

**State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**ORDER NO. R4-2008-0082
AMENDING EFFLUENT LIMITATIONS
FOR
ORDER NO. R4-2005-0024
(NPDES NO. CA0053856)**

ISSUED TO

**CITY OF LOS ANGELES
TERMINAL ISLAND TREATMENT PLANT**

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter Regional Board), finds:

1. On November 12, 2002, the Regional Board staff held a meeting with Bureau of Sanitation staff to discuss issues pertaining to the upcoming reissuance of the Terminal Island Treatment Plant (TITP) NPDES Permit. During that meeting, the City of Los Angeles (City) elected to develop a workplan for a Mixing Zone and Dilution Credit Study (Study), which would address the eleven conditions under which a mixing zone is allowed, according to Section 1.4.2.2.A. of the State Implementation Plan (SIP). On February 21, 2003, the City submitted the workplan, which included an eight-week schedule for completing the Study. Regional Board staff approved the workplan on March 28, 2003.

2. On May 28, 2004, the Regional Board received the City's final report of the Study. The resulting acute dilution ratios D_a ranged from 86:1 for Case A (15% brine – 85% effluent blend discharged at 12 mgd) to 82:1 for Case E (100% tertiary flow discharged at 17 mgd); and the resulting chronic dilution ratios D_c ranged from 215:1 for Case A (15% brine – 85% effluent blend discharged at 12 mgd) to 205:1 for Case E (100% tertiary flow discharged at 17 mgd). On September 3, 2004, the State Water Resources Control Board (State Board) partially approved the results of the Study, which is *“These dilution ratios appear to be appropriate for establishing an acute mixing zone and dilution credit as defined in the SIP.”* The State Board staff found that the Study did not provide sufficient information to cover the current daily maximum flow. The State Board staff suggested the use of a chronic dilution ration conservative applied as the unmodified acute dilution ration, i.e., $D_c = D_a$. This will result in a single dilution credit, similar to the minimum initial dilution ration D_m found in most ocean discharge permits. The current quantity of tertiary-treated effluent discharged into the Harbor fluctuates and ranges between 15 and 23 mgd. The Study did not provide the sufficient information to cover the current daily maximal flow. Therefore, the most conservative dilution credit of 61 was chosen

for calculating the final effluent limits for the purpose of protecting aquatic life, human health, and receiving water quality.

3. The dilution credit of 61 was not available for the final effluent limitations of certain constituents, specified in NPDES Order No. R4-2005-0024 adopted by the Regional Board on April 7, 2005, for the following reasons:
 - A. Receiving water background concentrations of ammonia and MBAS were not available; and,
 - B. Copper, lead, mercury, and silver had been detected in the receiving water, at least once, at a concentration greater than the CTR criteria.

As a result, the City was required to collect monthly receiving water data for one year. Once the data were made available, the permit could be reopened and the dilution ratio for these constituents granted, if the City demonstrated that the concentrations of these constituents in the receiving water are less than the relevant standards.

4. On September 6, 2007, the City submitted background concentration study results for the Los Angeles Harbor, and requested of a reopening of TITP's NPDES Order No. R4-2005-0024 to include dilution credit for ammonia, MBAS, copper, lead, mercury, and silver. The results indicate that the application of a dilution credit of 61 for these constituents is appropriate.
5. The purpose of this Order is to amend sections I.2.B.a. and I.2.B.b. of Order No. R4-2005-0024 to reflect the dilution credit for the specified constituents. The Regional Board notified the City and interested agencies and persons of its intent to adopt the amended waste discharge requirements; and to amend section I.2.G.a by deleting the interim limits for the specified constituents.

The Regional Board, in a public hearing, heard and considered all testimony pertinent to this matter. All Orders referred to above, Regional Board files on this matter, and records of hearings and testimony therein are included in the administrative record for this matter.

IT IS HEREBY ORDERED that the following Order, adopted by this Regional Board on April 7, 2005, is hereby amended as follows (additions are underlined, deletions are lined through):

1. **Section I.2.B.a. Conventional and nonconventional pollutants:**

Constituent	Units	Discharge Limitations		
		Monthly Average ^[1]	Weekly Average ^[1]	Daily Maximum ^[2]
BOD ₅ 20°C	mg/L	15 ^[3]	30 ^[3]	40 ^[3]
	lbs/day ^[4]	3,800 ^[4]	7,500 ^[4]	10,000 ^[4]
Suspended solids	mg/L	15 ^[3]	30 ^[3]	40 ^[3]
	lbs/day ^[4]	3,800 ^[4]	7,500 ^[4]	10,000 ^[4]
Settleable solids	ml/L	0.1 ^[3]	--	0.3 ^[3]
Oil and grease	mg/L	10 ^[3]	--	15 ^[3]
	lbs/day ^[4]	2,500 ^[4]	--	3,800 ^[4]
Total residual chlorine	mg/L	--	--	0.1 ^[5]
MBAS	mg/L	0.5 ^[6,7]	--	--
	lbs/day ^[4]	31 ^[6]	--	--
Summer total ammonia (May – October)	mg/L	0.71 ^[6,8]	--	4.7 ^[6,9]
	lbs/day ^[4]	44 ^[6]	--	290 ^[6]
Winter total ammonia (November – April)	mg/L	1.3 ^[6,10]	--	8.4 ^[6,11]
	lbs/day ^[4]	330	--	2,100
Radioactivity ^{[12][1]}				
Gross alpha	pCi/L	--	--	15
Gross beta	pCi/L	--	--	50
Combined radium 226 & 228	pCi/L	--	--	5
Tritium	pCi/L	--	--	20,000
Strontium	pCi/L	--	--	8
Uranium	pCi/L	--	--	20

Footnotes:

[1]. Average Monthly Discharge Limitation means the highest allowable average of daily discharge over a calendar month, calculated as the sum of all daily discharges measured during that month divided by the number of days on which monitoring was performed.

Average Weekly Discharge Limitation means the highest allowable average of daily discharge over a calendar week, calculated as the sum of all daily discharges measured during that week divided by the number of days on which monitoring was performed.

[2]. The daily maximum effluent concentration limit shall apply to flow weighted 24-hour composite samples and grab samples. It may apply to grab samples if the collection of composite samples for those constituents is not appropriate because of instability of the constituents.

- [3]. The existing permit limit is carried over.
- [4]. The mass emission rates are calculated as follows: $30 \text{ (mgd)} \times \text{Concentration (mg/L)} \times 8.366 \text{ (conversion factor)} = \text{lbs/day}$. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.
- [5]. The existing permit limit is carried over. For the determination of compliance with total residual chlorine limit, one of the following applies:

Total residual chlorine concentration excursions of up to 0.3 mg/L, at the point in treatment train immediately following dechlorination, shall not be considered violations of this requirement provided the total duration of such excursions do not exceed 15 minutes during any calendar day. Peaks in excess of 0.3 mg/L lasting less than one minute shall not be considered a violation of this requirement; or

For continuous total residual chlorine recording devices that require greater than one minute to level off after the detection of a spike: if it can be demonstrated that a stoichiometrically appropriate amount of dechlorination chemical has been added to effectively dechlorinate the effluent to 0.1 mg/L or less, then the exceedance over one minute, but not for more than five minutes, will not be considered to be a violation.

- [6]. The effluent concentration is based on a dilution ratio of 61.
- [6]. ~~Receiving water (background) concentration is not available. Therefore, the dilution ratios are not applicable. Once the Discharger collects monthly data of receiving water for a year, which are submitted to the Regional Board. The final effluent concentration and mass emission may be modified.~~
- [7]. ~~The concentrations of MBAS in the last permit cycle are between 0.090 mg/L to 0.368 mg/L, which do not exceed the Basin Plan's MBAS WQO (0.5 mg/L). Therefore, interim limit for MBAS is unnecessary, even though the Reasonable Potential Analysis projects MBAS that may exceed the Basin Plan's MBAS WQO.~~
- [8]. ~~This is the salt water total ammonia Water Quality Objective during summer, the lowest monthly average (see Table F8A) of total ammonia projected among water quality monitoring stations (HWs 20, 40-44, 50-54, and 62-64) in the receiving water, based on the eight monitoring data collected between May and October of 2000 and 2002, according to the methodology listed in the Resolution No. 2004-022, "Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life", adopted by the Regional Board on March 4, 2004. The Water Quality Objective will ultimately serve as the effluent limitation for the discharge. This limit becomes effective after the USEPA approves the Resolution No. 2004-022. If U.S. EPA does not approve the Resolution No. 2004-022, this effluent limitation including mass will not apply.~~
- [9]. ~~This is the salt water total ammonia Water Quality Objective during summer, the lowest daily maximum (see Table F8B) of total ammonia projected among water quality monitoring stations (HWs 20, 40-44, 50-54, and 62-64) in the receiving~~

~~water, based on the Bight monitoring data collected between May and October of 2000 and 2002, according to the methodology listed in the Resolution No. 2004-022, "Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life", adopted by the Regional Board on March 4, 2004. The Water Quality Objective will ultimately serve as the effluent limitation for the discharge. This limit becomes effective after the USEPA approves the Resolution No. 2004-022. If U.S. EPA does not approve the Resolution No. 2004-022, this effluent limitation including mass will not apply.~~

~~[10]. This is the salt water total ammonia Water Quality Objective during winter, resulting from the lowest monthly average (see Table F8A) of total ammonia projected among water quality monitoring stations (HWs 20, 40-44, 50-54, and 62-64) in the receiving water, based on the Bight monitoring data collected between January and April and between November and December of 2000 and 2002, according to the methodology listed in the Resolution No. 2004-022, "Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life", adopted by the Regional Board on March 4, 2004. The Water Quality Objective will ultimately serve as the effluent limitation for the discharge. This limit becomes effective after the USEPA approves the Resolution No. 2004-022. If U.S. EPA does not approve the Resolution No. 2004-022, this effluent limitation including mass will not apply.~~

~~[11]. This is the salt water total ammonia Water Quality Objective during winter, resulting from the lowest daily maximum (see Table F8B) of total ammonia projected among water quality monitoring stations (HWs 20, 40-44, 50-54, and 62-64) in the receiving water, based on the Bight monitoring data collected between January to April and between November and December of 2000 and 2002, according to the methodology listed in the Resolution No. 2004-022, "Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life", adopted by the Regional Board on March 4, 2004. The Water Quality Objective will ultimately serve as the effluent limitation for the discharge. This limit becomes effective after the USEPA approves the Resolution No. 2004-022. If U.S. EPA does not approve the Resolution No. 2004-022, this effluent limitation including mass will not apply.~~

~~[12][7]~~ Effluent limits for radioactivity are based on Maximum Contaminant Levels (MCLs) specified in Title 22, Chapter 15, Article 5, Section 64443, California Code of Regulations.

2. Section I.2.B.b. Toxic pollutants:

CTR # ^[1]	Constituent	Units	Discharge Limitations	
			Monthly Average ^[2]	Daily Maximum
6	Copper ^[3, 4, 5, 7]	µg/L	2.1 91 ^[8]	5.8 210 ^[8]
		lbs/day ^[6]	0.53 23 ^[6]	1.46 54 ^[6]
7	Lead ^[3, 4, 5, 7]	µg/L	6.6 270 ^[8]	15 830 ^[8]
		lbs/day ^[6]	1.7 67 ^[6]	3.8 210 ^[6]
8	Mercury ^[3, 4, 5, 7]	µg/L	0.051 2.1 ^[8]	0.094 3.7 ^[8]
		lbs/day ^[6]	0.013 0.52 ^[6]	0.024 0.93 ^[6]
9	Nickel ^[3, 4, 7]	µg/L ^[9]	120 ^[8]	250 ^[8]
		lbs/day ^[6]	30 ^[6]	63 ^[6]
11	Silver ^[3, 4, 5, 7]	µg/L	0.81 47 ^[8]	2.2 120 ^[8]
		lbs/day ^[6]	0.20 12 ^[6]	0.55 31 ^[6]
14	Cyanide ^[4, 9]	µg/L	0.50	1.0
		lbs/day ^[6]	0.13 ^[6]	0.25 ^[6]
68	Bis(2-ethylhexyl)phthalate ^[3, 4, 7]	µg/L ^[9]	190 ^[8]	560 ^[8]
		lbs/day ^[6]	48 ^[6]	140 ^[6]
111	Dieldrin ^[4, 9]	µg/L	0.00014	0.00028
		lbs/day ^[6]	0.000035 ^[6]	0.000070 ^[6]

Footnotes to discharge limitations:

- [1]. This number corresponds to the compound number found in Table 1 of CTR. It is simply the order in which the 126 priority pollutants were listed 40 CFR section 131.38 (b)(1).
- [2]. The daily maximum effluent concentration limit shall apply to flow weighted 24-hour composite samples and grab samples. It may apply to grab samples if the collection of composite samples for those constituents is not appropriate because of instability of the constituents.
- [3]. Concentration expressed as total recoverable.
- [4]. This constituent shows reasonable potential.
- [5]. This constituent concentration in receiving water is higher than water quality criteria of this constituent. Therefore, dilution credit is not applicable for this constituent.

- [6]. The mass emission rates are calculated as follows: 30 (mgd) x Concentration (µg/L) x 0.008366 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.
- [7]. This constituent concentration in receiving water is lower than water quality criteria of this constituent. Therefore, dilution credit is applicable for this constituent.
- [8]. The effluent concentration is based on a dilution ratio of 61.
- [9]. Minimal detection limit used for analyzing this constituent in receiving water is higher than water quality criteria of this constituent. Dilution credit is not applicable for this constituent, even though the all results showed non-detected. The Discharger shall collect monthly receiving water data for one year. Once the data are available, the permit will be reopened and the dilution ratio for these constituents will be granted, if the City demonstrates that the concentrations of these constituents in the receiving water are less than the relevant WQOs.

3. Section I.2.G.a. Interim Effluent Limitations:

Constituent	Units	Monthly Average	Daily Maximum
Total Ammonia ^[1]	mg/L	7.4	20
Copper ^[2]	µg/L	74	---
Lead ^[2]	µg/L	8.6	---
Mercury ^[2]	µg/L	0.30	---
Silver ^[2]	µg/L	3.8	---
Cyanide ^[1,2]	µg/L	11	---
Dieldrin ^[1,2]	µg/L	0.004	---

Footnote:

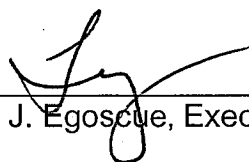
[1]. Interim effluent limit was derived statistically at 95 percentile for monthly average and at the 99 percentile for the daily maximum interim limits. Effluent performance data, provided by the City, from July 1997 through June 2004 and the *Minitab* program, which is based on lognormal base e, were used to calculate the interim limits.

[12]. The maximum effluent concentration is the interim limit.

- 4. The Expiration date, and all other Limitations, Requirements, and Provisions of Order No. R4-2004-0025 are unchanged and shall remain in full force and effect.

IT IS SO ORDERED.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on October 2, 2008.



Tracy J. Egoscue, Executive Officer