CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESPONSE TO WRITTEN COMMENTS
ON THE REISSUANCE OF WASTE DISCHARGE REQUIREMENTS FOR:

Chevron U.S.A., Inc., Chevron Chemical Company LLC, and General Chemical Corporation
Richmond Refinery
Richmond, Contra Costa County
NPDES Permit No. CA0005134

I. Chevron U.S.A. Inc. - May 15, 2006
II. East Bay Municipal Utility District - May 15, 2006
III. Editorial Changes

Note: The format of this staff response begins with a brief introduction of the party's comments, followed with staff's response. Interested persons should refer to the original letters to ascertain the full substance and context of each comment.

I. Chevron U.S.A. Inc. – May 15, 2006

Comment 1
Compliance Schedules for Water Quality Based Effluent Limitations: Chevron believes that the permit should include TMDL-based compliance schedules for each of the 303(d) listed pollutants under Section 2.1.1 of the SIP. In the case of cyanide, Chevron believes it is widely recognized that the current NTR criteria are inappropriate for the Bay, and that sources should not be forced to comply with effluent limits derived from inappropriate criteria. Chevron points out that based on existing technology, it may not be able to achieve compliance with water quality based effluent limits, and does not want to be put in the position of being subject to limits that may be more restrictive than a TMDL or SSO. To support its position, Chevron indicates that State Water Resources Control Board Order WQ 2001-06 supports longer compliance schedules for impairing pollutants. Under TMDL-based compliance schedules, Chevron indicates that none of the 303(d) listed pollutants would become subject to final limits during the life of the permit, and therefore, Chevron requests that the Water Board remove final limits, and include them as a point of reference in the findings. In the case of cyanide, Chevron believes that it is entitled to a compliance schedule based on the adoption of the SSO.

Response 1
We are denying this request. The compliance schedules contained in the Tentative Order for selenium, mercury, cyanide, total PCBs, and dioxin-TEQ are appropriate. The TMDL-based compliance schedules under section 2.1.1 of the SIP are only available for CTR pollutants and may not be used as they conflict with the maximum compliance schedule for CTR pollutants under section 2.1. Only the compliance schedule for total PCBs is based on CTR criterion, and therefore, the Water Board must use the Basin Plan in providing the appropriate allowance for the remaining pollutants. Specifically, the

Basin Plan states: "Implementation of any additional measures that may be required to comply with effluent limitations shall be completed as soon as possible, but in no event later than ten years after new objectives or standards take effect."

The Tentative Order recognizes that the development of TMDLs and an SSO for cyanide may take a considerable amount of time. Accordingly, the Water Board has granted the maximum compliance schedule allowed under the SIP and the Basin Plan. For total PCBs, the Tentative Order grants until May 17, 2010, or ten years from the effective date of the SIP (the longest permissible). As cyanide and selenium are both NTR pollutants, the compliance schedule must be based on the Basin Plan. This is also the case for mercury since the applicable numeric standard for mercury is from the Basin Plan. In such cases, the Basin Plan provides for a 10-year compliance schedule for implementation of measures to comply with new standards as of the effective date of those standards. This provision has been construed to authorize compliance schedules for new interpretations of existing standards, such as the numeric and narrative water quality objectives specified in the Basin Plan, if the new interpretations result in more stringent limits than in the previous permit. For the numeric standards and objectives in place prior to the SIP (these include objectives for mercury, selenium, and cyanide), due to the adoption of the SIP, the Water Board has newly interpreted these objectives and standards. The effective date of this new interpretation is the effective date of the SIP (April 28, 2000) for implementation of these numeric Basin Plan objectives. Therefore, the maximum compliance schedule allowed for cyanide, selenium, and mercury is granted in this Order (until April 27, 2010).

For dioxin-TEQ, the Water Board newly interpreted these objectives in the issuance of the previous permit. Therefore, this Order includes the compliance schedule for dioxin-TEQ from the previous permit (no later than June 30, 2011, or 10 years from the effective date of the previous permit).

Comment 2

Consistent with Chevron's objection to the lack of TMDL-based and SSO-based compliance schedules, it also objects to Provision C.13 of the Tentative Order. In the event TMDLs or SSOs are not developed for mercury, selenium, cyanide, PCBs, or dioxin-TEQ, Provision C.13 requires that Chevron submit a schedule that documents how it will reduce these pollutant concentrations to ensure compliance with water quality based effluent limits. Chevron points out that the Tentative Order wrongly assumes that these limits can be achieved within the time allotted. Additionally, Chevron indicates that for 303(d) listed pollutants, this provision deprives Chevron of any future benefit of TMDLs and conflicts with the concept of TMDL-based compliance schedules, as reflected in Section 2.1.1 of the SIP.

Response 2

We are denying this request. Since the Tentative Order grants compliance schedules and includes interim limitations for mercury, cyanide, selenium, and total PCBs that end within the effective date of this permit, we need to establish interim requirements and dates to ensure that final limits are met (see response 1 for why the Water Board cannot

apply TMDL-based compliance schedules). While we believe that a TMDL will address mercury, total PCBs, and selenium, and that a SSO will address cyanide, the permit must have an alternative mechanism for how limits are met for these pollutants should the TMDL and/or SSOs remain unadopted. In the case of dioxin-TEQ, we agree to remove this from Provision C.13 since the final limits do not become effective within the term of the proposed permit.

Comment 3

Water Quality Based Effluent Limitations for Bioaccumulative Pollutants should take into Account Available Assimilative Capacity. Chevron indicates that it disagrees with the Water Board's conclusion that assimilative capacity does not exist for mercury, PCBs, dioxins and furans, and selenium. To demonstrate that receiving waters have significant assimilative capacity for these pollutants, Chevron indicates it is in the process of compiling scientific evidence. Chevron points out that the most recent data cited in the Fact Sheet (1997 RMP report) is a decade old, and indicates that the fact consumption advisories have not been rescinded may be suggestive but not determinative of the existence of assimilative capacity. Chevron believes that a proper assessment of assimilative capacity must also consider environmental fate processes, such as the rapid flushing of the Bay, sorption to solids, volatilization, chemical or biochemical transformation, and bioaccumulation.

Chevron acknowledges that it is not proposing a rigorous demonstration of assimilative capacity at this time, but wishes to state for the record that a demonstration of assimilative capacity is possible. Once it has completed its assimilative capacity analysis, Chevron indicates that it intends to submit an application to modify its NPDES Permit to include revised WQBELs for 303(d) listed pollutants that account for the demonstrated assimilative capacity. In the meantime, Chevron indicates that its objection to the Water Board's failure to grant assimilative capacity for 303(d)listed bioaccumulative pollutants is for the record.

Response 3

Comment noted.

Comment 4

Test Species for Chronic Toxicity. Chevron indicates that the current test species, silversides (Menidia beryllina), should be retained for chronic whole effluent toxicity tests instead of Giant Kelp (Macrocystis pyrifera). This is because (1) Giant Kelp is not native to San Pablo Bay, and that silversides better reflect the sensitivity and response of estuarine species, (2) Giant Kelp is not cultured and must be harvested in the wild, which poses a quality assurance/quality control issue, (3) harvesting Giant Kelp during stormy conditions could put divers at risk, (4) Giant Kelp may not germinate at certain times of the year, which could cause them to be unavailable to meet quarterly testing requirements,(5) there is limited TIE/TRE experience with Giant Kelp, whereas there is extensive information available for silversides, (6) the response of Giant Kelp in screening test was inconsistent, and (7) silversides is a more suitable surrogate species because the majority of species of environmental concern in the Bay are fauna.

Response 4

We are denying this request. In support of its permit reissuance, Chevron was required to conduct screening phase monitoring for chronic toxicity to ensure that it conducted such tests on the most sensitive species. In conducting screening phase monitoring for chronic toxicity, the Water Board requires that species are selected from three taxa: (a) fish, (b) invertebrate, and (c) plant. To represent the plant taxa, Chevron chose to conduct chronic toxicity tests on Giant Kelp. The results of Chevron's chronic toxicity monitoring indicate that Giant Kelp was the most sensitive species of those tested, and therefore, should be used for compliance determination.

Chevron's first point, that Giant Kelp is not native to San Pablo Bay, and silversides would better reflect the sensitivity of estuarine species is unconvincing. This is because Giant Kelp is used in chronic toxicity testing because it is considered an appropriate indicator species to ensure that flora in the Bay are protected. On the second point, Chevron indicates that Giant Kelp must be harvested in the wild which poses quality assurance/ quality control issues. We disagree. All chronic toxicity testing requires the use of a control to ensure that test species are in reasonable health. On the third and fourth points, Chevron indicates that harvesting Giant Kelp may put divers at risk during stormy conditions, and that Giant Kelp may not be available. We realize that Giant Kelp cannot be harvested during certain storm events, but in our discussions with an area laboratory, we learned that the delay in obtaining Giant Kelp is on the order of days not months. On the fifth point, we acknowledge that it may be more difficult for Chevron to conduct a TIE/TRE on Giant Kelp than its current test species, but this is not adequate grounds for using a species that is less sensitive. On the sixth point, Chevron indicates that the response of Giant Kelp was inconsistent. We agree. However, Giant Kelp showed greater toxicity than any other test species. If Chevron wanted to fully document that these results were an anomaly it could have conducted additional testing. On the last point, Chevron indicates that silversides is a more suitable surrogate species because the majority of species of environmental concern in the Bay are fauna. We disagree. A species is not suitable as a surrogate if testing does not exhibit toxicity. Furthermore, the Basin Plan requires that we also protect plant species.

Comment 5

Reasonable Potential for TCDD Equivalents. Chevron indicates that the Tentative Order should not have found reasonable potential for TCDD Equivalents. While Chevron agrees that dioxins and furans can be formed during the regeneration of catalytic reformers, it does not believe that this possibility provides a sufficient basis for a finding of reasonable potential. Additionally, Chevron disagrees with the statement in the Fact Sheet that the "TEQ maximum background concentration is above the governing water quality criterion, which triggers RP using Trigger 2." Chevron indicates that Table 19F of the Fact Sheet indicates that background data for dioxin-TEQ is not available. Additionally, Chevron points out that even if background data exceeded the water quality criterion, there are no basis for using trigger 2 because dioxin-TEQ has not been detected in Chevron's effluent.

Response 5

We are denying Chevron's request to not find reasonable potential for dioxin-TEQ. This is because the mechanism exists at Chevron's facility (regeneration of catalytic reformers) for generation of dioxins and furans, detection limits cannot quantify dioxins and furans at concentrations that document this pollutant is below water quality criterion, background levels exceed the water quality criterion, and dioxin-TEQ is on the 303(d) list. In our view, this is enough information to use trigger 3 in the SIP to make a finding that reasonable potential exists. Chevron points out that Table 19F of the Fact Sheet indicates that background data are not available; however, Table 19F is in error. Attachment 2 to the Fact Sheet indicates that the maximum background concentration for dioxin-TEQ was $7.1*10^{-8}$ µg/L, which exceeds the water quality criterion of $1.4*10^{-8}$ µg/L. Therefore, we have modified Table 19F to include this correction. We have also modified the Fact Sheet to remove the reference to trigger 2, as Chevron correctly points out that trigger 2 requires dioxin-TEQ to also be detected in its effluent.

Comment 6

Collection System Maintenance Requirement. Chevron requests that the Water Board remove Provision C.12 (Collection System Maintenance) from the Tentative Order. Chevron points out that the Fact Sheet indicates that the basis for this provision is the Basin Plan, but that it does not provide a reference to a particular provision within the Basin Plan. Chevron indicates that it has no history of unpermitted releases from its collection system, and there is no justification for the inclusion of this condition in the permit. Chevron understands that this provision was included in the recently adopted permit for the Tesoro Refinery based on the results of an audit performed by the California Department of Toxics and Substances Control during which concerns over collection system performance were noted. In other words, Chevron does not believe it is appropriate for its facility, especially considering it was not included in the recently renewed permit for ConocoPhillips. Additionally, Chevron points out that recent case law with respect to the consolidated animal feed lots rule indicates that NPDES permitting agencies do not have authority to regulate facilities based on presumptive discharges when no evidence for discharge exists.

Response 6

We are denying this request. The purpose of this provision is to ensure that Chevron implements appropriate operation and maintenance of its collection system to ensure oily wastewater is properly transported to its treatment system. We are confused by Chevron's resistance to this provision because it already should be internally documenting the sorts of things it requests (e.g., how often maintenance occurs, cleaning schedules, past spills and measures taken to avoid future spills). This provision was included in Tesoro's Permit, in part, because of our discussions with the California Department of Toxics and Substances Control, but also because it is logical to document that oily wastewater reaches the treatment system. It was not included in ConocoPhillips' permit simply because that permit was adopted before Tesoro's Permit. This requirement, while much smaller in scale, is not unlike those the Water Board requires for municipal sanitary sewer collection systems. In the case of sanitary sewer collection systems, discharge is prohibited by the Basin Plan, and we require documentation of

collection system operation and maintenance to ensure such discharges do not occur. This basis is applicable to Chevron's collection system.

Comment 7

Monitoring Frequency for Total Suspended Solids, Settleable Solids, Total Phenols, Ammonia, and Sulfides. Chevron indicates that its current permit requires quarterly monitoring for these pollutants, and that Chevron has a long history of permit compliance. It points out that the Tentative Order requires monthly monitoring for these parameters, but it is unaware of any justification for the proposed increase. Therefore, Chevron requests that the monitoring frequency be restored to quarterly since it is opposed to monitoring for the sake of monitoring.

Response 7

We are denying this request. One of the main purposes of a self-monitoring program is to ensure compliance with permit limitations. In the case of these conventional pollutants, the Code of Federal Regulations requires that refinery permits include average monthly and maximum daily mass loading limitations. As these will be heavily dependent on flow, which varies seasonally, the monitoring frequency needs to be at least monthly to document compliance. This monitoring frequency for conventional pollutants is also consistent with other refinery permits recently adopted by the Water Board.

Comment 8

Stormwater Monitoring Requirements. Chevron requests that the Water Board eliminate the requirement for accelerated monitoring at stormwater outfalls if total suspended solids (TSS) concentrations exceed 100 mg/L. Chevron indicates that the Fact Sheet provides no rationale for requiring TSS as an accelerated monitoring trigger, or for selecting 100 mg/L. Chevron points out that the source of the 100 mg/L is not identified in the Fact Sheet, but that it believes it was borrowed from EPA's latest Multi-Sector Stormwater General Permit, which contains a "benchmark" for TSS of 100 mg/L. Chevron points out that this permit does not apply to refineries, and that the benchmark is based on best management practices (BMPs) used by municipalities to reduce TSS levels in urban runoff, which differs from Chevron's stormwater discharges.

Response 8

We are eliminating this accelerated monitoring requirement from the Tentative Order. This is because Chevron's (a) monitoring data show that total suspended solids (TSS) in stormwater runoff at each of its outfalls were typically below 100 mg/L, and (b) annual report is required to include a comprehensive discussion of source identification and control programs for constituents that do not have effluent limitations (e.g., TSS). Our expectation is that if Chevron encounters elevated levels of TSS at any of its stormwater outfalls, its annual stormwater report will discuss Best Management Practices (BMPs) to reduce TSS, and a time schedule to implement such BMPs. The rationale for using 100 mg/L is because it is a benchmark value from U.S. EPA's NPDES Stormwater Multi-Sector General Permit for Industrial Activities, Federal Register Volume 65, Number 210, October 30, 2000.

II. East Bay Municipal Utility District – May 15, 2006

Comment 1
East Bay Municipal Utility District requests clarification that the values in Table 22F may be updated based on the copper and nickel site-specific objectives and translators being developed for San Francisco Bay.

Response 1
We modified the Tentative Order to include this clarification.

III. Editorial Changes

E1: Monitoring and Reporting Program: On page E-9, we have modified the due date for monthly self-monitoring reports to be no later than 30 days after the end of each calendar month instead of on the 1st day of the second month following the end of each calendar month. This is our new direction for submittal of self-monitoring reports.

E2: Effluent Limitations and Discharge Specifications –Effluent Limit Credit for Recycled Water Use: We are removing two sentences from the Tentative Order under section (c) of this specification: "This concentration credit is added to the existing concentration limit." And, "This mass credit is added to the existing mass limit." This is because these two statements are inconsistent with how the Tentative Order allots mass and concentration credits.