STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (John H. Madigan)
MEETING DATE: March 10, 2010

ITEM: 5B

SUBJECT: Chevron USA Inc., Richmond Refinery, Richmond; ConocoPhillips, San Francisco Refinery at Rodeo, Rodeo; Shell Oil Products US and Equilon Enterprises LLC, Shell Martinez Refinery, Martinez; Tesoro Refining & Marketing Company, Golden Eagle Refinery, Martinez; Contra Costa County - Amendment of NPDES Permits

CHRONOLOGY:

Chevron:	June 2006 – Permit Reissued
ConocoPhillips:	June 2005 – Permit Reissued
Shell:	October 2006 – Permit Reissued
Tesoro:	September 2005 - Permit Reissued

DISCUSSION: The Revised Tentative Order (Appendix A) would revise the NPDES permits for the Chevron Richmond Refinery, ConocoPhillips' San Francisco Refinery at Rodeo, the Shell Martinez Refinery, and the Tesoro Golden Eagle Refinery to put in place selenium water-quality based effluent limitations (WQBELs) and mass emission limits using new information. This new information has been generated in the past several years to support the development of a Total Maximum Daily Load (TMDL) for selenium. The new information supports the allowance of a small dilution credit in calculating the selenium limits pending completion of the TMDL. This is consistent with the approach used for the Valero Benicia Refinery permit the Board adopted in November 2009. USEPA supports this approach.

We received comments (Appendix B) from Chevron Products Company and the Western States Petroleum Association on a draft order distributed for review. Appendix C contains our responses to those comments. We resolved all of the comments, modifying the draft permit as appropriate. The Revised Tentative Order reflects these modifications. We expect this item to remain uncontested.

RECOMMEND-ATION: Adoption of the Revised Tentative Order.

CIWQS Place Numbers: 256695, 255284, 252650, 228968 (JHM)

Appendices:
A. Revised Tentative Order
B. Comments
C. Response to Comments

APPENDIX A

Revised Tentative Order

Linda S. Adams
Secretary for
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Arnold Schwarzenegger
Governor

REVISED TENTATIVE ORDER No. R2-2010-XXXX

AMENDMENT OF WASTE DISCHARGE REQUIREMENTS FOR SAN FRANCISCO BAY REGION REFINERIES

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter "Regional Water Board"), finds that:

1. The Regional Water Board issued waste discharge requirements that serve as National Pollutant Discharge Elimination System (NPDES) permits for the dischargers listed in Table 1 (hereinafter "Dischargers"). These permits authorize the Dischargers to discharge treated effluent from their respective facilities to waters of the United States under specific conditions.

2. This Order amends the orders listed in Table 1 to replace existing interim selenium limits with revised water quality-based effluent limits (WQBELs) calculated with limited dilution credits in accordance with the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (hereinafter "State Implementation Policy"). This Order also amends the orders listed in Table 1 to require effluent and receiving water studies pertaining to selenium.

3. The Fact Sheet attached to this Order as Attachment F contains background information and rationale for this Order's requirements. It is hereby incorporated into this Order and therefore constitutes part of the findings for this Order.

4. This Order is exempt from the provisions of the California Environmental Quality Act pursuant to California Water Code §13389.

5. The Regional Water Board notified the Dischargers and interested agencies and persons of its intent to consider adoption of this Order, and provided an opportunity to submit written comments.

6. In a public meeting, the Regional Water Board heard and considered all comments pertaining to this Order.

TABLE 1
DISCHARGERS SUBJECT TO THIS ORDER

Discharger	Permit Number	Order Number	Permit Adoption Date
Chevron USA Inc., Richmond Refinery Chevron Chemical Company, LLC, Richmond Plant, and General Chemical Corporation, Richmond Works	CA0005134	R2-2006-0035	6/14/2006
ConocoPhillips San Francisco Refinery At Rodeo	CA0005053	R2-2005-0030	6/15/2005
Shell Oil Products US and Equilon Enterprises LLC, Shell Martinez Refinery	CA0005789	R2-2006-0070	10/11/2006
Tesoro Refining & Marketing Company, Golden Eagle Refinery	CA0004961	R2-2005-0041	9/21/2005

IT IS HEREBY ORDERED, pursuant to the provisions of California Water Code Division 7 and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, that the Dischargers listed in Table 1 shall comply with their respective orders listed in Table 1, as amended by this Order.

1. **The selenium WQBELs in Tables 2 and 3 shall replace all existing selenium limits in the orders listed in Table 1.**

These new WQBELs are both concentration-based and mass-based. Compliance with the mass-based limits in Table 3 shall be evaluated using running annual average mass loads, which shall be calculated from the arithmetic averages of each day's mass load and the mass loads from each of the preceding 364 days.

TABLE 2
SELENIUM EFFLUENT CONCENTRATION LIMITS

Discharger	Maximum Daily Effluent Limit (MDEL), µg/L	Average Monthly Effluent Limit (AMEL), µg/L
Chevron	34	33
ConocoPhillips	50	37
Shell	50	42
Tesoro	50	42

TABLE 3
SELENIUM MASS EMISSION LIMITS

Discharger	Annual Average Effluent Limit, lbs/day	Annual Average Effluent Limit, kg/day
Chevron	2.0	0.92
ConocoPhillips	0.85	0.39
Shell	2.0	0.92
Tesoro	1.0	0.45

2. The selenium compliance schedules and related requirements in the orders listed in Table 1 are hereby rescinded.

The Dischargers shall no longer be required to complete any remaining tasks or meet any remaining deadlines associated with their selenium compliance schedules.

3. The Dischargers listed in Table 1 shall implement effluent and receiving water selenium characterization studies as set forth in Table 4.

The Dischargers may complete, or cause to be completed, all or some of the required tasks collaboratively. All submittals shall be acceptable to the Executive Officer. Upon request by one or more Dischargers, the Executive Officer may modify the deadlines for the following tasks by no more than three years if good cause exists, such as delays in data collection, sample collection, analytical turnaround, or receipt of third party reports; laboratory QA/QC problems; other factors outside the Dischargers' control; or new information that warrants schedule modification. Any requests for schedule modification shall be in writing with necessary justification. Any approval shall also be in writing.

4. If conflicts exist between this Order's provisions and those of the orders listed in Table 1, this Order's provisions shall prevail.

Apparent conflicts may include, but may not necessarily be limited to, selenium limits, limit calculations and discussions, and text denying dilution credits when calculating selenium WQBELs. This Order's provisions, and the bases for them, shall supersede similar requirements and findings in the orders listed in Table 1.

5. This Order shall become effective on April 1, 2010.

TABLE 4
EFFLUENT AND RECEIVING WATER CHARACTERIZATION STUDY
TASKS AND SCHEDULE

Task	Compliance Date
1. Submit a study plan for a minimum two-year study that includes the following elements: a. effluent and receiving water sampling locations (the effluent sampling location may be the existing effluent compliance sampling point; receiving water sampling locations shall be within a 100-foot radius of the outfall to characterize near-field concentrations and speciation); b. receiving water sampling along transects from the Pacific Ocean (Golden Gate) to the Sacramento River (Rio Vista) and San Joaquin River (USGS Station 757), including sampling in the freshwater portions of the rivers at Vernalis (San Joaquin River) and Freeport (Sacramento River); c. sampling and analysis protocols (including means to evaluate seasonal conditions under low and high flows from the Sacramento / San Joaquin River Delta, selenium concentrations in the water column and suspended particles, and speciation and particulate selenium content in the effluent); d. comparison of the proposed protocols and analytical methods to previous sampling efforts; e. sampling parameters (including, at a minimum, salinity, carbon, nitrogen, and chlorophyll-a in receiving water, and dissolved and particulate selenate, selenite, organic selenides, and elemental selenium concentrations in both effluent and receiving water); f. data interpretation models and other methods to be used (representing conservative, reasonable worst case conditions); and g. implementation schedule.	May 1, 2010
2. Begin implementation of the study plan developed for Task 1.	July 15, 2010
3. Submit a status report for Tasks 1 and 2 containing, at a minimum, monitoring data collected since the beginning of the study, summary of results to date, and necessary updates to the study plan.	Annually on February 1, 2011, and February 1, 2012, with annual self-monitoring reports
4. Submit a final study report that includes the following elements: a. sampling results, data interpretation, and conclusions, such as receiving water and mixing zone characterization, seasonal variability, etc.; b. effluent characterization; c. determination if there is reasonable potential for selenium in the discharge to violate the Basin Plan's narrative bioaccumulation objective through the use of pertinent models; d. comparison of near-field selenium water column concentrations to applicable numeric objectives; e. demonstration of spatial and temporal extent to which the objectives and other relevant guidelines are being exceeded; and f. determination of whether selenium levels adversely affect food web or wildlife, or contributes to bioaccumulation.	August 15, 2012

I, Bruce Wolfe, 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, San Francisco Bay Region, on March 10, 2010.

_____

Bruce H. Wolfe
Executive Officer

ATTACHMENT F

FACT SHEET

This Fact Sheet describes the legal requirements and technical rationale that serve as the basis for this Order's requirements.

Purpose

The purpose of this Order is to replace the selenium limits in the orders listed in Table 1 with WQBELs based on new information developed to support a future selenium Total Maximum Daily Load (TMDL). These limits are interim measures to control selenium in advance of a TMDL. The new WQBELs reflect limited dilution credit in accordance with the State Implementation Policy. This Order also requires the Dischargers, either individually or collaboratively, to study selenium in their effluents and its effects on San Francisco Bay.

Background

Selenium is a component of crude oil. The Dischargers listed in Table 1 discharge selenium into San Pablo Bay, Suisun Bay, and Carquinez Strait with their treated refinery wastewaters. Pursuant to Clean Water Act section 303(d), USEPA maintains a list of waters not meeting water quality standards, and San Pablo Bay, Suisun Bay, and Carquinez Strait are on that list because selenium in these waters bioaccumulates within the food web. The livers of San Francisco Bay waterfowl that feed on bottom-dwelling organisms, such as clams, contain elevated selenium levels. The Office of Environmental Health and Hazard Assessment issued an advisory in 1987 for consumption of two species of North Bay diving ducks found to have high tissue levels of selenium. This advisory is still in effect. White sturgeon, which also feed on clams, also contain elevated selenium levels.

This information, together with high uncertainty regarding how different sources of selenium contribute to bioaccumulation, have previously led the Regional Water Board to deny dilution credits for selenium. The Dischargers' existing permits include selenium WQBELs based on National Toxics Rule chronic and acute water quality objectives of 5 and 20 micrograms per liter (µg/L), and because these WQBELs do not account for dilution credits, they are very conservative. Since the Dischargers could not immediately comply with these WQBELs, their permits also include compliance schedules with specific tasks and deadlines, and performance-based interim limits in lieu of WQBEL compliance. The interim selenium limits are 34 µg/L for Chevron and 50 µg/L for ConocoPhillips, Shell, and Tesoro (expressed as daily maxima).

Since adoption of the existing permits, the Dischargers have significantly reduced their selenium discharges and altered the chemical forms of the selenium they discharge so the selenium is generally less bioavailable. Also, since adoption of the existing permits, substantially more information has become available to advance the development of a selenium TMDL for north San Francisco Bay segments. Recent work reduces some uncertainties regarding selenium sources, fate, and transport, and suggests that some assimilative capacity remains in the receiving

waters. Based on this preliminary information, Regional Water Board staff concludes that limited dilution credit for selenium may be granted such that existing refinery performance is maintained, pending the completion of a selenium TMDL. This Order grants limited dilution credits for selenium, but only to a level that maintains existing refinery performance. When a selenium TMDL is completed, the Regional Water Board will amend these limits to be consistent with TMDL wasteload allocations. Granting dilution credits for selenium at this time is appropriate specifically because of the substantial new information about selenium in San Francisco Bay now available. This information does not apply to other pollutants.

Table F-1 provides some basic information about the facilities this Order covers.

TABLE F-1
DISCHARGER FACILITY INFORMATION

Discharger	Facility Name	Facility Address	Facility Average Flow [1] (mgd)	Receiving Water
Chevron U.S.A. Inc., Richmond Refinery, Chevron Chemical Company LLC, Richmond Plant, and General Chemical Corporation, Richmond Works	Richmond Refinery	841 Chevron Way Richmond, CA 94801 Contra Costa County Contact: Michael Coyle, (510) 242-4400	7.4	San Pablo Bay
ConocoPhillips	San Francisco Refinery	1380 San Pablo Ave Rodeo, CA 94572-1354 Contra Costa County Contact: Dennis Quilici, (510) 245-4403	3.0	San Pablo Bay
Shell Oil Products US and Equilon Enterprises, LLC	Shell Martinez Refinery	3485 Pacheco Blvd Martinez, CA 94553 Contra Costa County Contact: Steven Overman, (925) 313-3281	5.8	Carquinez Strait
Tesoro Refining & Marketing Co.	Golden Eagle Refinery	150 Solano Way Martinez, CA 94553 Contra Costa County Contact: Peter Carroll, (925) 335-3497	4.1	Suisun Bay

[1] Average flow calculated from daily flow over the period October 1, 2003, to September 30, 2009.

Dilution Credits

The Dischargers' outfalls are designed to achieve a minimum initial dilution of 10:1. Table F-2 provides the estimated actual initial dilution at each Discharger's outfall. The State Implementation Policy provides the basis for any dilution credit. State Implementation Policy section 1.4.2.1 states, "dilution credit may be limited or denied on a pollutant-by-pollutant

basis…." Based on Regional Monitoring Program monitoring data for San Francisco Bay, there is variability in the receiving water, and the hydrology of the receiving water is very complex. Therefore, it is uncertain how representative the ambient background data used to determine the effluent limitations is. Therefore, this Order significantly restricts selenium dilution credits. ConocoPhillips, Shell, and Tesoro receive a dilution credit of D = 9 (10 parts combined ambient water plus effluent to 1 part effluent). Chevron receives a dilution credit of D = 7 (8:1) because any larger dilution credit would result in WQBELs less stringent than Chevron's existing interim maximum daily effluent limit of 34 µg/L.

TABLE F-2
ESTIMATED DILUTION AND DILUTION CREDITS

Discharger	Discharge Point	Estimated Initial Dilution	New Dilution Credit
Chevron	E-001	200:1	8:1
ConocoPhillips	E-002	67:1	10:1
Shell	E-001	16:1	10:1
Tesoro	E-001	15:1	10:1

Concentration-Based WQBEL Calculations

Table F-3 presents the calculations underlying the concentration-based selenium WQBELs. These calculations reflect the State Implementation Policy methodology for calculating WQBELs and are based on the same data used to derive the concentration-based WQBELs in the existing permits. The only difference is the dilution credit applied.

TABLE F-3
CONCENTRATION-BASED WQBEL CALCULATIONS (µg/L)

	Chevron	Conoco Phillips	Shell	Tesoro
Dilution Factor (D) (if applicable)	7	9	9	9
No. of samples per month	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	N	N
Applicable Acute WQO	20	20	20	20
Applicable Chronic WQO	5	5	5	5
HH criteria	N/A	N/A	N/A	N/A
Background (Max Conc for Aquatic Life calc)	0.39	0.39	0.39	0.39
Background (Avg Conc for Human Health calc)	N/A	N/A	N/A	N/A
Is the pollutant Bioaccumulative(Y/N)?	Y	Y	Y	Y
ECA acute	157.3	196.5	196.5	196.5
ECA chronic	37.27	46.49	46.49	46.49
ECA HH	N/A	N/A	N/A	N/A
No. of data points <10 or at least 80% of data reported non-detect? (Y/N)	N	N	N	N

	Chevron	Conoco Phillips	Shell	Tesoro
Avg of effluent data points	12.4	22.6	33.7	10.2
Std Dev of effluent data points	4.7	15.9	9.5	3.1
CV calculated	0.38	0.70	0.28	0.31
CV (Selected) - Final	0.38	0.70	0.28	0.31
ECA acute mult99	0.46	0.28	0.55	0.52
ECA chronic mult99	0.66	0.48	0.73	0.71
LTA acute	72.1	55.0	107.6	102.4
LTA chronic	24.6	22.3	33.9	33.0
minimum of LTAs	24.6	22.3	33.9	33.0
AMEL mult95	1.3	1.7	1.2	1.3
MDEL mult99	2.2	3.6	1.8	1.9
AMEL (aq life)	32.8	36.9	42.3	41.9
MDEL(aq life)	53.6	79.6	62.0	63.3
MDEL/AMEL Multiplier	1.63	2.16	1.47	1.51
AMEL (human hlth)	N/A	N/A	N/A	N/A
MDEL (human hlth)	N/A	N/A	N/A	N/A
Min of AMEL for Aq. life vs HH	32.8	36.9	42.3	41.9
min of MDEL for Aq. Life vs HH	53.6	79.6	62.0	63.3
Final limit - AMEL	33	37	42	42
Final limit - MDEL	54	80	62	63

The Dischargers' previous permits contained performance-based interim maximum daily effluent limits of 34 µg/L (Chevron) or 50 µg/L (ConocoPhillips, Shell, Tesoro). To maintain current performance and avoid unnecessary backsliding, this Order retains these existing limits. The resulting concentration-based maximum daily WQBELs in this Order, shown in Table F-4, are therefore lower than those in calculated in Table F-3.

TABLE F-4
FINAL CONCENTRATION-BASED WQBELs

Discharger	Maximum Daily Effluent Limit (MDEL), µg/L	Average Monthly Effluent Limit (AMEL), µg/L
Chevron	34	33
ConocoPhillips	50	37
Shell	50	42
Tesoro	50	42

Mass Emission Limitation Calculations

State Implementation Policy section 2.1.1 states that, for bioaccumulative compounds on the 303(d) list, the Regional Water Board should consider whether mass loads should be limited to current levels pending TMDL development. Consistent with the orders listed in Table 1, the Regional Water Board continues to find that selenium mass limits are warranted. Such limits ensure that the Dischargers maintain their existing treatment performance and do not further contribute to water quality impairment. Therefore, this Order establishes selenium mass emission limits as described below.

The mass emission limits are based on the average monthly effluent limits (calculated above) and the average daily effluent flows from October 1, 2003, through September 30, 2009 (shown in Table F-5). The limits are calculated using average monthly effluent limits, instead of maximum daily effluent limits, because average monthly effluent limits better represent long-term performance.

TABLE F-5
AVERAGE FLOWS

Discharger	Average Flow, mgd
Chevron	7.4
ConocoPhillips	3.0
Shell	5.8
Tesoro	4.1

The limits are calculated using the following equation.

Mass Emission (kg/day) = (Flow, MGD) x (Selenium Concentration, mg/L) x 3.785

For two of the Dischargers, ConocoPhillips and Tesoro, the newly-calculated mass emission limits exceed the existing mass emission limits. Therefore, to maintain current performance and avoid unnecessary backsliding, this Order retains the existing limits.

The mass emission limits are expressed as running annual averages to be consistent with the limits in the existing permits. The running annual average is the arithmetic average of the current day's mass load and the mass loads for each of the previous 364 days, as shown in the following example:

$$\text{Annual Mass emission rate (kg/day)} = \frac{3.785}{N}\sum_{i=1}^{N} Q_i C_i$$

where:

N = number of samples analyzed in any calendar year
Q_i = flow rate (MGD) associated with the N^{th} sample
C_i = selenium concentration (mg/L) associated with the N^{th} sample.

Effluent and Receiving Water Selenium Characterization Study

This Order requires the Dischargers to characterize: (a) the concentrations and speciation of selenium in effluent and receiving water, (b) the variability of selenium in the discharge, (c) the potential for uptake and conversion of selenium to more bioavailable forms, (d) mixing and dilution in the receiving waters, and (e) the ability to comply with any more-stringent selenium criteria that may become effective in the foreseeable future. These requirements are reasonable and warranted because the Dischargers discharge selenium into San Pablo Bay, Suisun Bay, and Carquinez Strait with their refinery wastewaters. Based on the results of the studies, the Regional Water Board will be able to evaluate better how the Dischargers contribute to the selenium impairment of San Francisco Bay. The Regional Water Board may use the data to evaluate dilution credits, characterize selenium bioaccumulation potential and ecological risk, and evaluate receiving water quality with respect to selenium. The Regional Water Board may also use the data to determine whether receiving water quality correlates with seasonal or other environmental factors. California Water Code sections 13267 and 13383 authorize the Regional Water Board to require these studies.

Anti-backsliding

Clean Water Act sections 402(o)(2) and 303(d)(4), and 40 CFR 122.44(l), prohibit backsliding in NPDES permits. These anti-backsliding provisions require revised effluent limitations to be at least as stringent as those previously in place, with some exceptions. The WQBELs in this Order replace existing performance-based interim limits, which are not WQBELs. Anti-backsliding requirements do not apply when comparing different types of limits developed for different purposes (e.g., performance-based interim limits versus WQBELs). The WQBELs in this Order also replace WQBELs in the orders listed in Table 1; however, the WQBELs already in the permits have not yet become effective. Anti-backsliding requirements do not apply when imposing new WQBELs in lieu of WQBELs that have not gone into effect. Nevertheless, the WQBELs in this Order have been adjusted to maintain existing performance.

Antidegradation

Antidegradation policies require that the existing quality of waters be maintained unless degradation is justified based on specific findings. State Water Board Resolution Number 68-16 sets forth California's antidegradation policy. Consistent with 40 CFR 131.12, Resolution Number 68-16 incorporates the federal antidegradation policy. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with these antidegradation policies.

This Order is consistent with antidegradation policies because it will not result in any additional pollutant discharges and will not reduce receiving water quality. This Order requires that existing selenium discharge concentrations be maintained or reduced, and authorizes no flow increases. The revised WQBELs are at least as stringent as the interim limits currently in effect. Moreover, generic pollution minimization requirements in the existing permits remain in place.

Authority for Modification of Permits

The Regional Water Board is authorized to amend the permits listed in Table 1 of this Order by 40 CFR 122.62(a)(2), because the changes that allow dilution credits in WQBEL calculations for selenium reflect new information not considered when the permits were issued.

Notification of Interested Parties

The Regional Water Board encouraged public participation in this amendment process. It notified the Dischargers and other interested parties, and provided an opportunity to submit written comments between December 23, 2009, and January 27, 2010. The Contra Costa Times and Martinez News-Gazette published a notice that the Regional Water Board would consider this item during its March 10, 2010, meeting.

APPENDIX B

Comments

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Manager

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January 26, 2010

Mr. Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Region
1515 Clay Street, Suite 1400
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Chevron Comments on the Tentative Order to Amend Discharge Requirements for San Francisco Bay Region Refineries

Dear Mr. Wolfe:

The Chevron Richmond Refinery ("Chevron") appreciates the opportunity to comment on the tentative order to amend the discharge requirements for San Francisco Bay region refineries ("Tentative Order"). Chevron produces high quality transportation fuels created for the San Francisco Bay Area and Northwestern United States. In addition, the Chevron Richmond Refinery is the largest producer of base lubricating oils on the West Coast. We take pride in our commitment to serving our community, conducting safe operations, and protecting the environment. The Richmond Refinery is an important San Francisco Bay Area business that has provided jobs and transportation fuels for the Bay Area and the West Coast since 1902.

Applicability of Dilution Credits for Selenium

Chevron supports staff's approach of incorporating dilution in the calculation of selenium limits in the Tentative Order. For bioaccumulative pollutants such as selenium, the State Board has found that a 303(d) listing alone is not a sufficient basis on which to conclude that a water body lacks assimilative capacity. *State Board Order WQ 2001-006*, pg. 20. At the time Chevron's permit was adopted, information relating to assimilative capacity was not available. Since that time, additional information and analysis has been prepared for the selenium total maximum daily load ("TMDL"), currently under development for North San Francisco Bay, which provides the necessary support for finding that a dilution credit is appropriate for selenium. Based on the very large body of scientific work that has been completed by Tetra Tech, in connection with the selenium TMDL, and Flow Science, during their independent evaluation of assimilative capacity for refinery selenium discharges, there is substantial evidence to support a finding that the Bay has assimilative capacity for selenium discharges from Bay Area refineries.

The use of this data to support pre-TMDL limits for refinery discharges has also been endorsed by the United States Environmental Protection Agency (USEPA). In their January 2008 letter to

the Regional Board, the USEPA provided guidance that the Regional Board, as authorized through the Clean Water Act, may consider all appropriate technical information, including information developed through the TMDL process, when establishing final water quality-based effluent limits (WQBELs) in NPDES permits prior to completion or formal adoption of the TMDL.

We believe that sufficient data now exists to support the Regional Board's granting of dilution credits for purposes of calculating final effluent limits for selenium. For that reason, Chevron supports the incorporation of dilution for selenium in the Tentative Order

Dilution Credit Reduction for Selenium Calculations

The Fact Sheet summarizes the method used, per the SIP, to calculate the proposed WQBELs in this Tentative Order. As part of these calculations, Chevron was the only refinery source not granted a dilution credit of D=9 (10:1) at their respective outfall, but was instead assigned a dilution credit of D=6 (7:1) without a clear basis. The inconsistent treatment of Chevron has no basis in the known selenium science, is unrepresentative of the dilution and mixing that occurs at Chevron's outfall, and unfairly penalizes Chevron for being one of the better performing refineries with regard to selenium discharges.

As outlined in the Tentative Order, all the Bay Area refinery outfalls meet the requirements of a deep water discharge, which is described under the San Francisco Bay Basin Water Quality Control Plan ("Basin Plan") Section 4.6.1, as a discharge "through an outfall with a diffuser and must receive a minimum initial dilution of 10:1, with generally a much greater dilution". The selection of a cautious and conservative 10:1 dilution credit, as opposed to using actual initial dilution for each outfall, has been justified by the Regional Board for various reasons, including the difficulty in measuring or predicting dilution in the San Francisco Bay estuarine system.

Based on the science provided by the selenium TMDL process, the Bay has assimilative capacity for selenium. The data provides ample support for the Regional Board's use of a still conservative 10:1 dilution credit for selenium discharges. A previous study, also referenced in Table F-2 of the Fact Sheet, has estimated Chevron's actual dilution at 200:1, which is the largest initial dilution of any of the Bay Area refineries.

With the substantial new information and science developed for the TMDL, the Regional Board has correctly determined that a dilution credit of 10:1 for selenium discharges is warranted. However, these dilution credits have not been applied consistently to all dischargers. Chevron is the only refinery that was granted less than 10:1 dilution for its average monthly effluent limit (AMEL). The unequal treatment of Chevron is particularly troubling given that Chevron's maximum daily effluent limit (MDEL) is already significantly below both the MDEL and revised AMEL of every other refinery. There is no evidence suggesting that Chevron's outfall performance, with regard to selenium and/or the actual dilution achieved, is inferior to any other discharger affected by this Tentative Order. Nor is there any basis established in the Tentative Order or Fact Sheet that justifies such inequitable treatment.

The WQBEL calculations summarized in Table F-3 result in selenium MDELs that are greater than each discharger's currently permitted interim MDELs. While the Regional Board restricts the calculated MDELs listed in Table F-3 to their current permit levels, it is important to note that the actual calculations, including dilution credits, were not altered to achieve these existing MDELs.

A similar approach should be utilized in setting the AMELs for this Tentative Order. Because Chevron is currently regulated far more stringently than every other refinery, it is the only discharger who's calculated AMEL, at a 10:1 dilution, is greater than their currently permitted MDEL (34 µg/L). For Chevron only, the SIP-based calculation was arbitrarily altered restricting the dilution credit to D=6 (7:1). The only basis included in the Fact Sheet states that "any larger dilution credit would result in WQBELs less stringent than Chevron's existing interim maximum daily effluent limit." Not only is this limited statement legally insufficient to support the Regional Board's more stringent treatment of Chevron, it is also factually inaccurate. A dilution credit of D=7 would also result in an AMEL below the current MDEL of 34 µg/L.

Chevron should not be penalized simply because it is one of the better performing refineries with regard to the discharge of selenium. Even with only a MDEL of 34 µg/L, Chevron is regulated far more stringently than every other refinery whose AMELs are all significantly above Chevron's MDEL. Imposing further arbitrarily chosen reductions on Chevron establishes a troubling policy precedent where performance improvements are not rewarded, but instead punished by even more stringent requirements. Such an approach will remove all incentive to improve performance if doing so only leads to more stringent and unequal regulation.

There is no basis in the science, or in the conditions associated with actual dilution achieved at Chevron's outfall, that warrants more stringent treatment of Chevron. As such, the selection of 7:1 dilution for purposes of imposing an AMEL is arbitrary and capricious, and not supported by the record. Nor is the basis for this requirement sufficiently justified in the Fact Sheet. Chevron should be allowed 10:1 dilution like every other refinery. Since the calculated AMEL using 10:1 dilution is currently above Chevron's MDEL, only the current MDEL of 34 µg/L should be imposed. Alternatively, the Regional Board could establish an AMEL at 34 µg/L. Either approach remains protective of water quality since Chevron would remain, by far, the most stringently regulated of the facilities. Additionally, Chevron believes that the selenium TMDL, when adopted, should regulate all of the refineries consistently. Therefore, Chevron also respectfully requests that language be included in the Tentative Order that commits to address the inequities in regulation of Chevron as compared to the other refineries when the selenium TMDL is adopted and implemented.

Mass Emission Limitation Calculation

In alignment with the previous comments regarding the AMEL, the corresponding mass emission limits should be calculated as outlined in the Tentative Order. Using the MDEL of 34 µg/L (or alternatively an adjusted AMEL of 34 µg/L), the new mass emission limits would be calculated at 2.10 lbs/day (0.95 kg/day). This revised limit still achieves a reduction from the existing mass limit of 2.38 lbs/day (1.08 kg/day).

We appreciate the opportunity to present these comments and support the adoption of this Tentative Order, with the minor changes outlined above. If you have any questions or need additional information regarding this submittal, please contact Mr. Brian Hubinger at (510) 242-2554.

Sincerely,

T.A. Lizarraga

cc: Mr. John H. Madigan
California Regional Water Quality Control Board
San Francisco Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Ms. Lila Tang
California Regional Water Quality Control Board
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Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Kevin Buchan
Senior Coordinator, Bay Area and State Water Issues

VIA ELECTRONIC MAIL

January 27, 2010

Chair Muller, and Members of the Board
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, 14th Floor
Oakland, CA 94612

RE: Comments on the Tentative Order to Amend Waste Discharge Requirements for the San Francisco Bay Region Refineries

Chair Muller, and Members of the Board,
The Western States Petroleum Association (WSPA) appreciates the opportunity to submit comments to the San Francisco Bay Regional Water Quality Control Board (Regional Board) on the tentative order for the San Francisco Bay Region refineries. WSPA is a trade association that represents companies engaged in the exploration, production, transportation, refining and marketing of crude oil, natural gas and refined petroleum products across the western United States.

Dilution Credit for Selenium is Warranted
WSPA supports staff's approach incorporating dilution into the calculation of selenium limits in the tentative order (T.O.). The State Water Resources Control Board's State Implementation Plan (SIP), Section 1.4.2.2.B, requires the Regional Board to consider the presence of bioaccumulative chemicals, such as selenium, in determining whether to allow mixing zones and dilution credits. This provision does not prohibit the use of dilution for bioaccumulative chemicals, but does require the Regional Board to determine whether denying or restricting dilution credits is necessary to protect water quality. In this case, the information and analysis that has been prepared for the selenium TMDL currently under development for the North San Francisco Bay provide the appropriate support for finding that a dilution credit is appropriate for selenium. Based on the very large body of scientific work that has been developed by Tetra Tech in connection with the selenium TMDL, there is substantial evidence to support a finding that the Bay has assimilative capacity for selenium discharges from Bay Area refineries, including the Valero refinery.

In addition, FlowScience has conducted an independent evaluation of assimilative capacity for refinery selenium discharges that concludes that very significant assimilative capacity exists,

based on the large tidal exchange of water in the Bay and other factors. Water column concentrations for the Bay waters are near 0.2 part per billion (ppb), well below the water quality criterion of 5 ppb. Tidal inflows through the Golden Gate carry nearly 30,000 kg/yr into the Bay and dwarf refinery discharges in aggregate, yet the water column remains below the criterion. Flow Science's Power Point presentation on assimilative capacity was provided to the Regional Board in our previous comment letter pertaining to the November 2009 Valero Benicia refinery NPDES renewal, and is incorporated here by reference.

In their January 2008 letter to the Regional Board, USEPA provided guidance on the use of information developed as part of the TMDL process, prior to adoption of the TMDL. USEPA's letter, previously provided to the Regional Board in our comments for the Valero refinery NPDES renewal and incorporated here by reference, states that the Regional Board may consider all appropriate technical information, including information developed through the TMDL process, when establishing final water quality-based effluent limits (WQBELs) in NPDES permits prior to completion or formal adoption of the TMDL. These WQBELs are referred to as "pre-TMDL" limits. Specifically, USEPA concluded that the Clean Water Act allows an NPDES permit writer to use technical data, scientific information and water quality-related analyses – including demonstrations of assimilative capacity – developed during the TMDL process in advance of the final adoption and approval of the TMDL. We believe that sufficient data now exist to support the Regional Board's granting of 10:1 dilution in this case for purposes of calculating final effluent limits for selenium. Accordingly, WSPA supports the incorporation of dilution for selenium in the T.O.

Dilution Credit Should Be Granted Consistently

WSPA noted that the same 10:1 dilution credit was not granted to all the refineries. The T.O. provided a limited dilution credit of 7:1 to the Chevron refinery, and we are pressed to understand the scientific basis used for doing so.

WSPA believes the granting of a 10:1 dilution is warranted for all refineries in the T.O. since the Regional Board's use of this conservative 10:1 dilution credit, when actual dilution is much greater, adequately addresses the potential concerns outlined in the Fact Sheet. By treating one discharger's dilution credit differently, the Regional Board does not fulfill the Basin Plan requirement in Section 4.5.3 that the Regional Board should make "all attempts to ensure consistency among permits". WSPA recommends granting all refineries, including Chevron, a dilution credit of 10:1 to provide consistency among the permits.

Annual Mass Emission Rate

We have concerns over the annual mass emission rate equation on p. F-5 in the Fact Sheet. It is inconsistent with current monitoring requirements for the refineries which monitor on weekly sampling frequency. WSPA requests the Regional Board amend this inconsistency.

We appreciate the opportunity to comment on the T.O. Thank you.

Sincerely,

Kevin Buchan

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APPENDIX C

Response to Comments

RESPONSE TO WRITTEN COMMENTS

Amendment of Waste Discharge Requirements for San Francisco Bay Region Refineries

The Regional Water Board received written comments on a draft permit distributed for public comment from the following parties:

1. Chevron Products Company, letter dated January 26, 2010
2. Western States Petroleum Association, letter dated January 27, 2010

This response to those comments summarizes each comment in *italics* (often quoted and sometimes paraphrased for brevity) followed by our response. For the full context and content of each comment, refer to the comment letters. Also, the Regional Water Board has made staff-initiated revisions to the draft permit. These are presented first for clarity.

STAFF-INITIATED REVISIONS TO THE DRAFT PERMIT

Revision 1. The following text describing the Regional Water Board's authority to amend the San Francisco Bay Region refineries' permits has been added to the Fact Sheet, page F-7.

> **Authority for Modification of Permits**
> The Regional Water Board is authorized to amend the permits listed in Table 1 of the Order by 40 CFR 122.62(a)(2), because the changes that allow dilution credits in WQBEL calculations for selenium reflect new information not considered when the permits were issued.

Revision 2. The mass emission limit shown in Table 3 of the tentative order for Shell was 0.93 kilograms per day (kg/day). This was a typographical error. The correct mass emission limit is 0.92 kg/day. Table 3 has been revised accordingly. This revision is reflected in our Response to Chevron Comment No. 2.

Revision 3. The correct contact for Chevron is Mr. Michael Coyle. Fact Sheet Table F-1 has been revised accordingly.

RESPONSE TO CHEVRON PRODUCTS COMPANY (CHEVRON) COMMENTS

Chevron Comment No. 1. *Chevron supports using dilution in the selenium effluent limit calculations in the tentative order, and notes that the United States Environmental Protection Agency (USEPA) has endorsed using Total Maximum Daily Load (TMDL) data to support pre-TMDL limits.*

Response to Chevron Comment No. 1. No response is necessary.

Chevron Comment No. 2. *Chevron comments that restricting its dilution credit to D = 6 is inconsistent, has no basis in selenium science, is unrepresentative of the dilution and mixing that occurs at Chevron's outfall, and unfairly penalizes Chevron for its better selenium treatment performance relative to other San Francisco Bay region refineries. Furthermore, no clear basis for granting Chevron less dilution credit than the other San Francisco Bay region refineries is presented. Based on the science provided by the selenium TMDL process, San Francisco Bay has assimilative capacity for selenium. The data provides ample support for the Regional Water Board's use of a still conservative 10:1 dilution ratio.*

With the substantial new information and science developed for the TMDL, the Regional Water Board has correctly determined that a dilution ratio of 10:1 is warranted for selenium discharges. However, Chevron is the only refinery that was granted less than 10:1 dilution. The unequal treatment of Chevron is particularly troubling given that Chevron's interim maximum daily effluent limit (MDEL) is already significantly less than both the MDEL and revised average monthly effluent limit (AMEL) of every other refinery. For Chevron only, the State Implementation Plan (SIP) -based calculation was arbitrarily altered restricting the dilution credit to D = 6. The only basis included in the Fact Sheet states, "any larger dilution credit would result in water quality-based effluent limitations (WQBELs) less stringent than Chevron's existing interim maximum daily limit." Not only is this limited statement legally insufficient to support the Regional Water Board's more stringent treatment of Chevron, it is also factually inaccurate. A dilution credit of D = 7 would also result in an AMEL below the current MDEL of 34 ug/L.

Chevron requests that the calculation of their selenium limits be revised to use D = 9 like the other refineries. Since this would result in an AMEL above Chevron's current MDEL, only the MDEL should be retained and imposed. Alternatively, the Regional Water Board could establish an AMEL of 34 ug/L. Either approach would be protective of water quality and would leave Chevron by far the most stringently regulated refinery.

Chevron also requests that the tentative order include language committing to address the inequalities in regulation of Chevron compared to other refineries when the selenium TMDL is adopted and implemented.

Response to Chevron Comment No 2. We partly agree, and we revised the tentative order somewhat in response to this comment. However, we do not agree that a dilution credit of D = 9 is necessary or warranted. The basis for restricting Chevron's dilution credit to less than D = 9 (i.e., a dilution of 10:1) is twofold: first, it is allowed by the SIP; second, it is needed to maintain existing performance, which is the basis on which we conclude that dilution credit may be granted for selenium, a bioaccumulative pollutant.

SIP section 1.4.2.1, Dilution Credits, states:

> Dilution credits may be limited or denied on a pollutant-by-pollutant basis, which may result in a dilution credit for some, all, or no priority pollutants in a discharge.

Given that the SIP allows the Regional Water Board to deny dilution credits entirely, it follows that the SIP also allows the Regional Water Board to restrict dilution credit for certain priority pollutants to less than D = 9.

SIP section 1.4.2.2.B, states:

> The Regional Water Quality Control Board (RWQCB) shall deny or significantly limit a mixing zone and dilution credit as necessary to protect beneficial uses, meet the conditions of this Policy, or comply with other regulatory requirements. Such situations may exist based upon the quality of the discharge, hydraulics of the water body, or the overall discharge environment (including water column chemistry, organism health, and potential for bioaccumulation). For example, in determining the extent of or whether to allow a mixing zone and dilution credit, the RWQCB shall consider the presence of pollutants in the discharge that are carcinogenic, mutagenic, teratogenic, persistent, bioaccumulative, or attractive to aquatic organisms.

Since selenium is bioaccumulative, we may consider this in limiting dilution credit, specifically to maintain existing performance pending a TMDL.

The Regional Water Board did not find that a 10:1 dilution credit is warranted in all cases. Although for the other refineries a dilution credit of 10:1 results in limits that maintain or improve existing performance, this is untrue for Chevron due to its current high performance. Therefore, the Chevron dilution credit is set lower than 10:1.

Nevertheless, we agree that a higher dilution credit, specifically D = 7 (i.e., a dilution of 8:1), results in selenium effluent limits at least as stringent as the existing limits. We therefore revised the selenium WQBEL calculations to use a dilution credit of D = 7. This revised calculation results in an AMEL of 33 ug/L and an MDEL of 54 ug/L. Since the calculated MDEL is greater than the existing MDEL, similar to the MDELs calculated for other refineries, the existing MDEL is retained. This results in an AMEL of 33 ug/L and an MDEL of 34 ug/L. The specific revisions to the tentative order are shown below:

Table 2:

TABLE 2
SELENIUM EFFLUENT CONCENTRATION LIMITS

Discharger	Maximum Daily Effluent Limit (MDEL), µg/L	Average Monthly Effluent Limit (AMEL), µg/L
Chevron	34	~~29~~33
Conoco-Phillips	50	37
Shell	50	42
Tesoro	50	42

Attachment F, Fact Sheet, Background, third paragraph (pages F-1 and F-2)

> Since adoption of the existing permits, the Dischargers have significantly reduced their selenium discharges and altered the chemical forms of the selenium they discharge so the selenium is generally less bioavailable. Also, since adoption of the existing permits, substantially more information has become available to advance the development of a selenium TMDL for north San Francisco Bay segments. Recent work reduces some uncertainties regarding selenium sources, fate, and transport, and suggests that some assimilative capacity remains in the receiving waters. Based on this preliminary information, limited dilution credit for selenium may be granted such that existing refinery performance is maintained, pending the completion of a selenium TMDL. ~~t~~This Order grants limited dilution credits for selenium, but only to a level that maintains existing refinery performance. When a selenium TMDL is completed, the Regional Water Board will amend these limits to be consistent with TMDL wasteload allocations. Granting dilution credits for selenium at this time is appropriate specifically because of the substantial new information about selenium in San Francisco Bay now available. This information does not apply to other pollutants.

Attachment F, Table 2-F:

TABLE F-2
ESTIMATED DILUTION AND DILUTION CREDITS

Discharger	Discharge Point	Estimated Initial Dilution	New Dilution Credit
Chevron	E-001	200:1	~~7:1~~8:1
ConocoPhillips	E-002	67:1	10:1
Shell	E-001	16:1	10:1
Tesoro	E-001	15:1	10:1

Attachment F, Dilution Credits:

> The Dischargers' outfalls are designed to achieve a minimum initial dilution of 10:1. Table F-2 provides the estimated actual initial dilution at each Discharger's outfall. The State Implementation Policy provides the basis for any dilution credit. State Implementation Policy section 1.4.2.1 states, "dilution credit may be limited or denied on a pollutant-by-pollutant basis…." Based on Regional Monitoring Program monitoring data for San Francisco Bay, there is variability in the receiving water, and the hydrology of the receiving water is very complex. Therefore, it is uncertain how representative the ambient background data used to determine the effluent limitations is. Therefore, this Order significantly restricts selenium dilution credits. ConocoPhillips, Shell, and Tesoro receive a dilution credit of D = 9 (10 parts combined ambient water plus effluent to 1 part effluent). Chevron receives a dilution credit of D = ~~6~~7 (~~7~~8:1) because any larger dilution credit would result in WQBELs less stringent than Chevron's existing interim maximum daily effluent limit of 34 µg/L.

Attachment F, Table F-3, Concentration-Based WQBEL Calculations:

TABLE F-3
CONCENTRATION-BASED WQBEL CALCULATIONS (µg/L)

	Chevron	Conoco Phillips	Shell	Tesoro
Dilution Factor (D) (if applicable)	~~6~~7	9	9	9
No. of samples per month	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	N	N
Applicable Acute WQO	20	20	20	20
Applicable Chronic WQO	5	5	5	5
HH criteria	N/A	N/A	N/A	N/A
Background (Max Conc for Aquatic Life calc)	0.39	0.39	0.39	0.39
Background (Avg Conc for Human Health calc)	N/A	N/A	N/A	N/A
Is the pollutant Bioaccumulative(Y/N)?	Y	Y	Y	Y
ECA acute	~~137.7~~157.3	196.5	196.5	196.5
ECA chronic	~~32.66~~37.27	46.49	46.49	46.49
ECA HH	N/A	N/A	N/A	N/A
No. of data points <10 or at least 80% of data reported non-detect? (Y/N)	N	N	N	N
Avg of effluent data points	12.4	22.6	33.7	10.2
Std Dev of effluent data points	4.7	15.9	9.5	3.1
CV calculated	0.38	0.70	0.28	0.31
CV (Selected) – Final	0.38	0.70	0.28	0.31
ECA acute mult99	0.46	0.28	0.55	0.52
ECA chronic mult99	0.66	0.48	0.73	0.71
LTA acute	~~63~~72.1	55.0	107.6	102.4
LTA chronic	~~21.5~~24.6	22.3	33.9	33.0
minimum of LTAs	~~21.5~~24.6	22.3	33.9	33.0
AMEL mult95	1.3	1.7	1.2	1.3
MDEL mult99	2.2	3.6	1.8	1.9
AMEL (aq life)	~~28.8~~32.8	36.9	42.3	41.9
MDEL(aq life)	~~47.0~~53.6	79.6	62.0	63.3
MDEL/AMEL Multiplier	1.63	2.16	1.47	1.51
AMEL (human hlth)	N/A	N/A	N/A	N/A
MDEL (human hlth)	N/A	N/A	N/A	N/A
Min of AMEL for Aq. life vs HH	~~28.8~~32.8	36.9	42.3	41.9
min of MDEL for Aq. Life vs HH	~~47.0~~53.6	79.6	62.0	63.3
Final limit – AMEL	~~29~~33	37	42	42
Final limit – MDEL	~~47~~54	80	62	63

Attachment F, Table F-4, Final Concentration-Based WQBELs:

TABLE F-4
FINAL CONCENTRATION-BASED WQBELs

Discharger	Maximum Daily Effluent Limit (MDEL), µg/L	Average Monthly Effluent Limit (AMEL), µg/L
Chevron	34	~~29~~33
Conoco-Phillips	50	37
Shell	50	42
Tesoro	50	42

As for including language in the tentative order committing the Regional Water Board to address perceived inequalities when adopting a selenium TMDL, we do not believe that there are any inequalities in these WQBELs that need addressing. Further, it would be inappropriate for the Regional Water Board to predetermine any aspect of such a TMDL without having all the science and information yet to be developed for the TMDL. Adoption of a selenium TMDL will be considered in a public process with an opportunity for comment and revision, and comments will be accepted and responded to at that time.

Chevron Comment No. 3. *Chevron requests that the selenium mass emission limit be revised based on an AMEL of 34 ug/L, consistent with its previous comment.*

Response to Chevron Comment No. 3. Consistent with our response to Comment 2, we revised the selenium mass emission limit for Chevron based on an AMEL of 33 ug/L. This results in a running annual mass limit of 2.03 pounds per day (0.92 kilograms per day), which is still more stringent than the previous permit's 2.38 pounds per day. Specific revisions to the tentative order are shown as follows:

Table 3:

TABLE 3
SELENIUM MASS EMISSION LIMITS

Discharger	Annual Average Effluent Limit, lbs/day	Annual Average Effluent Limit, kg/day
Chevron	~~1.8~~2.0	~~0.82~~0.92
Conoco-Phillips	0.85	0.39
Shell	2.0	0.92
Tesoro	1.0	0.45

RESPONSE TO WESTERN STATES PETROLEUM ASSOCIATION (WSPA) COMMENTS

WSPA Comment No. 1. *WSPA supports incorporating dilution in calculating water quality-based effluent limits for selenium.*

Response to WSPA Comment No. 1. No response is necessary.

WSPA Comment No. 2. *WSPA notes that a 10:1 dilution ratio (D = 9) was not granted to all refineries. The tentative order provides a limited dilution ratio of 7:1 to the Chevron refinery. WSPA believes a 10:1 dilution credit is warranted for all refineries in the tentative order since the Regional Water Board's use of this conservative 10:1 dilution credit, when actual dilution is much greater, adequately addresses the potential concerns outlined in the Fact Sheet. By treating one discharger's dilution ratio differently, the Regional Board does not fulfill the Basin Plan requirement in Section 4.5.3 that the Regional Board should make "all attempts to ensure consistency among permits." WSPA recommends granting all refineries, including Chevron, a dilution ratio of 10:1 to provide consistency among the permits.*

Response to WSPA Comment No. 2. See our Response to Chevron Comment 2. Our approach is consistent with Basin Plan section 4.5.3, and maintains existing selenium treatment performance pending a TMDL.

WSPA Comment No. 3. *WSPA comments that the annual mass emission rate equation on page F-5 of the Fact Sheet is inconsistent with current monitoring requirements for the refineries, which are required to monitor selenium weekly. WSPA requests that the Regional Water Board amend this inconsistency.*

Response to WSPA Comment No. 3. We did not revise the emission rate equation, which is the same as the equation in Attachment G, *Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits*, section VII.1.b, Mass Emission Rate. Attachment G is the same as the new Regional Standard Provisions that the Regional Water Board adopted for nearly all other wastewater dischargers on February 10, 2010.