

**California Regional Water Quality Control Board
San Francisco Bay Region**

RESPONSE TO WRITTEN COMMENTS

On the Reissuance of an NPDES Permit for Discharges from
C&H Sugar Company and Crockett Community Services District

The Regional Water Board received written comments from the following parties on a tentative order distributed from July 27 through August 30, 2012, for public comment:

- C&H Sugar Company,
- Crockett Community Services District, and
- San Francisco Baykeeper.

This response to comments summarizes each comment in italics, followed by Regional Water Board staff response. For the full content and context of each comment, refer to the comment letters. All revisions to the tentative order are shown with underline for additions and ~~strikethrough~~ for deletions.

C&H SUGAR COMPANY

C&H Comment 1

P.1, Table 2. Discharge Locations

C&H proposes removing Discharge Point 007 from Table 2 because it is redundant.

Response to Comment 1

We agree and revised Table 2 of the tentative order as follows:

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
⋮				
006	Stormwater from community streets and truck parking areas: estimated flow is 1,000 gpd.	38° 03' 27" N	122° 13' 31" W	Carquinez Strait
007	Stormwater from community streets, hills, and truck loading station: estimated flow is less than 100 gpd.	38° 03' 27" N	122° 13' 18" W	Carquinez Strait
008	Stormwater from Refinery yard: estimated flow is 3,000 gpd.	38° 03' 27" N	122° 13' 11" W	Carquinez Strait
⋮				

C&H Comment 2

P.2, II. Findings, B. Facility Description and Discharge Location

C&H notes that the Refinery's sanitary wastewater flow is about 0.032 MGD, not 0.01 MGD.

Response to Comment 2

We agree but note that the Crockett Community Services District's comments 4 and 11 assert that the appropriate flow should be less than 0.04 MGD. We confirmed with C&H that the flow should be less than 0.04 MGD. Therefore, we revised Finding B, Facility Description (Paragraph 4), as follows:

The Joint Treatment Plant is an activated sludge wastewater treatment facility that treats primary-treated sugar refining wastewater and pretreated (comminuted and de-gritted) domestic wastewater from ~~the Crockett Community Services District~~. The Refinery's sanitary wastes and tank truck washings, which account for less than 0.04 ~~0.01~~ MGD, are combined with the pretreated sewage from the District....

C&H Comment 3

P.4, H. Water Quality Control Plans - Requirements of this Order Implement Thermal Plan

C&H notes that the previous order more fully explained how the permit complies with the Thermal Plan.

Response to Comment 3

We agree and revised Fact Sheet section III.C.1 as follows:

Water Quality Control Plans. *The Water Quality Control Plan for the San Francisco Bay Basin* (hereinafter Basin Plan) is the Regional Water Board's master water quality control planning document....

The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (hereinafter Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters and establishes specific limitations for thermal wastes (cooling water and industrial process water used for the purpose of transporting waste heat) and elevated temperature wastes (liquid, solid, or gaseous material including thermal waste discharged at a temperature higher than the natural temperature of receiving water), ~~which are applicable to the C&H Sugar Company facility.~~

The Thermal Plan establishes ~~limitations for existing discharges of elevated temperature waste and thermal waste to estuarine environments. Those applicable to the Refinery discharges are~~ that elevated temperature waste discharges, either individually or combined with other discharges, are shall not to create a zone, defined by water temperature of more than 1°F above natural receiving water temperatures, which exceeds 25 percent of the cross sectional area of a main river channel at any point. In addition, no elevated temperature waste discharge is to

shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place. These requirements apply to Discharge Point 001. The Thermal Plan also establishes that elevated temperature waste discharges are not to exceed the natural receiving water temperature by more than 20°F, and that the maximum temperature of thermal waste discharges is not to exceed 86°F. State Water Board Resolution No. 75-72, issued on July 17, 1975, and approved by USEPA on September 2, 1975, however states that discharges from Discharge Points 001 and 002 are exempt from these last two requirements.

C&H Comment 4

P.10, E.3, Whole Effluent Acute Toxicity – Discharge Point 002

C&H notes that the Tentative Order calls for bioassays to be performed using the most up-to-date U.S. EPA protocol and to follow the requirements described in MRP section V.A. C&H requests that the Tentative Order be revised to allow the Executive Officer or the Environmental Laboratory Accreditation Program (ELAP) to grant exceptions.

Response to Comment 4

The tentative order requires the use of standard methods. If the use of these methods proves unworkable, we will work with C&H and ELAP to resolve such problems if, and when, they arise. MRP sections V.A.4 and V.B.1.c indicate that, if the Discharger can demonstrate that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, toxicity may be evaluated after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer is required to authorize such an adjustment.

C&H Comment 5

P.14, (2) Reporting Requirements (a) Routine Reporting

C&H notes that the Tentative Order requires that, within 30 days of receiving analytical results, C&H is to report them in the transmittal letter for the appropriate monthly self-monitoring report. C&H seeks to clarify that it is to report the results with the self-monitoring report due within 30 calendar days following receipt of the results.

Response to Comment 5

We agree. No change is necessary.

C&H Comment 6

P.20, 6. Other Special Provisions, a. Copper Action Plan for Discharge Point 001 and Discharge Point 002

C&H asserts that the requirement for a Copper Action Plan only applies to Discharge Point 002, not Discharge Point 001, in accordance with Order R2-2007-0042.

Response to Comment 6

We agree. Basin Plan section 7.2.1.2 requires copper action plans for wastewater treatment facilities, but the once-through cooling water discharged at Discharge Point 001 does not receive treatment. We revised Provision VI.C.6.a as follows:

Copper Action Plan for ~~Discharge Point 001~~ and Discharge Point 002

The discharger shall continue to implement source control, and pollution prevention for copper in Discharge Point 002 in accordance with the following tasks and time schedule....

C&H Comment 7

P.21, 6. Other Special Provisions, b. Cyanide Action Plan for Discharge Point 001 and Discharge Point 002

C&H asserts that the requirement for a Cyanide Action Plan only applies to Discharge Point 002, not Discharge Point 001, in accordance with Order R2-2006-0086.

Response to Comment 7

We agree. Any cyanide in the once-through cooling water discharged at Discharge Point 001 is present in the Carquinez Strait intake. We revised VI.C.6.b as follows:

Cyanide Action Plan for ~~Discharge Point 001~~ and Discharge Point 002

The Discharger shall continue to implement monitoring and surveillance, source control, and pollution prevention for cyanide in Discharge Point 002 in accordance with the following tasks and time schedule....

C&H Comment 8

Attachment A – Definitions, p.A-3 - Not detected (ND), Sample results less than the laboratory’s MDL

C&H notes that the Tentative Order defines “not detected” (ND) as a sample result less than the laboratory’s method detection limit (MDL). Laboratories are required to report data at the laboratory reporting-limit (RL) for the method employed. The RL is based on method-specific calibrations, reference materials, and the method detection limit (MDL). If the laboratory reports data as “ND,” this often refers to a concentration that is below the RL, but not the MDL, so the definitions are potentially confusing. C&H suggests removing the definition of “ND.”

Response to Comment 8

We disagree. C&H may wish to work with its laboratory to ensure that its submittals use terms consistent with the permit. In conjunction with the definitions for “method detection limit” (MDL), “minimum level” (ML), and “reporting level” (RL) in Attachment A, the definition of “not detected” (ND) becomes clear. These definitions are based on the State Implementation Policy and are consistent with the NPDES permit template used throughout the State.

C&H Comment 9

Attachment E, Monitoring and Reporting Program (MRP), p.E-2, Table E-1 Monitoring Station Locations

C&H notes that its participation in the Regional Monitoring Program (RMP) should satisfy any specific need for receiving water monitoring.

Response to Comment 9

We agree. MRP section VI states, “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 San Francisco Bay. The Discharger’s participation and support of the RMP is used in consideration of the level of receiving water monitoring required by this Order.” However, we retained the description of the receiving water monitoring stations in MRP Table E-1 for consistency with past monitoring in the event that future monitoring becomes necessary. We also clarified in the tentative order that no additional receiving water monitoring is currently required.

We revised MRP section II, Monitoring Locations, as follows:

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order. No monitoring is currently required at Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004.

C&H Comment 10

Attachment E, III. Influent Monitoring Requirements, p.E-3, Table E-2. Intake and Influent Monitoring – INF-001, INF-002 and INF-003

C&H requests changing the sample type for arsenic, copper, cyanide, lead, nickel, selenium, and zinc from “grab” to “24-hour composite,” and removing COD monitoring since there are no COD effluent limits. C&H also requests that the sampling frequency for INF-001 (cooling water intake) be 2/year, rather than 1/month. Finally, C&H requests removing sampling requirements for INF-002 (Crockett Community Services District Influent) and INF-003 (Refinery Influent).

Response to Comment 10

We agree with most of these changes, with a few exceptions. We retained the sampling requirements for INF-002 and, in fact, added monitoring requirements for INF-003. We need these influent flow data to determine the relative flows of sanitary waste and Refinery process waste and to calculate technology-based effluent limits for the next permit reissuance. We also retained grab sampling for cyanide at INF-001 to be consistent with MRP Table E-3. Unless properly preserved, cyanide is a relatively unstable compound, so grab sampling and analysis is more appropriate than collecting samples over an extended period.

We revised MRP Table E-2 as follows (these revisions include changes related to lead and cyanide made in response to C&H Comments 16 and 18:

Table E-2. Intake and Influent Water Monitoring –INF-001, INF-002, and INF-003

Parameter	Units	Sampling method	Minimum Sampling Frequency		
			INF-001 Intake	INF-002 Influent	INF-003 Influent
Flow ^[1]	MGD	Continuous	Continuous	Continuous	<u>Continuous</u>
Arsenic	µg/L	<u>24-hour composite</u> Grab			
Copper	µg/L	<u>24-hour composite</u> Grab	<u>2/Year 1/Month</u>		
Cyanide	µg/L	Grab	1/Month	<u>2 4/Year</u>	<u>4/Year</u>
Lead	µg/L	Grab	1/Month		
Nickel	µg/L	<u>24-hour composite</u> Grab	<u>2/Year 1/Month</u>		
Selenium	µg/L	<u>24-hour composite</u> Grab	<u>2/Year 1/Month</u>		
Zinc	µg/L	<u>24-hour composite</u> Grab	<u>2/Year 1/Month</u>		
Chemical Oxygen Demand (COD) ^[2]	mg/L, lbs/day	24 hour composite			Daily
BOD ₅	mg/L, lbs/day	24 hour composite	1/Week		

C&H Comment 11

Attachment E, IV. Effluent Monitoring Requirements, p.E-3, Table E-3. Effluent Monitoring – EFF-001

C&H requests that temperature be monitored through grab sampling, rather than continuous monitoring, and that biochemical oxygen demand (BOD₅) (increase over intake) be removed.

Response to Comment 11

We agree and revised the tentative order to allow grab samples for temperature (the previous order called for continuous monitoring). We also revised the tentative order to clarify that temperature sampling is required daily only when the plant is operating, not necessarily five times per week. Likewise, we clarified that the pH monitoring frequency should be daily while operating, not necessarily five times per week. We removed the requirement to monitor “BOD₅ (increase over intake)” because this value can be calculated from the required intake and effluent BOD₅ data.

We revised MRP Table E-3 as follows:

Table E-3. Effluent Monitoring – EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow ^[1]	MGD	Continuous	Continuous
BOD ₅	mg/L	24 hour composite	1/Week
	lbs/day		1/Week
BOD₅ (increase over intake)	lbs/day		
pH ^[2]	standard units	Grab	5/Week <u>1/Day</u> ^[4]
Temperature	°C	Continuous <u>Grab</u>	5/Week <u>1/Day</u> ^[4]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Conductivity	µmhos/cm	24 hour composite	1/Month
:			

Footnotes:

⋮
^[4] Monitoring is required only when the Refinery is operating.

We revised Fact Sheet section VI.B, Effluent Monitoring, as follows:

Discharge Point 001

The MRP retains most effluent monitoring requirements at Monitoring Location EFF-001 from the previous permit. Changes in effluent monitoring are summarized as follows:

- The MRP only retains routine monitoring for pollutants with effluent limitations: arsenic, copper, lead, nickel, selenium, zinc, cyanide, dioxin-TEQ, and bis(2-ethylhexyl)phthalate. Monitoring for all other priority toxic pollutants is required to characterize the discharge pursuant to the effluent characterization study required by Provision VI.C.2(a).
- Routine monitoring for mercury is not retained because it is now regulated under Order No. R2-2007-0077).
- A temperature monitoring frequency of “daily” is retained, but the sample type is now a “grab,” whereas the previous order required it to be “continuous.” More frequent sampling is unnecessary since the Carquinez Strait intake water temperature is not expected to vary much within a day and since the Refinery has a fairly constant heat output when operating. Temperature and pH monitoring is required only when the Refinery is operating.

C&H Comment 12

Attachment E, IV. Effluent Monitoring Requirements, p.E-4, Table E-4, Effluent Monitoring – EFF-002

C&H requests that the minimum sampling frequency for BOD, TSS, and settleable matter be 2/month instead of 1/week. C&H also requests that grab samples be used to monitor temperature and ammonia, and that flow through or static renewal tests be allowed for acute toxicity.

Response to Comment 12

We did not change the BOD, TSS, and settleable matter sampling frequencies because they are consistent with the monitoring frequencies for nearby wastewater treatment plants. However, we agree that temperature may be monitored using grab samples. Also, unless properly preserved, ammonia can undergo chemical changes and break down over time, so we agree that grab samples are appropriate (and consistent with the nearby Vallejo Sanitary District permit). In addition, we revised the acute toxicity sample type to allow either static renewal or flow-through tests.

We revised MRP Table E-4 as follows:

Table E-4. Effluent Monitoring – EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
:			
Enterococcus Bacteria ^[7]	Colonies/100 mL	Grab	5/Month ^[12]
Temperature	°C	Continuous <u>Grab</u>	Continuous <u>1/Day</u>
Copper	mg/L	24 hour composite	1/Month
:			
Dibenzo(a,h)anthracene	µg/L	Grab	2/Year
Ammonia as N ^[9]	mg/L	24 hour composite <u>Grab</u>	1/Month
Chronic Toxicity ^[10]	TUc	24 hour composite	1/Year
Acute Toxicity ^[11]	% Survival	Flow through <u>or static renewal</u>	1/Month

C&H Comment 13

Attachment E, V. Whole Effluent Toxicity Testing Requirements, p.E-6.

C&H requests that static renewal acute bioassay testing be acceptable, in addition to continuous flow-through monitoring.

Response to Comment 13

We agree and revised MRP section V.A.1 as follows:

Compliance with the acute toxicity effluent limitations of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays or static renewals.

We revised Fact Sheet section IV.C.5.b as follows:

Discharge Point 002. This Order retains from the previous permit effluent limitations for whole effluent acute toxicity based on Basin Plan Table 4-3. Compliance is evaluated based on 96-hour continuous flow-through or static renewal bioassays. All bioassays are to be performed according to USEPA-approved methods in 40 CFR 136, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th Edition.

We revised Fact Sheet section VI.C.1 as follows:

Whole Effluent Acute Toxicity. Monthly 96-hour flow-through or static renewal bioassay testing is required at Discharge Point 002 (Monitoring Location EFF-002) to demonstrate compliance with the effluent limitation for acute toxicity. Rainbow trout is the preferred bioassay test species.

C&H Comment 14

Attachment E, VIII. Reporting Requirements, p.E-11, Table E-6. SMR Reporting for CIWQS
C&H requests that it be permitted to upload instantaneous dissolved oxygen data to electronic self-monitoring reports, rather than monthly maximum and minimum data.

Response to Comment 14

C&H is free to submit more data than required. MRP Table E-4 requires a minimum dissolved oxygen monitoring frequency of once per month. Because only one result is required each month, we revised the tentative order to delete the requirement to report maxima and minima. We revised MRP Table E-6 as follows:

Table E-6. SMR Reporting for CIWQS

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	Attached File
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for All Results	
Dissolved Oxygen Temperature	Required for Monthly Maximum and Minimum Results Only ^[1]	Discharger may use this method for all results or keep records
Cyanide Arsenic Cadmium Chromium Copper Lead Mercury Nickel Selenium Silver Zinc Dioxins and Furans (by U.S. EPA Method 1613)	Required for All Results ^[2]	
:		

C&H Comment 15

Attachment E – VIII. Reporting Requirements, p.E-14, D. Modification to Attachment G
C&H notes that this section may require updating because C&H is submitting electronic self-monitoring reports.

Response to Comment 15

We disagree. We standardize permit conditions to the extent possible, and this modification to Attachment G appears in most recent NPDES permits. It is appropriate for most dischargers, which may or may not submit electronic self-monitoring reports.

C&H Comment 16***Attachment F, p. F-18, IV.C.2.f. Receiving Water Hardness***

C&H notes that the hardness (48 mg/L as CaCO₃) used to determine the water quality objectives for the Tentative Order is based on the lowest of 26 measurements collected at the Napa River and Davis Point RMP stations between April 1995 and August 2001. C&H asserts that this hardness concentration is unrealistically low for the receiving water, which has an average and maximum hardness of 1,484 mg/l and 4,210 mg/l. C&H requests that the water quality-based effluent limitations be recalculated using a more realistic hardness concentration; it suggests 1,484 mg/L.

Response to Comment 16

We agree that a higher hardness value is warranted. Because the receiving water is estuarine, the effluent limits must be based on the more stringent of the marine and fresh water quality objectives. Several fresh water quality objectives are hardness-dependent. We re-examined the 26 hardness values and censored the data set to remove values above 400 mg/L because these values are beyond the linear range (25 – 400 mg/L) within which hardness has been correlated with metals toxicity (Federal Register, Vol. 65, No. 97, p. 31692) and because they generally represent marine conditions where marine water quality objectives, not freshwater objectives, apply). Then we calculated the geometric mean of the remaining eight samples (130 mg/L). This approach to calculating the fresh water quality objectives represents a conservative compromise between not using the extremely conservative lowest hardness value ever observed and a value that could be higher than the hardness typical of freshwater salinity conditions. Based on this revised hardness value, we revised the tentative order in several places.

We used the revised hardness value to recalculate the freshwater lead acute and chronic and acute water quality objectives to be 4.4 µg/L and 110 µg/L. At Discharge Point 001, the resulting average monthly effluent limit (AMEL) is 3.0 µg/L, and the maximum daily effluent limit (MDEL) is 8.2 µg/L. At Discharge Point 002, the resulting AMEL is 23 µg/L, and the MDEL is 67 µg/L. Based on available effluent data, we believe compliance with these new limits is feasible. During the last permit cycle, C&H violated the Discharge Point 002 limits three times. The less stringent limits comply with anti-backsliding and antidegradation policies as explained in the numerous revisions to the tentative order shown below.

Based on the updated water quality objectives, the Discharge Point 001 discharge does not qualify for intake water credits because the maximum background concentration observed in the intake water (3.8 µg/L) is less than the lowest revised water quality objective (4.4 µg/L). Therefore, we removed the lead intake water credit and the requirement to monitor lead in the cooling water intake (see the revision shown in response to C&H Comment 10).

We revised Table 7 of the Tentative Order as follows:

Table 7. Effluent Limitations for Toxic Pollutants – Discharge Point 001

Parameter	Units	Effluent Limitations ^[1]	
		Average Monthly Effluent Limit (AMEL)	Maximum Daily Effluent Limit (MDEL)
Arsenic ^[2]	µg/L	24	67
Copper	µg/L	54	120

Parameter	Units	Effluent Limitations ^[1]	
		Average Monthly Effluent Limit (AMEL)	Maximum Daily Effluent Limit (MDEL)
Lead ^[2]	µg/L	0.8 <u>3.0</u>	2.3 <u>8.2</u>
Nickel ^[2]	µg/L	23	54
:			

Footnotes:

- [1] All metals limitations are expressed as total recoverable metal.
- [2] Effluent arsenic, ~~lead~~, nickel, selenium, and cyanide concentrations measured at Monitoring Location EFF-001 shall only be subject to these limitations if they also exceed the following intake water concentrations (see Provision VII.B for details):
 arsenic: 68 µg/L
~~lead: 7.4 µg/L~~
 nickel: 50 µg/L
 selenium: 59 µg/L
 cyanide: 5.5 µg/L
- Effluent concentrations above these values are statistically greater than intake water concentrations, demonstrating that the Discharger has added or contributed the pollutant to the intake water, and thus does not qualify for intake water credits and shall be subject to the water quality based effluent limitations in this Table.

We revised Table 9 of the tentative order as follows:

Table 9. Effluent Limitations for Toxic Pollutants – Discharge Point 002

Parameter	Units	Effluent Limitations ^[1]	
		Average Monthly Effluent Limit (AMEL)	Maximum Daily Effluent Limit (MDEL)
Copper	µg/L	55	120
Lead	µg/L	3.2 <u>23</u>	9.4 <u>67</u>
Zinc	µg/L	300	600
:			

We revised section VII.B of the Tentative Order as follows:

Compliance with arsenic, ~~lead~~, nickel, selenium, and cyanide effluent limitations at Discharge Point 001, as set forth in Table 7, shall be as follows....

We revised Fact Sheet section IV.C.2.f as follows:

Receiving Water Hardness. Ambient hardness data collected at the Napa River (BD50) and Davis Point (BD40) sampling stations between April 1995 and August 2001 were used to calculate freshwater water quality objectives that are hardness dependent. A hardness of 130 ~~48~~ mg/L as CaCO₃ was used to determine the water quality objectives for this Order. This is the geometric mean lowest of the 26 measurements taken at the Napa River and Davis Point ~~Stations, censored to remove 18 values above 400 mg/L. Values above 400 mg/L fall beyond the range in which hardness has been correlated with metals toxicity and generally represent marine conditions where marine water quality objectives, not freshwater objectives, apply. This approach represents a conservative compromise between not using the extremely conservative lowest hardness value ever observed and a value that could be higher than the hardness typical of freshwater salinity conditions. Consistent with the previous permit, the lowest observed hardness measurement was selected to maximize environmental protection.~~

We revised Fact Sheet Table F-13 as follows:

Table F-13 Reasonable Potential Analysis Summary – Discharge 001

CTR #	Priority Pollutant	Governing Water Quality Objective (WQO) (µg/L)	MEC or Minimum DL ^[1] (µg/L)	Maximum Background or Minimum DL ^[1] (µg/L)	RPA Result ^[2]
:					
6	Copper	5.9	66	2.5	Yes ^[3]
7	Lead	4.2 4.4	8.1	0.8	Yes
8	Mercury (303(d) listed) ^[4]	---	---	---	---
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We revised Fact Sheet Table F-14 as follows:

Table F-14 Reasonable Potential Analysis Summary – Discharge 002

CTR #	Priority Pollutant	Governing Water Quality Objective (WQO) (µg/L)	MEC or Minimum DL ^[1] (µg/L)	Maximum Background or Minimum DL ^[1] (µg/L)	RPA Result ^[2]
:					
6	Copper	5.9	20	2.5	Yes ^[4]
7	Lead	4.2 4.4	13	0.8	Yes
8	Mercury (303(d) listed) ^[5]	---	---	---	---
:					

We revised Fact Sheet section IV.C.4.c(3), Lead (pertaining to Discharge Point 001), as follows:

- (a) **Water Quality Objectives.** The most stringent applicable water quality objectives for lead are the Basin Plan chronic and acute freshwater aquatic life objectives of ~~4.2~~ 4.4 and ~~32~~ 110 µg/L, respectively.
- (b) **RPA Results.** This Order establishes effluent limitations for lead because the MEC (8.1 µg/L) exceeds the governing WQO (~~4.2~~ 4.4 µg/L), demonstrating reasonable potential by Trigger 1.
- (c) **WQBELs.** Data indicate that effluent lead concentrations are the same as intake lead concentrations; therefore, no dilution can occur at the outfall. WQBELs for lead, calculated according to SIP procedures using a CV of 1.3 and no dilution, are an AMEL of ~~0.80~~ 3.0 µg/L and an MDEL of ~~2.3~~ 8.2 µg/L.
- (d) **Feasibility of Compliance.** Statistical analysis of lead data collected from the outfall from June 2007 through November 2011 shows that the 95th percentile (3.6 µg/L) is greater than the AMEL (~~0.80~~ 3.0 µg/L) and the 99th percentile (8.1 µg/L) is ~~less~~ greater than the MDEL (~~2.3~~ 8.2 µg/L). However, because data from the intake and the outfall were determined, with 95% confidence, to belong to the same data set, these data sets were combined for a more robust statistical analysis. The resulting 95th percentile was 2.9 µg/L, less than the AMEL of 3.0 µg/L, and the 99th percentile was 7.4 µg/L, less than the MDEL of 8.2 µg/L. Therefore, the Discharger is expected to be able to comply with these limits. Therefore, the Discharger may have difficulty complying with

these limits. However, the intake water credit described below will ensure that compliance is feasible.

- (e) **Lead Intake Credit.** SIP section 1.4.4 states that the Regional Water Board may establish effluent limitations that allow discharges to contain pollutant concentrations no greater than intake water concentrations when specific conditions are met. In other words, effluent sample concentrations at Discharge Point 001 that exceed the lead limitations in Table 7 can, nevertheless, be considered in compliance with those limitations if the effluent lead concentration is also no greater than the intake water lead concentration.

Lead data in the intake and in the outfall collected from June 2007 through November 2011 were subject to statistical analysis. Both sets of data were not normally distributed but, using the Mann-Whitney nonparametric analysis, it was determined, with 95% confidence, that the data belonged to the same data set. The data were then combined and the analysis showed that the 95th percentile was 2.9 µg/L, greater than the AMEL of 0.80 µg/L, and the 99th percentile (7.4 µg/L) greater than the MDEL of 2.3 µg/L.

As explained below, the discharge meets the conditions for an intake water credit set forth in SIP section 1.4.4. Each SIP requirement is followed by an evaluation in italics.

1. The observed maximum ambient background concentration and the intake water concentration of the pollutant must exceed the most stringent applicable WQO for that pollutant.

The maximum ambient background concentration observed at the Yerba Buena RMP station (0.87 µg/L) was less than the most stringent applicable WQO (1.2 µg/L). The maximum background concentration observed at the intake water (3.8 µg/L), reflects nearby water quality. This is more stringent than the applicable WQO (1.2 µg/L).

2. The intake water credit must be consistent with any TMDL applicable to the discharge.

No lead TMDL has been established for Carquinez Strait.

3. The intake water must be from the same water body as the receiving water body.

The intake and discharge are both within Carquinez Strait. The discharge point is hydrologically connected to the intake source. All of the non-contact cooling water is from Carquinez Strait, and the intake structure is located approximately 500 feet upstream of Discharge Point 001.

- ~~4. The Facility must not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses.~~

~~—Lead is not used in any Facility process. The Discharger does not alter the intake water chemically or physically in a manner that would change the lead in the intake water.~~

- ~~5. The timing and location of the discharge must not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.~~

~~C&H Sugar Company completed an analysis of the residence time of water in the barometric cooling system and determined this was between 0.60 and 1.3 minutes, and the outfall location is within 500 feet of the intake. Nothing suggests that the time and location of the discharge would adversely affect water quality or beneficial uses since the nickel would have been in the Carquinez Strait anyway.~~

~~—For this Order, intake water concentrations are characterized statistically so effluent concentrations may be evaluated to determine whether they fall within or beyond the range expected for influent concentrations. If effluent concentrations exceed the range expected for influent concentrations, the Discharger does not qualify for the intake water credit and the effluent limits apply.~~

~~—This permit uses the 99th percentile lead concentration (7.4 µg/L) of the available data from both the intake and outfall monitoring locations. Both data sets were used because statistical analysis demonstrates that both represent the same population (there's no statistical difference between the intake and effluent concentrations). The 99th percentile represents the upper range of the variability of the lead concentrations due to sampling and analysis variability. It results in an intake credit that captures the variability between influent and effluent data, and prevents discharge of additional pollutant mass. A higher percentile might include extreme and possibly spurious values, which might mask a legitimate violation; a lower percentile might result in violations due to sample variability instead of addition of pollutants.~~

~~(f) **Anti-backsliding.** Anti-backsliding requirements are satisfied because the new lead limits are more stringent than the limits in the previous permit. These limits are higher than those in the previous order. Although backsliding is generally prohibited, CWA sections 303(d)(4)(B), 402(o)(1), and 402(o)(2) allow exceptions under certain circumstances:~~

- ~~• CWA section 402(o)(2)(C) allows backsliding when a less stringent limit is necessary due to circumstances over which the permittee has no control~~

and there is no reasonably available remedy. In this case, the Discharger cannot control the lead in its intake water.

- CWA sections 303(d)(4)(B) and 402(o)(1) allow backsliding provided that the receiving water is not impaired by the limited pollutant and that the less stringent limits comply with antidegradation policies. In this case, lead concentrations in Carquinez Strait do not exceed water quality standards and, as explained in section IV.C.7, below, the less stringent limits comply with antidegradation policies.

We revised Fact Sheet section IV.C.4(2), Lead (pertaining to Discharge Point 002), as follows:

- (a) **Water Quality Objectives.** The most stringent applicable water quality objectives for lead are the Basin Plan chronic and acute freshwater aquatic life objectives of ~~1.2~~ 4.4 and ~~32~~ 110 µg/L, respectively.
- (b) **RPA Results.** This Order establishes effluent limitations for lead because the MEC (13 µg/L) exceeds the governing WQO (~~1.2~~ 4.4 µg/L), demonstrating reasonable potential by Trigger 1.
- (c) **WQBELs.** WQBELs for lead, calculated according to SIP procedures using a CV of 1.7, a dilution credit of 10:1 (D = 9), are an AMEL of ~~3.2~~ 23 µg/L and an MDEL of ~~9.4~~ 67 µg/L.
- (d) **Anti-backsliding.** ~~Anti-backsliding requirements are satisfied because the new lead limits are more stringent than the limits in the previous permit. These limits are higher than those in the previous order. Although backsliding is generally prohibited, CWA sections 303(d)(4), 402(o)(1), and 402(o)(2) allow exceptions under certain circumstances:~~
- CWA section 402(o)(2)(E) allows backsliding when the permittee has installed the treatment facilities required to meet the effluent limitations in the previous order and has properly operated and maintained its facilities but has nevertheless been unable to achieve the previous effluent limitations. In this case, the Discharger has been unable to comply with the previous limitations despite providing and successfully operating and maintaining secondary treatment. Three lead effluent limit violations occurred during winter 2010-2011. CWA section 402(o)(2)(E) also requires that revised limits not be less stringent than required by effluent limitation guidelines. As discussed in section IV.B.2 of this Fact Sheet, no effluent limitation guidelines for lead apply to this discharge.
 - CWA sections 303(d)(4) and 402(o)(1) allow backsliding provided that the receiving water is not impaired by the limited pollutant and that the less stringent limits comply with antidegradation policies. In this case, lead concentrations in Carquinez Strait do not exceed water quality standards and, as explained in section IV.C.7, below, the less stringent limits comply with antidegradation policies.

We revised Fact Sheet Table F-15 as follows:

Table F-15. WQBEL Calculations – Discharge Point 001

PRIORITY POLLUTANTS	...	Lead	...
Units		µg/L	
Basis and Criteria type		CTR Fresh Water Aquatic Life	
Criteria -Acute		32 <u>110</u>	
Criteria -Chronic		1.2 <u>4.4</u>	
SSO Criteria -Acute		-----	
SSO Criteria -Chronic		-----	
Water Effects ratio (WER)		1	
Lowest WQO		1.2 <u>4.4</u>	
Site Specific Translator - MDEL		-----	
Site Specific Translator - AMEL		-----	
Dilution Factor (D) (if applicable)		0	
No. of samples per month		4	
Aquatic life criteria analysis required? (Y/N)		Y	
HH criteria analysis required? (Y/N)		N	
Applicable Acute WQO		32 <u>110</u>	
Applicable Chronic WQO		4 <u>4.4</u>	
HH criteria		-----	
Background (Maximum Conc for Aquatic Life calc)		0.80	
Background (Average Conc for Human Health calc)		-----	
Is the pollutant on the 303d list (Y/N)?		N	
ECA acute		32 <u>110</u>	
ECA chronic		4 <u>4.4</u>	
ECA HH			
No. of data points <10 or at least 80% of data reported non detect? (Y/N)		N	
Avg of effluent data points		1.0	
Std Dev of effluent data points		1.3	
CV calculated		1.3	
CV (Selected) - Final		1.3	
ECA acute mult99		0.16	
ECA chronic mult99		0.30	
LTA acute		5 <u>18</u>	
LTA chronic		0 <u>1.3</u>	
minimum of LTAs		0.04 <u>1.3</u>	
AMEL mult95		2.2	
MDEL mult99		6.2	
AMEL (aq life)		4 <u>3.0</u>	
MDEL(aq life)		2 <u>8.2</u>	
MDEL/AMEL Multiplier		2.8	
AMEL (human hlth)			

MDEL (human hlth)			
minimum of AMEL for Aq. life vs HH		0.8 3.0	
minimum of MDEL for Aq. Life vs HH		2.3 8.2	
Current limit in permit (30-day average)		3.7	
Current limit in permit (daily)		8.3	
Final limit - AMEL		0.8 3.0	
Final limit - MDEL		2.3 8.2	
Max Effl Conc (MEC)		8.1	

We revised Fact Sheet Table F-16 as follows:

Table F-16. WQBEL Calculations – Discharge Point 002

PRIORITY POLLUTANTS	...	Lead	...
Units		µg/L	
		CTR Fresh Water Aquatic Life	
Basis and Criteria type			
Criteria -Acute		32 110	
Criteria -Chronic		4.2 4.4	
SSO Criteria -Acute		-----	
SSO Criteria -Chronic		-----	
Water Effects ratio (WER)		1	
Lowest WQO		4.2 4.4	
Site Specific Translator - MDEL		-----	
Site Specific Translator - AMEL		-----	
Dilution Factor (D) (if applicable)		9	
No. of samples per month		4	
Aquatic life criteria analysis required? (Y/N)		Y	
HH criteria analysis required? (Y/N)		N	
Applicable Acute WQO		32 110	
Applicable Chronic WQO		4 4.4	
HH criteria		-----	
Background (Maximum Conc for Aquatic Life calc)		0.80	
Background (Average Conc for Human Health calc)		-----	
Is the pollutant on the 303d list (Y/N)?		N	
ECA acute		312 1133	
ECA chronic		5 37	
ECA HH			
No. of data points <10 or at least 80% of data reported non detect? (Y/N)		N	
Avg of effluent data points		1.6	
Std Dev of effluent data points		2.6	
CV calculated		1.7	
CV (Selected) - Final		1.7	

ECA acute mult99		0.13	
ECA chronic mult99		0.24	
LTA acute		42 <u>150</u>	
LTA chronic		1 <u>9.0</u>	
minimum of LTAs		13 <u>9.0</u>	
AMEL mult95		2.5	
MDEL mult99		7.5	
AMEL (aq life)		23 <u>23</u>	
MDEL(aq life)		67 <u>67</u>	
MDEL/AMEL Multiplier		3.0	
AMEL (human hlth)			
MDEL (human hlth)			
minimum of AMEL for Aq. life vs HH		3.2 <u>23</u>	
minimum of MDEL for Aq. Life vs HH		9.4 <u>67</u>	
Current limit in permit (30-day average)		3.6	
Current limit in permit (daily)		9.7	
Final limit - AMEL		3.2 <u>23</u>	
Final limit - MDEL		9.4 <u>67</u>	
Max Effl Conc (MEC)		13	

We revised Fact Sheet section IV.C.7 as follows:

~~Anti-backsliding and~~ Antidegradation

NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution 68-16, which incorporates federal policy where federal policy applies. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both State and federal antidegradation policies.

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. ~~This~~ With the exception of lead discharges from Discharge Points 001 and 002 (discussed below), this Order continues the status quo with respect to the level of discharge authorized in the previous permit and thus there will be no change in water quality beyond the level authorized in the last permit. ~~The limitations in this Order comply with antidegradation requirements because they~~ This Order holds the Discharger to performance levels that will neither cause nor contribute to water quality impairment, nor further water quality degradation. This is because this Order does not provide for an increase in the permitted design flow, allow for a reduced level of treatment, or increase any effluent limitations (other than those for lead).

The revised lead limits are consistent with antidegradation policies because they would not result in any measureable degradation relative to the water quality baseline, which is the quality resulting from compliance with the previous order. The Discharger does not add any lead to the once-through cooling water collected from Carquinez Strait prior to discharge at Discharge Point 001. Therefore, there will be no change in discharge quality at Discharge Point 001 and no change in receiving water quality compared to conditions under the previous order's requirements. At Discharge Point 002, no increase in lead loading is likely because the Plant will continue to provide the same level of treatment and because little growth is anticipated for the District's service area.

This Order does not retain mercury effluent limitations for Discharge Point 001 or Discharge Point 002 because the Discharger's mercury discharges are regulated by ~~Regional Water Board~~ Order No. R2-2007-0077, which implements the San Francisco Bay Mercury TMDL and establishes wasteload allocations for industrial and municipal mercury discharges. Order No. R2-2007-0077 superseded the previous permit and complied with antidegradation requirements.

Because there will be no lowering of water quality beyond the current level authorized in the previous permit, which is the baseline by which to measure whether degradation will occur, further analysis in this permit is unnecessary. Findings authorizing degradation are thus unnecessary.

We revised Fact Sheet Table F-17 as follows:

Table F-17. Summary of Routine Monitoring Requirements

Parameter	Intake INF-001	Influent INF-002	Influent INF-003	Effluent EFF-001	Effluent EFF-002	Effluent EFF-003 through EFF-016	Receiving Water
:							
Copper	1/Month			1/Month	1/Month		Support RMP
Lead	1/Month			1/Month	1/Month		Support RMP
Nickel	1/Month			1/Month			Support RMP
:							

C&H Comment 17

Attachment G, D.3. Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs), p.G-3

C&H clarifies that C&H Sugar Company, Inc., owns the Joint Treatment Plant; therefore, it is a privately owned treatment works, not a Publicly Owned Treatment Works (POTW).

Response to Comment 17

We agree and revised the tentative order to correct references to the Joint Treatment Plant being a POTW. We also added a provision to clarify that the Attachment G requirements for POTWs

are to apply to the Joint Treatment Plant. We did not revise Attachment G (or Attachment D) since this standard attachment appears in nearly all NPDES permits in the Region.

We revised tentative order Provision VI.A.2 as follows:

Regional Standard Provisions. The Discharger shall comply with all applicable items of the Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits (Attachment G). Although the Joint Treatment Plant is privately owned, all provisions in Attachment G applicable to publicly-owned treatment works shall also apply to the Joint Treatment Plant.

We revised Fact Sheet section IV.A.4 as follows:

Discharge Prohibition III.D (No sanitary sewer overflows): This prohibition is retained from the previous permit and is based on Basin Plan Discharge Prohibition No. 15 (Basin Plan Table 4-1) and the CWA, which prohibits the discharge of wastewater to waters of the U.S. except as authorized under an NPDES permit. Publicly owned treatment works must achieve secondary treatment, at a minimum, and any more stringent limitations necessary to achieve water quality standards (33 U.S.C. § 1311[b][1][B and C]). Although the Joint Treatment Plant is privately owned, it serves public areas, and this Order requires the Discharger to meet the secondary treatment standards for a publicly-owned treatment works. ~~Therefore, a~~ A sanitary sewer overflow that results in the discharge of raw sewage, or sewage not meeting effluent limitations required by this Order, to surface waters is prohibited under the CWA and the Basin Plan.

C&H Comment 18

P.21, 6. Other Special Provisions, b., Table 11. Cyanide Action Plan, Task 2

C&H requests that the influent cyanide concentration that would trigger implementation of an emergency monitoring and response plan be 190 µg/L, which is ten times the average monthly effluent limitation. Assuming a minimum 90 percent treatment efficiency in the activated sludge process, this influent concentration could indicate the potential for effluent limit violations. C&H asserts that the effort to prepare and implement an emergency monitoring and response plan if the proposed influent concentration of 11 µg/L were exceeded would not be worthwhile.

Response to Comment 18

We agree that a higher trigger for the emergency monitoring and response plan is appropriate, but disagree with C&H's approach. The purpose of the Cyanide Action Plan is to ensure that implementation of the cyanide site-specific water quality objectives does not degrade receiving waters. Basin Plan section 4.7.2.2 requires actions to maintain existing performance and not allow cyanide effluent concentrations to rise. The Cyanide Action Plan requires identification and control of cyanide sources, and the influent concentration trigger is to facilitate identification of new sources in particular.

Our approach, described below, focuses on identifying when a significant change occurs in the influent concentration, which could indicate a new or increasing cyanide source. (In contrast,

C&H’s proposed trigger is derived from the effluent limit based on the site-specific objectives.) The Joint Treatment Plant receives influent from the Refinery and the Crockett community. In 2008 and 2009, the highest influent cyanide levels in Refinery influent (Monitoring Station INF-003) were 130 and 170 µg/L. After 2009, C&H reduced its cyanide generation, and in 2010 and 2011, the highest influent cyanide concentrations from the Refinery were 31 and 36 µg/L. In 2008 and 2009, the highest influent cyanide levels in Crockett community influent (Monitoring Station INF-002) were 7 and 30 µg/L. In 2010 and 2011, they dropped to 5.0 and <3.0 µg/L. Therefore, we revised the trigger in the tentative order to be 40 µg/L, a rounded value based on the highest concentration measured at the Refinery. Influent cyanide concentrations above 40 µg/L could indicate the presence of cyanide sources that require control.

Because of the relatively high cyanide concentrations in Refinery influent, we revised MRP Table E-2 to include cyanide sampling at Monitoring Station INF-003 (see revision shown in response to C&H Comment 10). We also revised Table 11 of the tentative order to require further review of potential cyanide sources.

We revised Table 11 of the tentative order as follows:

Table 11. Cyanide Action Plan

Task	Compliance Date
<p>1. Review Potential Cyanide Sources The Discharger shall submit an <u>updated</u> inventory of potential cyanide sources to the <u>Joint Treatment pPlant</u> (e.g., metal plating operations, hazardous waste recycling, etc.). 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 November 21, 2008 <u>June 1, 2013</u></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. d. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. <p>For purposes of this Order, a “significant cyanide discharge” is occurring if the plant’s influent cyanide concentration <u>from the Refinery or the Crockett community</u> exceeds 44 <u>40</u> µg/L (i.e., the maximum cyanide concentration detected in the treated effluent during the previous permit term).</p>	<p>With annual pollution prevention report due February 28</p>
<p>:</p>	

We revised Fact Sheet section VII.C.6.b as follows:

Cyanide Action Plan. This provision is based on Basin Plan section 4.7.2.2 and is necessary to ensure that use of cyanide site-specific objectives is consistent

with antidegradation policies. The trigger for the emergency monitoring and response plan is a rounded value based on the highest influent cyanide concentration from the Refinery or the Crockett community since 2009. ~~The Discharger submitted an inventory of potential cyanide sources.~~

CROCKETT COMMUNITY SERVICES DISTRICT

District General Comment

The District notes that our distribution list did not include the District, even though the Tentative Order lists the District as a discharger. The District learned about the permit reissuance through the C&H Sugar Company. The District is concerned about its due process rights and asks the Water Board to carefully review its comments.

Response to General Comment

We regret that we inadvertently neglected to send a copy of the tentative order directly to the District. We appreciate the District’s input. Our responses to its specific comments are below.

District Comment 1

Cover Page, Table 1, Discharger Information. Name of Facility and Facility Address

The District notes that C&H Sugar Company owns and operates the Joint Treatment Plant, and the District, which owns and operates the collection system, sub leases an interest in the plant from C&H Sugar Company pursuant to a Joint Use Agreement. The District requests that Table 1 be revised to accurately describe plant ownership and operation.

Response to Comment 1

We agree and revised Table 1 of the tentative order as follows:

Table 1. Discharger Information

Discharger	C&H Sugar Company, Inc., and Crockett Community Services District
Name of Facility	C&H Sugar Company Refinery, Joint C&H Sugar Company-Crockett Community Services District Philip F. Meads Water Treatment Plant, and <u>the Crockett Community Services District associated sewage</u> collection system
Facility Address	830 Loring Avenue, Crockett, CA 94525, Contra Costa County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

District Comment 2

I. Facility Information. Table 4

The District asks that Table 4 be revised to include representatives from both C&H Sugar Company and the District.

Response to Comment 2

We agree and revised Table 4 as follows:

Table 4. Facility Information

:	
CIWQS Place ID	212212
Facility Contact, Title, <u>Email</u>, and Phone	Tanya Akkerman, Environmental Manager, <u>C&H Sugar Company</u> , Tanya.akkerman@chsugar.com, (510) 787-4352 <u>Dale McDonald, General Manager, Crockett Community Services District</u> , <u>manager@town.crockett.ca.us, (510)787-2992</u>
CIWQS Contact Party ID	521474
:	

District Comment 3***II.(A). Findings. Background. 1st paragraph***

The District notes that C&H Sugar Company owns the Joint Treatment Plant, and the District sub-leases an interest in the plant from the C&H Sugar Company. The C&H Sugar Company operates the plant, and the District manages its own collection system. The District’s wastewater is discharged only at Discharge Point 002, not Discharge Point 001. The District asks that references to “joint ownership” of the plant be changed throughout the Tentative Order to refer instead to “joint use.”

Response to Comment 3

We agree and revised Finding II.A of the Tentative Order as follows:

Background. C&H Sugar Company, Inc., and the Crockett Community Services District, collectively the Discharger, are currently discharging under Order No. R2-2007-0032 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005240.... Both C&H Sugar Company and Crockett Community Services District signed a Joint Use Agreement on November 9, 1976, such that the C&H Sugar Company Refinery wastewater and municipal sewage from the Crockett area are treated at the Joint C&H Sugar Company-Crockett Community Services District Philip F. Meads Water Treatment Plant (hereinafter the Joint Treatment Plant). C&H Sugar Company, Inc., and the Crockett Community Services District jointly use own the Plant, and C&H Sugar Company is the owner and operator.

District Comment 4***II.(B). Findings. Facility Description and Discharge Location, 4th paragraph***

The District requests that Finding II.B be changed to reflect that the Refinery’s sanitary wastes and tank truck washings account for less than 0.04 MGD, not less than 0.01 MGD as stated in the Tentative Order.

Response to Comment 4

Refer to our response to C&H Comment 2.

District Comment 5

III.(D). Discharge Prohibitions

The District requests clarity regarding who is responsible for any sanitary sewer overflows upstream of the Joint Treatment Plant.

Response to Comment 5

We agree and changed Prohibition III.D of the tentative order as follows:

Any sanitary sewer overflow that results in a discharge of untreated or partially-treated wastewater to waters of the United States is prohibited. Sanitary sewer overflows upstream of the Joint Treatment Plant, if any, are the responsibility of ~~the Crockett Community Services District~~.

District Comment 6

IV.(B). Effluent Limitations and Discharge Specifications

Since the District only discharges through Discharge Point 002, it recommends that the Tentative Order clarify that compliance at Discharge Point 001 is C&H Sugar Company's responsibility.

Response to Comment 6

We agree and revised section IV.B of the tentative order as follows:

Discharges at Discharge Point 001 shall comply with the following effluent limitations, with compliance measured at Monitoring Location EFF-001 as described in the MRP. Compliance at Discharge Point 001 shall be the responsibility of C&H Sugar Company, Inc.

District Comment 7

IV.(C)-(F). Effluent Limitations and Discharge Specifications

Since C&H Sugar Company and the District both contribute to Discharge Point 002 discharges, the District recommends that the Tentative Order clarify that the C&H Sugar Company and the District share responsibility for exceedances at Discharge Point 002.

Response to Comment 7

We agree and revised section IV.C.1 of the tentative order as follows:

Discharges at Discharge Point 002 shall comply with the following effluent limitations, with compliance measured at Monitoring Location EFF-002 as described in the MRP. The District and C&H Sugar Company, Inc., share responsibility for compliance with these limitations.

District Comment 8

IV.(D). Table 9. Effluent Limitations for Toxic Pollutants – Discharge Point 002

The District notes that the proposed lead effluent limits at Discharge Point 002 are lower than those in the previous order. It states that it serves a small community and cannot afford to pay for significant upgrades. It suggests basing the lead limits on wet weather performance. The District also mentions the new chlorodibromomethane, dichlorobromomethane, and ammonia

limits, noting that the cost of compliance is unknown and that efforts to reduce chlorodibromomethane and dichlorobromomethane concentrations could make it more difficult to comply with the new ammonia limits. The District asks to postpone these effluent limitations.

Response to Comment 8

We cannot postpone the proposed limits. The State Water Board's *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (State Water Board Resolution No. 2008-0025) does not allow it. Nevertheless, we believe compliance is feasible. In the past, chlorodibromomethane and dichlorobromomethane have not exhibited reasonable potential to exceed water quality standards; therefore, previous orders did not contain limits for these constituents. These pollutants rarely trigger reasonable potential at wastewater treatment plants, and the relatively high concentrations reported in recent years may be anomalies resulting from deficient sample handling and analysis. (Provision VI.C.6.c of the tentative order requires evaluation of sample handling and analysis procedures to ensure data quality and reliability.) Nevertheless, we believe compliance with these limits is feasible because the highest chlorodibromomethane effluent concentration reported for six samples collected between 2007 and 2011 was 50 µg/L, and the highest dichlorobromomethane concentration was 53 µg/L. The chlorodibromomethane and dichlorobromomethane AMELs are 340 µg/L and 460 µg/L.

Compliance with the new ammonia limits is also feasible based on ammonia data collected between 2007 and 2011. The 95th percentile was 0.75 µg/L and the 99th percentile was 9.7 µg/L. These data are less than the AMEL of 17 µg/L and MDEL of 55 µg/L.

Regarding the lead limits, refer to our response to C&H Comment 16, in which we describe changes that increase the lead limits above those in the previous order.

District Comment 9

IV.(G). Effluent Limitations and Discharge Specifications. Stormwater Limitations
The District requests that the Tentative Order clarify that the C&H Sugar Company is responsible for any violations of stormwater limitations at Discharge Points 003 through 016.

Response to Comment 9

We agree and revised section IV.G of the tentative order as follows:

Stormwater Limitations – Discharge Points 003 through 016

The discharge of stormwater runoff from Discharge Point 003 through and including Discharge Point 016 outside the pH range or containing constituents in excess of the following limits is prohibited:

Constituent	Units	Limitation
pH	Standard Units	6.0 to 9.0
Visible Oil	---	none observed
Visible Color	---	none observed

C&H Sugar Company, Inc., is responsible for compliance with these limitations.

District Comment 10

VI.(C)(4). Special Provisions. Stormwater Pollution Prevention Plan

The District recommends clarifying that the responsibility for preparing and submitting the Stormwater Pollution Prevention Plan and Best Management Practices Plan for Discharge Points 003 through 016 belongs to the C&H Sugar Company.

Response to Comment 10

We agree and revised Provision VI.C.4.a of the tentative order as follows:

C&H Sugar Company, Inc., ~~The Discharger~~ shall submit an updated Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices Plan (BMPP) either annually or, if there is a change in the operation of the Refinery that could substantially affect the quality of the stormwater discharged, ~~the Discharger~~ C&H Sugar Company, Inc., shall submit an updated plan more frequently. Annual updates shall be submitted by July 1 of each year. If there is no change to either plan, the annual updates may be a letter indicating that the plan is unchanged. ~~The Discharger~~ C&H Sugar Company, Inc., shall implement the SWPPP and BMPP, and the SWPPP shall comply with the requirements contained in the Regional Standard Provisions. ~~(Attachment G.)~~ In any update of the SWPPP and BMPP, ~~the Discharger~~ C&H Sugar Company, Inc., shall (1) include at least an up-to-date drainage map for the facility; (2) identify on a map the areas that contribute runoff to the permitted discharge points; (3) describe the activities in each area and the potential for contamination of stormwater runoff and discharge of hazardous material; and (4) address the feasibility for containment and/or treatment of the stormwater.

District Comment 11

Attachment C, Page C-2 – Process Flow Diagram

The District indicates that the sanitary wastewater flow rate should be “<0.04 MGD,” not “<0.01 MGD,” in Attachment C and elsewhere in the Tentative Order.

Response to Comment 11

Refer to our response to C&H Comment 2.

District Comment 12

Attachment C, Page C-3 – Process Flow Diagram

The District proposes including a footnote in Attachment C to indicate that excess wastewater and stormwater inflow and infiltration during storm events can be diverted to wet weather storage.

Response to Comment 12

We agree and added the following note to Attachment C – Process Flow Diagram:

Excess wastewater and stormwater inflow and infiltration during storm events can be diverted to wet weather storage.

District Comment 13

Attachment D, Page D-8, (VI). Standard Provisions – Enforcement

The District requests adding detailed Water Code enforcement provisions, indicating its preference to have them easily referenced within the permit.

Response to Comment

We disagree. The NPDES permit template used throughout the State calls for incorporating the Water Code enforcement provisions by reference. We do not include them verbatim because they are lengthy and readily available. The previous order included a description of possible penalties and stated that, if the Discharger is aware of any person who violates any section of the Clean Water Act or the Porter-Cologne Water Quality Control Act, the Discharger must report this to the Water Board. This is still true, even if not stated explicitly.

District Comment 14

Attachment E, Page E-10, (VIII)(B). Reporting Requirements. Self-Monitoring Reports (SMRs)

The District requests that the Tentative Order state that C&H Sugar Company is responsible for submitting self-monitoring reports.

Response to Comment

We disagree. Both co-permittees share the responsibility for submitting self-monitoring reports. By mutual agreement between the co-permittees, they may arrange between themselves for C&H Sugar Company to submit the reports on behalf of both parties.

District Comment 15

Attachment F, Table F-1, Facility Information

The District requests Fact Sheet changes that mirror changes it requested for the Tentative Order.

Response to District Comment 15

We agree and changed Fact Sheet Table F-1 as follows:

Table F-1 Facility Information

WDID	2 071006001
CIWQS Place ID	212212
Discharger	C&H Sugar Company, Inc. Crockett Community Services District
CIWQS Discharger Party ID	6755
Name of Facility	C&H Sugar Company Refinery, Joint C&H Sugar Company-Crockett Services District Philip F. Meads Water Treatment Plant, and <u>the Crockett Community Services District</u> its collection system
Facility Address	830 Loring Avenue Crockett, CA 94525 Contra Costa County
Facility Contact, Title, <u>Email</u>	Tanya Akkerman, Environmental Manager, <u>C&H Sugar Company</u> ,

Phone	Tanya.akkerman@chsugar.com, 510-787-4352 <u>Dale McDonald, General Manager, Crockett Community Services District, manager@town.crockett.ca.us, 510-787-2992</u>
CIWQS Party ID	521474
:	

District Comment 16

Attachment F, Page F-2, (A). 1st paragraph

The District requests clarification that the Joint Treatment Plant is located on land that C&H Sugar Company leases.

Response to Comment 16

We agree and revised Fact Sheet section I.A as follows:

C&H Sugar Company, Inc., owns and operates the C&H Sugar Company refinery (Refinery). The Refinery discharges the following.... The Discharger (C&H Sugar Company and the Crockett Community Services District) is subject to a Joint Use Agreement, which allows the Crockett Community Services District to discharge to and make use of the wastewater treatment facility located at on property leased to C&H Sugar Company. C&H Sugar Company and the Crockett Community Services District; ~~jointly own~~ use the treatment plant. C&H Sugar Company owns and operates the plant, which discharges through Discharge Point 002.

District Comment 17

Attachment F, Page F-2, Facility Description. 3rd paragraph

The District requests changes that replace “co-owned” with “jointly used” when referring to the Joint Treatment Plant.

Response to Comment 17

We agree and revised Fact Sheet section II as follows (this revision also includes an unrelated correction regarding C&H Sugar Company’s operating schedule):

C&H Sugar Company owns and operates a sugar refinery that processes raw cane sugar at an average melt rate of 3,300 tons per day over 260 operating days per year....

The Refinery processes approximately 800,000 tons of cane sugar annually, which includes: packaged consumer sugar; and liquid and bulk granulated industrial-use cane sugar....

The Refinery typically operates on a 7-day operating cycle, with 5 days of operation followed by 2 days down. Both crystalline and liquid refined sugars are delivered from the Refinery by truck and rail. ~~The Refinery may also operate on a 14-day cycle; with 10 days on and 4 days down.~~ The wastewater treatment plant is known as the Philip F. Meads Water Treatment Plant, or Joint Treatment Plant,

as it is ~~co-owned~~ jointly used and subject to a joint use agreement between C&H Sugar Company and the Crockett Community Services District. C&H Sugar Company owns and operates the Plant.

District Comment 18

Attachment F, Page F-3, (A). Facility Description, Description of Wastewater. 4th paragraph
The District requests that the Fact Sheet be revised to reflect that Refinery sanitary waste and tank truck washings account for “less than 0.04 MGD,” as opposed to “less than 0.01 MGD.”

Response to Comment 18

Refer to our response to C&H Comment 2.

District Comment 19

Attachment G, Page G-3, (I)(J)(1). Stormwater Pollution Prevention Plan (SWPPP)
The District asks that we clarify who is responsible for preparing the Stormwater Pollution Prevention Plan since C&H Sugar Company is responsible for Discharge Points 003 through 016.

Response to Attachment 19

We agree. Refer to our revisions in response to C&H Comment 17.

SAN FRANCISCO BAYKEEPER

Baykeeper Comment 1

The Relaxation of Effluent Limitations for Bis(2-Ethylhexyl)Phthalate and Cyanide Violate the Clean Water Act’s Prohibition on Backsliding.

Baykeeper notes that the CWA prohibits reissuing a permit with less stringent effluent limitations than those contained in the previous order. The Tentative Order has average monthly effluent limits (AMELs) of 55 µg/L for bis(2-ethylhexyl)phthalate at Discharge Points 001 and 002, which are less stringent than the limits in the previous order, 54 µg/L. The Fact Sheet states that the effluent limitations from the previous order are retained.

Baykeeper also comments that the cyanide AMEL and maximum daily effluent limitation (MDEL) for Discharge Point 002 (19 µg/L and 46 µg/L) are not necessarily more stringent than the AMEL and MDEL in the previous order (20 µg/L and 44 µg/L). Baykeeper disputes Regional Water Board staff’s assertion that the newly calculated limits comply with anti-backsliding requirements because the lower AMEL would limit the discharge to a lower long-term average concentration. Baykeeper believes the AMEL and MDEL should be considered separately, and the lower MDEL from the previous order should be retained.

Response to Comment 1

We disagree that the tentative order should retain the cyanide limits from the previous order at Discharge Point 002. According to the State Implementation Policy (SIP), AMELs and MDELs are to be calculated in pairs. The only difference between the calculation for this tentative order versus the calculation for the previous order is that effluent data variability is higher than in the past. When the coefficient of variation increases, the AMEL goes down, and the MDEL goes up. To determine the more stringent set of limits, our practice has been to look at the AMEL because it better reflects the discharge over the long-term. In this case, since the newly calculated AMEL (19 µg/L) is lower than the previous AMEL (20 µg/L), the new limits will allow less cyanide to be discharged over time.

We agree that the tentative order should retain the bis(2-ethylhexyl)phthalate AMELs from the previous order, as already stated in Fact Sheet sections IV.C.4.c(9)(e) and IV.C.4.d(8)(c).

We revised Table 7 of the tentative order as follows:

Table 7. Effluent Limitations for Toxic Pollutants – Discharge Point 001

Parameter	Units	Effluent Limitations ^[1]	
		Average Monthly Effluent Limit (AMEL)	Maximum Daily Effluent Limit (MDEL)
:			
Dioxin-TEQ	µg/L	1.4 x 10 ⁻⁸	2.8 x 10 ⁻⁸
Bis(2-Ethylhexyl)Phthalate	µg/L	54 55	110

We revised Table 9 of the Tentative Order as follows:

Table 9. Effluent Limitations for Toxic Pollutants – Discharge Point 002

Parameter	Units	Effluent Limitations ^[1]	
		Average Monthly Effluent Limit (AMEL)	Maximum Daily Effluent Limit (MDEL)
:			
Dichlorobromomethane	µg/L	460	920
Bis(2-Ethylhexyl)Phthalate	µg/L	54 55	110
Dibenzo(a,h)Anthracene	µg/L	0.48	1.0
Ammonia as N	mg/L	17	55

We revised Fact Sheet section IV.C.4.c(9)(c) as follows:

WQBELs. Data indicate that effluent bis(2-ethylhexyl)phthalate concentrations are greater than intake concentrations; therefore, no intake water credits are allowed. WQBELs for bis(2-ethylhexyl)phthalate, calculated according to SIP procedures using a default CV of 0.60 and a dilution credit of 10:1 (D = 9), are an AMEL of 55 µg/L and an MDEL of 110 µg/L. The previous permit included an AMEL of 54 µg/L and an MDEL of 110 µg/L. The limits in the previous permit are retained to avoid backsliding.

Baykeeper Comment 2***The Tentative Order Should Include Proactive Requirements to Help the Permittee Eliminate Violations of the Biochemical Oxygen Demand Effluent Limitations.***

Baykeeper notes C&H Sugar Company's history of violating the biochemical oxygen demand (BOD) effluent limitation for its cooling water discharges. Baykeeper asks that the Tentative Order be revised to include information showing how past problems have been corrected.

Response to Comment 2

We agree and revised Fact Sheet section II.E as follows:

Violations have resulted from leaky equipment, operator error, and ineffective equipment monitoring and repair. The Discharger violated its numeric effluent limitations 38 times during the previous permit term, as listed below, and ~~also~~ had one additional monitoring violation. Most of these violations occurred between 2007 and 2010 ~~were from the Refinery (Discharge Point 001) when sugar liquors at the Refinery became entrained in the cooling water resulting in exceedances of the BOD₅ limits at Discharge Point 001. These violations occurred between 2007 and 2010. These occurrences have not been repeated in the past two years, indicating that the Refinery has improved performance. There have been no violations since June 2011.~~

[Table F-6 Numeric Effluent Limitation Violations]

To address most of the above violations the Regional Water Board took the following enforcement actions:

- Administrative Civil Liability Order No. R2-2009-0058....
- Administrative Civil Liability Order No. R2-2011-0001....
- Administrative Civil Liability Order No. R2-2011-0053....
- Administrative Civil Liability Order No. R2-2011-0077....

In response to these enforcement actions, C&H Sugar Company undertook improvements to prevent future violations, including installing automatic equipment, replacing manual valves with automatic valves, and programming process control equipment to interlock between process operations. Many of the problems had been caused by human error in opening and closing manual valves. C&H Sugar Company retrained its employees to ensure familiarity with the new automated procedures.

Although no similar large releases have occurred since February 2011, in June and September 2012, the Discharger reported smaller releases. In June, during piping repair work inside a building, an estimated 200 gallons of water, with about 10% sugar, flowed under a roll up door and into Carquinez Strait. In September, a similarly sized release of condensate water (with about 10% sugar) occurred at the powerhouse. The discharge flowed from a concrete apron to

Carquinez Strait through a crack in the concrete. C&H Sugar Company revised its operating procedures and sealed the crack to prevent reoccurrences.

Baykeeper Comment 3

The Tentative Order Should be Revised to Include Requirements for Chronic and Acute Toxicity that are Consistent with Other Water Quality Permits and Policies and Protective of Beneficial Uses in Carquinez Strait.

Baykeeper claims that the reasonable potential analysis (RPA), effluent limitations, and monitoring requirements for chronic and acute toxicity in the Tentative Order are inconsistent with water quality policies and other permits. Baykeeper finds the system for evaluating toxicity to be confusing, making it difficult to determine whether discharges comply with water quality standards. Baykeeper makes a number of specific points, stressing the need for the process to be clear and consistent.

- (a) Baykeeper notes that the Tentative Order contains toxicity limitations for Discharge Point 002, but not Discharge Point 001. Since effluent limit violations have occurred at Discharge Point 001 in the past, including two mercury violations, Baykeeper asserts that there is reasonable potential for toxicity to exceed water quality standards at Discharge Point 001, and thus there should be toxicity limitations at Discharge Point 001.*
- (b) For Discharge Point 002, Baykeeper asserts that the Tentative Order does not contain an RPA for acute toxicity and that the RPA for chronic toxicity is inadequate since it is based on 2008 data. Baykeeper states that RPAs are needed because the Basin Plan contains narrative toxicity water quality objectives. Baykeeper points out that the State Water Board's Draft Statewide Policy for Toxicity and Control, if adopted, would mandate RPAs for chronic toxicity. Baykeeper asserts that the existence of the draft policy suggests that the State Water Board supports conducting RPAs for toxicity.*
- (c) Baykeeper believes that, if there is reasonable potential for chronic or acute toxicity to exceed water quality standards, the Tentative Order should include numeric toxicity effluent limits. Baykeeper asserts that the State Water Board's draft toxicity policy mandates numeric objectives for chronic toxicity when there is reasonable potential. Baykeeper notes that the NPDES permit for the Shell Oil Refinery contains numeric toxicity effluent limits.*
- (d) Baykeeper points out that the Monitoring and Reporting Program requires acute toxicity monitoring once per month and chronic toxicity monitoring once per year, while the Fact Sheet states that no routine chronic toxicity monitoring is required.*

Response to Comment 3

We disagree that the RPA, effluent limitations, and monitoring requirements for toxicity are inconsistent with water quality policies and other permits. We explain the basis and rationale for our practices in the Fact Sheet. Our responses to Baykeeper's specific points follow:

- (a) We do not agree that acute or chronic toxicity limits are appropriate for Discharge Point 001 (once-through cooling water). Fact Sheet sections IV.C.5.a and IV.C.6.a contain brief toxicity RPAs for Discharge Point 001. There is no reasonable potential for these discharges*

to cause or contribute to exceedances of the toxicity water quality objective because the only way toxic pollutants could enter the once-through cooling water is through corrosion, and the tentative order already requires copper and zinc effluent limits. Mercury and other pollutants in the discharge arise from the intake of Carquinez Strait water. Therefore, toxicity testing is unwarranted.

- (b) We consider it premature to base requirements on the State Water Board's draft toxicity policy prior to State Water Board adoption and subsequent Office of Administrative Law and USEPA approval. Nevertheless, we agree that, consistent with federal regulations, an RPA is appropriate for chronic toxicity at Discharge Point 002. While the tentative order did not include an RPA discussion, we note that Section IV.F did already contain a narrative chronic toxicity effluent limit, which means that there is, in fact, reasonable potential for chronic toxicity at Discharge Point 002. We revised Fact Sheet section IV.C.6.b(2) to include an explicit RPA as follows:

Reasonable Potential Analysis. The Discharger conducted a chronic toxicity screening study with three rounds of tests in 2007 and 2008. The no observable effect concentration was 100% in all three rounds of tests. The previous order required no further tests. These low toxicity values indicate low reasonable potential for chronic toxicity so there is only a narrative chronic toxicity limit in this Order. A numeric limit is unwarranted at this time. The previous permit included chronic toxicity triggers of a single sample maximum of 20 TUE and a 3-sample median of 10 TUE, which would trigger accelerated chronic toxicity testing if exceeded. Based on the results of the toxicity screening phase study conducted in 2008 (see below) and in accordance with the 2007 NPDES Permit, the discharger was not required to conduct routine chronic toxicity testing during the permit term.

As explained in Fact Sheet section IV.C.5.b, no RPA is necessary for acute toxicity at Discharge Point 002 because Basin Plan Table 4-3 requires acute toxicity effluent limitations regardless of whether there is reasonable potential.

- (c) We agree that, when there is reasonable potential for toxicity to exceed water quality standards, effluent limits are necessary. We do not agree, however, that the effluent limits must be numeric. We recognize that the State Water Board has drafted a proposed toxicity policy that could someday require numeric chronic toxicity limits. However, in State Water Board Order No. WQO 2003-0012 (Los Coyotes and Long Beach), the State Water Board found it inappropriate to include numeric chronic toxicity limits until the State Water Board updates the State Implementation Policy's toxicity requirements. Until then, the State Water Board said most NPDES permits should include only narrative limits. In State Water Board Order No. WQO 2008-0008 (Davis), the State Water Board revisited this issue, concluding that numeric effluent limitations for chronic toxicity were inappropriate at the time. That order directed the Central Valley Regional Water Board to impose narrative chronic toxicity limits. This tentative order (see section IV.F) contains the following narrative chronic toxicity effluent limit: "The discharge shall not contain chronic toxicity at a level that would cause or contribute to toxicity in the receiving water."

The Regional Water Board does include numeric chronic toxicity limits and more frequent toxicity monitoring for petroleum refineries, such as the Shell Refinery, because there is a significant potential for the release of toxic pollutants from petroleum refineries, unlike sugar refineries and sanitary wastewater treatment plants.

- (d) We agree that Fact Sheet section IV.C.6.b(2) was inconsistent with MRP Table E-4. We revised section IV.C.6.b(2), as shown in this response above, to correct the inconsistency by no longer stating that no routine chronic toxicity monitoring is required.

Baykeeper Comment 4

The Tentative Order Should Retain the Discharge Prohibition for Algaecides and Anti-Fouling Additives from the Prior NPDES Permit or Justify its Removal with an Antidegradation Analysis.

Baykeeper notes that the Tentative Order removed from the previous order a prohibition on the use of algaecides and anti-fouling additives in the Refinery's barometric condenser cooling water system. Baykeeper asserts that the change is unjustified and conflicts with antidegradation policies. Baykeeper recommends either retaining the prohibition or better justifying its removal.

Response to Comment 4

We revised section III of the tentative order to restore this prohibition. We had deleted it because the C&H Sugar Company does not use algaecides or anti-fouling additives in its cooling water system. Nevertheless, retaining the prohibition will ensure that C&H Sugar Company continues to not use algaecides or anti-fouling additives.

We added the following prohibition to Section III of the tentative order:

E. The use of algaecides or anti-fouling additives in the barometric condenser cooling water system, discharged at Discharge Point 001, is prohibited.

We added our basis for this prohibition to Fact Sheet Section IV.A as follows:

5. Discharge Prohibition III.E (No algaecides or anti-fouling additives in barometric condenser cooling water system): Algaecides and anti-fouling agents are, by their nature, toxic. This prohibition ensures that these toxic additives are not present in cooling water discharges. This prohibition is necessary because this Order does not contain effluent limitations for such substances and does not require toxicity testing of the cooling water discharges at Discharge Point 001.

Baykeeper Comment 5

The Tentative Order Should Require the Permittee to Monitor its Stormwater Discharges for Additional Pollutants Likely to be Present at the Facility and to Ensure that Stormwater Discharges Protect Beneficial Uses.

Baykeeper considers the Tentative Order's stormwater monitoring requirements to be minimal. It notes that the C&H Sugar Company violated its stormwater pH limitation five times and asserts that this could indicate the presence of additional pollutants. Baykeeper comments that

the Refinery is old and some of the equipment may be laden with toxic pollutants. Therefore, Baykeeper believes stormwater monitoring should be required for total suspended solids, iron, aluminum, magnesium, and copper. Baykeeper maintains that this revision would be consistent with the General Industrial Stormwater Permit (State Water Board Order No. 97-03).

Baykeeper also claims that the Tentative Order does not require “best available or control technologies” and requests that the Tentative Order require use of best management practices. At a minimum, Baykeeper proposes a provision that states, “NPDES Permits for storm water discharges must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT).”

Response to Comment 5

We disagree. We believe the tentative order’s requirements are adequate. Provision VI.C.4 of the tentative order and Attachment G section I.J set forth stormwater requirements, including (1) preparation and implementation of a Stormwater Pollution Prevention Plan, (2) source identification, (3) implementation of appropriate management controls, and (4) annual verification of controls through inspections. MRP Table E-5 and Attachment G section III.A.3.c set forth stormwater monitoring requirements. Together, these requirements are effectively the same as those in the State Water Board’s General Industrial Stormwater Permit (General Permit). They include “best management practices” that meet the Clean Water Act’s “best available technology economically achievable” and “best conventional pollutant control technology” requirements. We believe this level of stormwater control is appropriate because the Refinery manufactures only food grade products from primarily non-toxic agricultural raw materials. All manufacturing operations take place inside buildings, and only truck loading and unloading, ship unloading, and temporary storage of some process materials occur outside where they could be exposed to stormwater.

Both the tentative order and the General Permit require total suspended solids (TSS) pH, specific conductance, and total organic carbon (TOC) monitoring at least twice per year. Attachment G section III.A.3.b of the tentative order also requires accelerated monitoring when effluent limit violations occur. The General Permit requires monitoring for other pollutants likely present in stormwater in significant quantities, but we have identified no such pollutants at this site. Baykeeper provides no evidence to support adding monitoring requirements for iron, aluminum, magnesium, or copper other than to note that the Refinery has been in operation for many years. For iron, aluminum, and magnesium, in particular, it is difficult to imagine environmentally harmful stormwater loads since neither the California Toxics Rule nor the Basin Plan contains a water quality objective applicable to Carquinez Strait for any of these ubiquitous metals. Iron and aluminum could be present in stormwater because they are common elements found in nature. C&H Sugar Company handles magnesium oxide in the granulated activated carbon (GAC) it uses for its sugar processing, but this occurs indoors. We do not believe copper monitoring is necessary because, although copper is present in indoor piping, its presence in stormwater above natural background levels is unlikely.

Baykeeper asserts that stormwater pH violations indicate the potential for other pollutant discharges. We disagree. TSS and TOC monitoring are better surrogates for generic pollutants

because many pollutants adhere to solids or organic carbon. TSS and TOC monitoring also provides a good means to evaluate the effectiveness of best management practices implementation. When the stormwater pH violations took place, there were no TSS or TOC violations.

To clarify that the “best management practices” identified in the tentative order constitute “best available technology economically achievable” and “best conventional pollutant control technology” pursuant to the Clean Water Act, we revised Fact Sheet section VII.C.4, Stormwater Pollution Prevention Plan and Best Management Practices Plan, as follows:

This provision is retained from the previous order. This provision requires ongoing implementation of the Stormwater Pollution Prevention Plan and Best Management Practices Plan to ensure compliance with Federal stormwater pollution controls. The Stormwater Pollution Prevention Plan is based on the Regional Standard Provisions (~~Attachment G~~) and Best Management Practices Plan on 40 CFR 125, Subpart K. These requirements meet the Clean Water Act’s “best available technology economically achievable” and “best conventional pollutant control technology” requirements.