampling. Alternatively, 24-hour composite samples may consist of discrete grab samples combined (volumetrically flow-weighted) prior to analysis or mathematically flow-weighted.
 - b. ~~The Discharger may use automatic compositors for mercury if either (1) the compositing equipment (hoses and containers) comply with ultraclean specifications, or (2) appropriate equipment blank samples demonstrate that the compositing equipment has not contaminated the sample.~~
 - b.e. The biosolids sample shall be a composite of the biosolids to be disposed. Biosolids collection and monitoring shall comply with the requirements specified in Attachment H, Appendix H-4. The Discharger shall also comply with the biosolids monitoring requirements of 40 CFR 503.

5. CMSA requests that Table F-8, Monitoring Requirements Summary, be revised for consistency with monitoring requirements throughout the permit.

Several revisions to Table F-8 are needed for consistency with monitoring requirements throughout the permit. These revisions are shown below, including both edits that are needed to correct inconsistencies in the TO as written as well as those reflecting the requested changes described in this comment letter. The preferred option and alternate request are included to reflect those alternatives shown in Comment 3, above.

(Page F-31)

Preferred option:

Table F-8. Monitoring Requirements Summary

Parameter	Influent INF-001	<u>Effluent EFF-001</u>	Effluent EFF-002 <u>(EFF-001 after dechlorination)</u>	<u>Effluent E-002</u> <u>(E-001 after dechlorination)</u>	Effluent E-002b (during blending)	Sludge and Biosolids B-001	Receiving Water
Flow	<u>Continuous</u>	<u>Continuous</u>		<u>Continuous</u>	Continuous		
CBOD	1/Week		1/Week		1/Year		

TSS	1/Week		3/Week		1/Day		
Oil and Grease			1/Quarter				
pH			1/Day or Continuous		1/Day or Continuous		Support RMP
Chlorine Residual			Continuous	Continuous	Continuous		
Acute Toxicity			1/Month				Support RMP
Chronic Toxicity			2/Year				Support RMP
Total Coliform		3/Week		3/Week	1/Year		Support RMP
Enterococcus		2/Year		2/Year			Support RMP
Dissolved Oxygen		1/Day		1/Day			Support RMP
Temperature		1/Day	1/Day		1/Year		Support RMP
Copper			1/Month		1/Year		Support RMP
Cyanide	1/Month		1/Month		1/Year	2/Year	Support RMP
Silver			1/Month		1/Year		Support RMP
Ammonia			1/Month		1/Year		Support RMP
Dioxin-TEQ			2/Year				Support RMP
VOCs & BNA	2/Year		2/Year			2/Year	Support RMP
BNA	1/Year		1/Year			2/Year	Support RMP
Organophosphorus Pesticides	2/Year		2/Year			2/Year	Support RMP
Carbamate and Urea Pesticides	2/Year		2/Year			2/Year	Support RMP
Metals, including Hexavalent Chromium and Mercury	1/Month		1/Month			2/Year	Support RMP
All Other Priority Pollutants			1/Year				Support RMP
Standard Observations		1/Month		1/Month			
Metric tons/year						See Att. G § III.B.1	
Paint filter test						See Att. G § III.B.2	

Alternate request (if preferred option is not accepted):

Table F-8. Monitoring Requirements Summary

Parameter	Influent INF-001	<u>Effluent EFF-001</u>	Effluent EFF-002 ¹ (EFF-001 after dechlorination)	<u>Effluent E-002</u> (E-001 after dechlorination)	Effluent E-002b (during blending)	Sludge and Biosolids B-001	Receiving Water
Flow	<u>Continuous</u>	<u>Continuous</u>		<u>Continuous</u>	Continuous		
CBOD	1/Week		1/Week		1/Year		
TSS	1/Week		3/Week		1/Day		
Oil and Grease			1/Quarter				
pH			1/Day or Continuous		1/Day or Continuous		Support RMP
Chlorine Residual			<u>Continuous</u>	<u>Continuous</u>	Continuous		
Acute Toxicity			1/Month				Support RMP
Chronic Toxicity			2/Year				Support RMP
Total Coliform		<u>3/Week</u>		<u>3/Week</u>	1/Year		Support RMP
Enterococcus		<u>2/Year</u>		<u>2/Year</u>			Support RMP
Dissolved Oxygen		<u>3/Week</u>		<u>4/Day</u>			Support RMP
Temperature		<u>3/Week</u>	<u>4/Day</u>		1/Year		Support RMP
Copper			1/Month		1/Year		Support RMP
Cyanide	1/Month		1/Month		1/Year	2/Year	Support RMP
<u>Silver</u>			<u>1/Month</u>		<u>1/Year</u>		<u>Support RMP</u>
Ammonia			1/Month		1/Year		Support RMP
Dioxin-TEQ			2/Year				Support RMP
VOCs & <u>BNA</u>	2/Year		2/Year			2/Year	Support RMP
<u>BNA</u>	<u>1/Year</u>		<u>1/Year</u>			<u>2/Year</u>	<u>Support RMP</u>
<u>Organophosphorus Pesticides</u>	<u>2/Year</u>		<u>2/Year</u>			<u>2/Year</u>	<u>Support RMP</u>
<u>Carbamate and Urea Pesticides</u>	<u>2/Year</u>		<u>2/Year</u>			<u>2/Year</u>	<u>Support RMP</u>
Metals, including Hexavalent Chromium and Mercury	1/Month		1/Month			2/Year	Support RMP
All Other Priority Pollutants			1/Year				Support RMP
Standard Observations		<u>1/Month</u>		<u>1/Month</u>			
Metric tons/year						See Att. G § III.B.1	
Paint filter test						See Att.	

						G § III.B.2	
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Comments 6 - 9 pertain to typographical errors and inconsistencies contained in the Tentative Order and indicate CMSA’s requested corrections.

6. Revision to page 14:

ii. Final Report

The Discharger shall submit a final report that presents all these data to the Regional Water Board ~~no later than 180 days prior to the Order expiration date.~~ ~~The final report shall be submitted~~ with the application for permit reissuance due January 31, 2017.

7. Revision to page F-6:

Table F-3. Historic Effluent Limitations and Monitoring Data for Conventional and Non-Conventional Pollutants and Toxic Pollutants

Parameter	Units	Effluent Limitations			Monitoring Data (From 04/07- 04/11)	
		Monthly Average	Weekly Average	Daily Maximum	Average ^[1]	Range
5-day Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	mg/L	25	40	---	<6.1	2.0-43
Total Suspended Solids (TSS)	mg/L	30	45	---	6.4	0.5-65
Oil and Grease	mg/L	10	---	20	<2.3	1.2- 5.0 <u>2.7</u>
Total Coliform Bacteria	Colonies/100 mL	240	---	10,000	<70	2.0- 3,000 <u>5,000</u>
Copper	µg/L	13	22		4.4	2.0-12
Cyanide	µg/L	21	41		<2.7	0.6-4.9
Dioxin-TEQ	µg/L	1.4x10 ⁻⁸	2.8x10 ⁻⁸		1.5x10 ⁻⁹	7.8x10 ⁻¹² -6.3x10 ⁻⁹

Unit Abbreviations:

mg/L = milligrams per liter
s.u. = standard units
mL = milliliters
µg/L= micrograms per liter

[1] Some of the values used to calculate the average were below the minimum detection level. In those cases, the minimum detection level was used to calculate an average likely higher than the “true” average, as denoted by “<”.

8. Revision to page F-30:

2. **Chronic Toxicity.** This Order establishes a requirement for the Discharger to conduct chronic toxicity testing twice a year to ensure the discharge has acceptable levels of chronic toxicity. The Discharger conducted an effluent toxicity screening study during the previous permit term. The study concluded that the *Americamysis bahia* (mysid shrimp) was the most sensitive species. The permit, therefore, requires the use of *Americamysis bahia* as the chronic toxicity test species. The Discharger is to re-screen in accordance with MRP Appendix E-1 (Attachment E) after any significant change in the nature of the effluent or [prior to submittal of the application for permit reissuance, due January 31, 2017](#) ~~180 days prior to the expiration of this Order.~~

9. *Revision to page F-32:*

Table E-1. Monitoring Station Locations

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description
Influent	INF-001 (formerly M-INF)	At any point in the treatment facility headworks at which all waste tributary to that plant is present and preceding any phase of treatment. Recycle streams from internal treatment plant processes may be included in the flow for this sampling station.
Effluent	EFF-001 (formerly ME -001)	At any point in the outfall between the point of discharge and the point at which all flow tributary to the outfall is present.
Effluent	EFF-002 (formerly ME -002)	At any point in the outfall following dechlorination.
Effluent	EFF-002b	At any point in the treatment facility at which all blended fully treated and primary treated waste tributary to the discharge outfall is present (may be the same location as EFF-001 or EFF-002).
Biosolids	BIO-001 (formally B-001)	Sludge in the treatment facility.