RESPONSE TO COMMENTS
CHEVRON PRODUCTS COMPANY
EL SEGUNDO REFINERY
TENTATIVE ORDER R4-2017-XXXX
NPDES PERMIT NO. CA0000337

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
1	Special Provisions; Section VI.C.2.b; Page 14 ***"Mixing Zone Study Workplan.*** *The dilution ratio of 80:1 (receiving water to effluent) established in Order No. R4-2013-0025 is retained in this Order for discharges to the Pacific Ocean via Discharge Point 001. The Discharger must provide to the Regional Water Board a work plan to conduct an updated mixing zone study. The study shall identify the boundary of the zone of initial dilution (ZID) based on modeling results, and include monitoring upstream of the discharge point, directly above the discharge location, at the boundary of the ZID and outside the ZID for the list of constituents included in Table 1 of the Ocean Plan, to confirm the assumptions made by the model."* Chevron proposes the following language: The dilution ratio of 80:1 (receiving water to effluent) established in Order No. R4-2013-0025 is retained in this Order for discharges to the Pacific Ocean via Discharge Point 001. The Discharger must provide to the Regional Water Board a work plan to conduct an updated mixing zone study. ~~The study shall identify the boundary of the zone of initial dilution (ZID) based on modeling results, and include monitoring upstream of the discharge point, directly above the discharge location, at the boundary of the ZID and outside the ZID for the list of constituents included in Table 1 of the Ocean Plan, to confirm the assumptions made by the model.~~ **The goal of work plan is to demonstrate that 80:1 dilution occurs within a relatively short distance of the outfall. Within 90 days of the effective date of the**	Section III.C.4.d of the Ocean Plan states that the "minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates shall be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure." The goal of the workplan is not to demonstrate that the 80:1 dilution ratio occurs in a relatively short distance. The goal of the workplan is to utilize the current guidance in the Ocean Plan, models, and technology available to evaluate the amount of mixing the discharge is experiencing based on the current discharge quality and flow. Mixing zone modeling software can identify the boundary of the zone of initial dilution (ZID) and it predicts a distance from the outfall structure when the plume stops rising. The mixing zone study does not require analysis of all of the Ocean Plan Table 1 constituents at each of the nine or more	Section VI.C.2.b (pg 14) and Section VI.B.2.b (pg F-46) edited as indicated in the response.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
	permit, the Discharger shall submit a work plan acceptable to the Executive Officer to achieve this goal. The language proposed is problematic because there is no identifiable or sustainable physical boundary for the zone of initial dilution. Depending on the wind, the tide, and the nature of the discharge, the boundary is constantly changing. Furthermore, we know of no tools to assess where the boundary would be at any given moment such that a sample can be taken at that location. The software itself does not attempt to define a boundary; rather, it estimates the degree of dilution (in this case, 80:1) when either the plume stops rising, or the momentum of the plume is essentially indistinguishable from background[1]. Chevron proposes that there are ways to demonstrate that 80:1 initial dilution occurs within a relatively short distance of the diffuser. Chevron further proposes that the study be performed with a suitable colorless dye, rather than trying to analyze all the constituents in Table 1 of the Ocean Plan at each of nine or more stations. Most Table 1 constituents are not even detected in the refinery's effluent and therefore aren't suitable to demonstrate the level of dilution. Chevron does not oppose conducting a mixing zone study. However, due to the complexity of such studies, we simply request that certain details be left to be determined in the Work Plan, subject to Staff approval, so that we are not in a position of having requirements in the permit that would need to be amended in order to demonstrate compliance once technical details of such a study are determined.	stations. The approved workplan will stipulate how the study will be conducted. One scenario may be that, using an approved model, the discharge rates over the past year are evaluated to determine the various dilutions achieved under the specific conditions. Regional Board staff will review the model results and evaluate whether the 80:1 dilution ratio continues to be appropriate for the discharge. Section VI.C.2.b of the Order and Section VI.B.2.b of Attachment F have been edited in the revised tentative requirements as follows: *The dilution ratio of 80:1 (receiving water to effluent) established in Order No. R4-2013-0025 is retained in this Order for discharges to the Pacific Ocean via Discharge Point 001. The Discharger must provide to the Regional Water Board a workplan to conduct an updated mixing zone study. ~~The study shall identify the boundary of the zone of initial dilution (ZID) based on modeling results, and include monitoring upstream of the discharge point, directly above the discharge location, at the boundary of the ZID and outside the ZID for the list of constituents included in Table 1 of the Ocean Plan, to confirm~~*	

[1] See definition of Initial Dilution, California Ocean Plan (2015), Appendix I, p. 56.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
		~~*the assumptions made by the model.*~~ *The goal of the workplan is to utilize the current guidance in the Ocean Plan, models, and technology available to evaluate the amount of mixing the discharge is experiencing based on the current discharge quality and flow.*	
2	<u>Effluent Limitations and Discharge Specifications; Section IV.A.1 Table 4; Page 5</u> *Chronic Toxicity (TST) – Pass/Fail* Chevron does not currently have sufficient data to know how a change to the TST method for measuring chronic toxicity will impact its ability to comply. We believe the new treatment being installed will also effectively control chronic toxicity, but there will be a short gap in timing between when the TST requirement becomes effective and when the new treatment unit is in place and fully operational. Therefore, Chevron requests a short delay in requiring the TST method to match the timing of implementation of the final acute toxicity limit. Chevron requests that until then we be allowed to maintain the current chronic toxicity Short Term Methods for Estimating the Chronic Toxicity (EPA/600/R-95/136, 1995). Also, neither the Basin Plan nor the Ocean Plan require or endorse the TST, nor does the SIP or any state policy. There is not an explanation of why the TST has been substituted for the current numerical limit of 81 TUc.	The use of the TST approach for chronic toxicity is consistent with what the Regional Board has been requiring of other dischargers in the region for over three years. The TST statistical approach for use in the statistical analysis of WET test data has undergone an extensive external peer review process by both the USEPA and the State Water Board. The TST statistical approach has been shown to perform as well or better than the NOEC-LOEC statistical analysis of multi-concentration data. This evidence supports the Regional Water Boards decision to choose an alternative, more robust, statistical approach. An explanation for why the TST statistical analysis has been specified appears in Section IV.C.7 of Attachment F (pages F-33-36), which discusses the use of the TST approach. This section states that “This (TST) statistical approach is consistent with the Ocean Plan in that it provides maximum protection to the environment since it more reliably identifies chronic toxicity than the current No Observed	None taken.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
		Effect Concentration (NOEC) hypothesis-testing approach."	
3	<u>Fact Sheet; Section II.A; Page F-7</u> *"Chevron has requested intake credits for the recycled water. The Ocean Plan does not include provisions for intake credits. Recent monitoring data, however, indicate that the effluent is currently in compliance with effluent limitations for ammonia."* As the largest industrial user of reclaimed water in Southern California, Chevron strongly supports making it as easy as possible for potential users to accept reclaimed water without risking compliance problems. Intake credits are one way to ease the path to more reuse, as discussed below. First, Chevron wants to clarify that the refinery does not seek intake credits that are automatically applied to the effluent limits. All we seek is the option to apply a credit, if we ever need one, to demonstrate compliance. Although our recycled water has quality specifications, upsets at West Basin are beyond Chevron's control. Therefore, in the event of an upset not meeting specifications, Chevron might have to reject use of reclaimed water and instead draw on California's limited supply of potable water. An intake credit might permit us to accept the reclaimed water for some period of time while West Basin works out its problem. Although the Ocean Plan does not contain a specific intake credit provision, it similarly does not prohibit it. The State Board has adopted the Recycled Water Policy which expressly states that "The State Water Board and Regional Water Boards will exercise the authority granted to them by the Legislature to the fullest extent possible to encourage the use of recycled water, consistent with state and federal	The comment is noted. The request for intake credits cannot be granted for the reasons indicated in the comment, i.e. the intake water and receiving water are not the same water body and the Ocean Plan does not include provisions for intake credits. According to the water balance provided by the discharger (Attachment C, page C-1) Chevron uses approximately 7-8 MGD of reclaimed water supplied by the West Basin Municipal Water District. Approximately 3.5-4 MGD of the water is used for irrigation and cooling tower supply and therefore not discharged to the receiving water. The remaining 3.5-4 MGD of reclaimed water is used for boiler feed and then treated along with other process water prior to discharge. Reclaimed water represents approximately half of the effluent. The pollutant of concern for the reclaimed water is ammonia. The proposed effluent limitations for ammonia are 20 mg/L for average monthly and 44 mg/L for maximum daily. Chevron has consistently been in compliance with the effluent limitations for ammonia. The reclaimed water from the lines used for boiler feed is currently at or below 5 mg/L for ammonia prior to mixing with the other process wastewater.	None taken.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
	water quality laws." *See Recycled Water Policy, Section 4, pg. 3*. The Regional Board has also indicated that it cannot issue credits because the water does not come from the same water body as the discharge. However, absent Chevron taking the water, this very same water, and the pollutants contained within it, would be discharged to the same water body Chevron discharges to. Additionally, this is a condition that may be waived under Federal regulations. Chevron is only requesting the ability to use credits should West Basin issues beyond Chevron's control impact the ability to comply. In such cases, the ability to use intake credits would avoid the need to switch to potable water, and is consistent with the "fullest extent" language in the State Board's Recycled Water Policy.	There is no evidence that indicates that the lack of intake credits will result in effluent violations or decrease Chevron's use of reclaimed water.	
4	<u>Monitoring and Reporting Program; Section VIII.C.4; Page E-18</u> *"Biomass shall be determined as the wet weight in grams or milligrams retained on a 1.0 millimeter screen per unit volume (e.g., 1 liter) of sediment. Biomass shall be reported for each major taxonomic group (i.e. polychaetes, crustaceans, mollusks, echinoderms, all other macroinvertebrates) for each sample."* Chevron asks that this condition be deleted. After discussions with the certified third party laboratory that conducts such tests, this is an outdated requirement that is not required of other dischargers in the region. Moreover, the data is not biologically relevant as large polychaetes often exclude all other species. Biomass values in samples that have even a single large organism (sea stars, sand dollars, polychaete worms) produce wild fluctuations in total and taxa-specific biomass values over time, space (station locations), and taxa, where false assumptions about sediment quality can be made. Additionally, community analyses rely solely on abundance data for individual taxa rather than the pooled taxa biomass values.	Regional Board staff has updated Section VIII.C of Attachment E in the revised tentative requirements with current language for benthic infaunal sampling as follows: 3. *One sample shall be taken at each station for benthic infaunal community analysis. The entire contents of each sample shall be passed through a 1.0 millimeter screen to retrieve the benthic organisms. Sampling methods and protocols shall follow those described in the most current edition of the Field Operations Manual for Marine Water Column, Benthic and Trawl Monitoring in Southern California. All organisms contained within the sample shall be identified to the lowest possible taxon and counted. The resulting data shall be used to describe community structure at each station. ~~The entire contents of each sample shall be~~*	Section VIII.C (pg E-18) updated.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
		~~passed through a 1.0 mm standard mesh screen to retrieve the benthic organisms. All organisms recovered shall be enumerated and identified to the lowest taxon possible. Infaunal organisms shall be reported as concentrations per liter for each replicate and each station. Total abundance, number of species and Shannon-Wiener diversity indices shall be calculated (using natural logs) for each replicate and each station.~~ 4. *Procedures and test methods shall adhere to the following federal guidelines when applicable: Macroinvertebrate Field and Laboratory Methods for Evaluation the Biological Integrity of Surface Waters (1990) –EPA/600/4-90/030 (PB91-171363). This manual describes guidelines and standardized procedures for the use of macroinvertebrates in evaluating the biological integrity of surface waters. ~~Biomass shall be determined as the wet weight in grams or milligrams retained on a 1.0 millimeter screen per unit volume (e.g., 1 liter) of sediment. Biomass shall be reported for each major taxonomic group (i.e. polychaetes, crustaceans, mollusks, echinoderms, all other macroinvertebrates) for each sample.~~* 5. *Community analysis of benthic infauna shall include number of species, number of individuals per species, total numerical abundance per station, benthic response*	

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
		index (BRI) and biological indices, plus utilize appropriate regression analyses, parametric and nonparametric statistics, and multivariate techniques or other appropriate analytical techniques.	
5	<u>Effluent Limitations and Discharge Specifications; Section IV.A.1 Table 4; Page 5</u> *Acute Toxicity as an Instantaneous Maximum Limit* Table E-2 on page E-6 requires the analysis to be performed on a 24 hour composite. Therefore, Chevron believes this should be a Daily Maximum limit.	Order R4-2013-0025 defined the acute toxicity effluent limitation as an instantaneous maximum. This convention was continued in the tentative permit. The 2015 Ocean Plan defines the Water Quality Objective for acute toxicity as a daily maximum. The comment is correct that compliance with the acute toxicity limitation is based on a 24-hour composite sample. Therefore, the effluent limitation for acute toxicity is changed from "instantaneous maximum" to "daily maximum" in the revised tentative permit. (Note: for consistency the interim limitation for acute toxicity in the TSO has also been changed from "instantaneous maximum" to "daily maximum")	Acute toxicity limitation changed from "instantaneous maximum" to "daily maximum" in Table 4 (pg 5), Table F-16 (pg F-38) and Table F-17 (pg F-41. Edit made to Order R4-2017-YYYY (pg 10).
6	Effluent Limitations and Discharge Specifications; Section V.A.1; Receiving Water Limitations and discussion on bacterial contamination; Page 9 Chevron respectfully requests that language in the current permit, cited below, be included in this discussion: "Even though the bacteria limits are included as effluent (end of pipe) and receiving water (based on TMDL implementation plan), the primary	To achieve the clarification requested the following paragraph is added to Section V.A.1.a: *Compliance with this receiving water limitation is demonstrated through compliance with the effluent limitations for bacteria at Discharge Point 001.*	Section V.A.1.a (pg 9) edited as indicated in the response.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
	compliance point is end-of pipe. If monitoring shows the Discharger is able to meet the limit at the end-of -pipe monitoring location, the Discharger is in compliance." [Bacterial Characteristics, Part V.A, page 20]		
7	<u>Compliance Determination; Section VII.E.2; Page 16</u> *"If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples approximately at equal intervals during the month. All five analytical results shall be reported for that month, or 45 days after results for the additional samples are received, whichever is later."* As it is currently worded, the Discharger must draw the four samples in the same month. However, if the result is provided at the end of the month meeting this requirement would not be possible. Therefore, Chevron requests that the wording be changed to the following: "If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples ~~approximately at equal intervals during the month~~ **as soon as the Discharger becomes aware of the result. If possible, the Discharger shall collect four additional samples approximately at equal intervals during the period. In that case, all** ~~All~~ five analytical results shall be reported for that period, or 45 days after results for the additional samples are received, whichever is later. If not possible, continue to monitor in accordance with provision VII.E.3"	The issue raised by the comment is noted. To allow for the circumstances described, the phrase "during the month" is edited to read "over a thirty-day period". Therefore Section VIII.E.2 now reads as follows: *If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples approximately at equal intervals over a thirty-day period. All five analytical results shall be reported for that month, or 45 days after results for the additional samples are received, whichever is later.* However, staff encourages the discharger to collect the samples early in the month.	The phrase "during the month" changed to "over a thirty-day period" in Section VIII.E.2 (pg 17)
8	<u>Monitoring and Reporting Program; Section IV.A Table E-2; Page E-7</u>	In the event that the discharge does not exceed 10 MGD, annual monitoring for these pollutants is sufficient to meet Ocean Plan requirements. Therefore, Footnote 11 of Table E-2 is edited to read as follows:	Table E-2 (pg E-8) edited as indicated in the response.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
	Monitoring Frequency for most of the Ocean Plan Table 1 constituents was increased from annually to semiannually; see Table E-2 at p. E-6. In the rationale[2], cites the following Ocean Plan language: "Consistent with Appendix VI [RPA procedure], the core monitoring for the substances in Table 1 and Table 2 shall be required periodically. For discharges less than 10 MGD, the monitoring frequency shall be at least one complete scan of the Table 1 substances annually. Discharges greater than 10 MGD shall be required to monitor at least semiannually." [Appendix III, Part 5.1.] Chevron requests that the frequency remain at annual, for the following reasons: • Although Chevron's permitted discharge is nominally up to 27 MGD to include rare large storm events, the actual discharge in most cases does not exceed 10 MGD except in extreme cases. The Ocean Plan condition cited above does not specify a worst-case scenario, and Chevron respectfully suggests that it should refer to a typical discharge, not an unusual one. Chevron's average flow is 7-8 MGD. Even in wet weather, Chevron's standard practice is to impound excess stormwater and work it off later at a controlled rate. • Additional data will add no value. As documented in Table F-2 of the Fact Sheet, nearly all of the contaminants in question have not historically been detected. Adding more ND data adds no environmental value. Years and years of data already submitted demonstrate this. The large amount of existing data should inform the decision on what frequency is appropriate.	*Monitoring is required during the first semiannual period (January 1 - June 30) of each year. In any given year, if the discharge volume exceeds 10 MGD at any point during the year, then sampling is also required during the second semiannual period (July 1 – December 31) of that year.* Also, the third paragraph of Section VII.B of the Fact Sheet is edited to read, in part: *Chevron has indicated a potential maximum discharge of 27 MGD. Based on the model monitoring framework of the 2015 Ocean Plan, this Order increases the frequency of monitoring for Table 1 pollutants to semiannually (2/year). Should the discharge not exceed 10 MGD at any point during a given year, then monitoring during the second semiannual monitoring period (July 1 – December 31) of that year is not required.*	3rd Paragraph of Section VII.B (pg F-47) edited as indicated in the response.
9	<u>Monitoring and Reporting Program; Section IV-A Table E-2; Page E-10</u>	The comment is correct, Footnote 1 of Table E-2 applies to flow but not to temperature and pH.	Table E-2 (pg E-6) corrected

[2] Fact Sheet, Part VII.B., p. F-46

<table>
<tr><th colspan="4">Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)</th></tr>
<tr><th>No.</th><th>Comment</th><th>Response</th><th>Action Taken</th></tr>
<tr><td></td><td>Footnote 1: “When continuous monitoring is required, the total daily flow shall be recorded.”

This footnote is assigned to flow, pH, and temperature. Since it only pertains to flow, it should be deleted from pH and temperature to avoid confusion. In any case, the total daily flow will always be recorded and reported.</td><td>Therefore the footnote has been deleted for temperature and pH.</td><td>as requested for temperature and pH.</td></tr>
<tr><td>10</td><td><u>Fact Sheet; Section II.C. Table F-2</u>

This table shows HCH as “Not Reported”.

Chevron has previously reported the following values:
<table>
<tr><th>SAMPLE ID</th><th>SAMPLE DATE</th><th>ANALYTE</th><th>RESULT</th><th>UNITS</th></tr>
<tr><td>440-34643-1</td><td>01/09/2013</td><td>HCH</td><td>ND</td><td>ug/L</td></tr>
<tr><td>440-67185-1</td><td>01/10/2014</td><td>HCH</td><td>ND</td><td>ug/L</td></tr>
<tr><td>440-98461-1</td><td>01/07/2015</td><td>HCH</td><td>ND</td><td>ug/L</td></tr>
<tr><td>440-133318-1</td><td>01/06/2016</td><td>HCH</td><td>ND</td><td>ug/L</td></tr>
<tr><td>440-172085-1</td><td>01/04/2017</td><td>HCH</td><td>ND</td><td>ug/L</td></tr>
</table></td><td>The information provided indicates that the Table F-2 “Range of Reported Max. Daily Values” entry for HCH should be changed from “Not Reported” to “All ND”.

Regional Board staff performed a reasonable potential analysis (RPA) using this data. The result was “Endpoint 3” or inconclusive. Therefore the inclusion of the effluent limitation for HCH is appropriate. Table F-15 is updated with this result.</td><td>Table F-2 (pg F-8) updated as requested for HCH.
Table F-15 (pg F-28) updated with HCH result.</td></tr>
<tr><td>11</td><td>Clarification on Chronic Toxicity Requirements

a. <u>Effluent Limitations and Discharge Specifications; Section IV.A.1 Table 4; Page 5</u>
Per the calculation on page 18, TST Fail and 25 percent effect are required to fail the MDEL. We request Table 4 reflects this requirement.

b. <u>Monitoring and Reporting Requirements; Section V.B.1 and Section V.B.1.d Table E-4; Page E-11 and E-13</u>
The purple sea urchin and the sand dollar are both invertebrate species and are seasonal substitutes for each other (i.e. purple urchins are usually gravid in the winter and sand dollars are usually</td><td>The effluent limitation for chronic toxicity should be “Pass or %Effect<50” as it is in Table F-17 of Attachment F. The effluent limitation has been updated in Table 4 of the revised tentative requirements.

The language used is a direct quote from the method referenced, Fertilization Test Method 1008.0, which states “A static non-renewal toxicity test with the purple sea urchin, Strongylocentrotus purpuratus, and the sand</td><td>Chronic toxicity limit updated to “Pass or %Effect<50” in Table 4 (pg 5).

“And” changed to “or” in Section V.B.1.c.ii (pg E-11.</td></tr>
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Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
	gravid in the summer). The permit currently reads "the purple sea urchin, *Strongylocentrotus purpuratus*, **and** the sand dollar…". We request the language to read "the purple sea urchin, *Strongylocentrotus purpuratus*, **or** the sand dollar…". If the word "and" remains, it suggests the need to monitor two invertebrate species which from our understanding is not usually required.	dollar, *Dendraster excentricus*." The instructions for the method, however, do not dictate that tests be run for both species. Therefore the word "and" has been changed to "or" as requested in Section V.B.1.c.ii of Attachment E in the revised tentative requirements.	
	c. <u>Monitoring and Reporting Requirements; Section V.B.1.d; Page E-13</u> The EPA test acceptability requirements for percent minimum significant difference (PMSD or MSD) are not applicable when using the TST analysis. We suggest removing them from the Test Acceptability Criteria (TAC) table or adding a footnote that they would not be applicable when analyzing data with the TST method. There is language already in the permit on page F-34, final paragraph, last sentence that supports this interpretation "The PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results."	The EPA test methods and test acceptability criteria, Table E-4, have been deleted.	Table E-4 (pg E-13) deleted.
	d. <u>Monitoring and Reporting Requirements; Section V.B.1.f; Page E-14</u> For accelerated monitoring, the permit calls for EC25 calculation and testing that "including the discharge IWC...". An EC25 cannot be calculated using only the IWC and a control. A five concentration dilution series is required to have enough statistical certainty to calculate an EC25 value. Please clarify on whether accelerated testing is to be conducted using only the IWC (single concentration, 1.23 percent effluent) or an EC25 value (which would necessitate a	As per the EPA approved method, a dilution series is included in the analytical test method. During accelerated monitoring a concentration dilution series which includes the control with five dilutions, one of which must be the IWC, is evaluated. The IWC for acute toxicity is 37 percent effluent (see Response to comment 12 below). Section V.B.1.f has been edited to clarify these requirements as follows: *The accelerated monitoring schedule shall consist of a five concentration*	Section V.B.1.f (pg E-14) edited as indicated in the response.

Comments from Letter dated September 18, 2017, from Chevron Products Company (Discharger)			
No.	**Comment**	**Response**	**Action Taken**
	five concentration dilution series to be tested for accelerated monitoring).	*dilution series which includes the control with five dilutions, one of which must be the IWC, conducted at approximately two week intervals, over an eight week period; in preparation for the TRE process and associated reporting.*	
	e. <u>Fact Sheet; Section IV.C.10 Table F-16 and Section IV.F Table F-17; Pages F-37 and F-41</u> Please clarify what the MDEL is for Chronic Toxicity. There are inconsistencies throughout the permit. It is currently stated in three different ways: Pass or Fail; Pass or Fail, % effect; Pass or Fail, <50% effect.	The MDEL for chronic toxicity is "Pass or %Effect<50" and the units are "Pass or Fail, %Effect". Conforming changes have been made throughout the revised tentative requirements.	MDEL for chronic toxicity made consistent throughout permit.
12	Clarification on Acute Toxicity Requirements a. <u>Monitoring and Reporting Requirements; Section V.A.1 and V.A.3; Page E-9</u> This section seems to be with regards to Chronic Toxicity (not Acute Toxicity). IWC of 1.23 does not seem to apply to Acute Toxicity. Also, on V.A.3 the following also does not seem to apply for Acute Toxicity: "Discharger shall conduct the following acute toxicity tests on effluent samples at the in-stream waste concentration for the discharge in accordance with species and test methods"	The language references the incorrect IWC. For acute toxicity the IWC is equal to the lethal concentration (percent waste giving 50% survival of test organisms, LC 50%). For Discharge Point 001, the effluent limitation for acute toxicity is 2.7 TU_a and the IWC is calculated as follows: $IWC = 96\text{-hr LC } 50\% = \frac{100}{TU_a} = \frac{100}{2.7} = 37\%$ Section V.A.1 is edited in the revised tentative requirements to include the above calculation. The statement "at the in-stream waste concentration" is deleted from Section V.A.3 in the revised tentative requirements.	Sections V.A.1 and V.A.3 (pg E-9) edited as indicated in the response.

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	b. <u>Monitoring and Reporting Requirements; Section V.A.3, V.A.4 and V.A.5; Page E-9 and E-10</u> Section V.A.4 mentions sensitivity screening on three species. However, in section V.A.3 and V.A.5 only two species are listed. Please clarify.	"Three" has been changed to "two" in Section V.A.4 of the revised tentative requirements.	"Three" changed to "two" in Section V.A.4 (pg E-9).
	c. <u>Monitoring and Reporting Requirements; Section V.A.4; Page E-9</u> Based on certified third party laboratory input please remove the following as this statement should only be used on chronic toxicity "As allowed under the test method, a second and third sample may be collected for use as a test solution renewal water as the multi-day toxicity test progresses."	The statement "As allowed under the test method, a second and third sample may be collected for use as a test solution renewal water as the multi-day toxicity test progresses." is deleted in Section V.A.4 of the revised tentative requirements.	Section V.A.4 (pg E-9) edited as indicated in the response.

Comments from Letter dated September 18, 2017, from Heal the Bay			
No.	**Comment**	**Response**	**Action Taken**
1	Heal the Bay is pleased to see that Chevron has successfully received its permit from the South Coast Air Quality Management District that will now enable them to implement a Powdered Activated Carbon system. We are particularly encouraged that Chevron has plans to have the system fully constructed and effectively configured by the third quarter of 2018. Ideally the system will be successful in mitigating the organic toxicants that were identified as coming from the segregated system drainage and allow the refinery to come into compliance.	Comment noted.	None taken.
2	We would also like to reaffirm our approval of Chevron El Segundo's use of recycled water from West Basin Municipal Water District. Whether it's the highly purified variety used within high pressure boilers or simply nitrified water for cooling and irrigation, every gallon of recycled water that is used by Chevron conserves a gallon of potable water that can be used within the surrounding Los Angeles community. Heal the Bay supports Chevron's use of recycled water and hopes to see its use continued and possibly expanded in the future.	Comment noted.	None taken.
3	Heal the Bay is also in complete support of the Los Angeles Regional Water Quality Control Board's change to the Test of Significant Toxicity to monitor for chronic toxicity within Chevron's effluent. This statistical t-test matches or outperforms other statistical approaches and has gone through an extensive external peer review process by both the U.S. Environmental Protection Agency as well as the State Water Resources Control Board.[3]	Comment noted.	None taken.
4	In regards to the specifications of the Tentative Permit, we are concerned about the individual Effluent Limitations for "phenolic compounds." We noticed that the Daily Maximum for the constituent jumped from a dry weather limitation of 36 lbs/day in the 2013 permit to 65.1 within the current Tentative Permit, while the wet weather limitation jumped from 83 lbs/day to 112.2 between permits. We were curious about the rationale behind the less stringent limitation regarding	Regional Board staff have recalculated the TBELs for phenolic compounds for both the tentative permit and the 2013 permit. An error was discovered in the 2013 permit. In Table F-8 of the Fact Sheet for Order No. R4-2013-0025 the dry weather maximum daily effluent limitation for phenolic compounds was	None taken.

[3] Environmental Protection Agency (June 2010). *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document.* Retrieved 9/15/2017 from: https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf

Comments from Letter dated September 18, 2017, from Heal the Bay			
No.	**Comment**	**Response**	**Action Taken**
	"phenolic compounds" considering their toxicity within the marine environment.[4]	calculated to be 58 lbs/day. When the number was copied to Table F-10, however, it was incorrectly listed as 36 lbs/day. The incorrect number was also used in calculating the wet-weather limitation resulting in a limit of 83 lbs/day, which should have been 101 lbs/day. The correct numbers, 58 lbs/day for dry weather and 101 lbs/day for wet weather, are much closer to the values of 65.1 lbs/day for dry weather and 112.2 lbs/day for wet weather calculated for the 2017 permit. As discussed in Section IV.D.1 of the Fact Sheet, the slight increase comes as a result of higher production rates reported by the discharger.	
5	Heal the Bay also noticed that Effluent Limitations were lifted for radioactivity. Despite the fact that radionuclides were not detected above laboratory reporting limits during the past five-year period, lifting a limitation on radioactivity seems unwise. The current enforceable limitation has worked well in keeping radioactivity at levels below reporting limits. In addition, the Tentative Permit states on p. F-35 that Chevron Refinery will be required to continue monitoring for radionuclides regardless, so the reasoning behind taking away the Effluent Limitation seems haphazard and unnecessary.	The Discharger conducted annual monitoring for gross alpha and gross beta on four occasions. Regional Board staff has reviewed the data again and determined that due to the high method detection limits (MDLs) utilized the results are inconclusive. Therefore, per the request, the effluent limitation for radionuclides based on Ocean Plan Water Quality Objectives is included in the revised tentative permit. Footnote 13 of Table E-2 in the Monitoring and Reporting Plan (Attachment E) includes language that clarifies monitoring requirements for radionuclides.	Established the effluent limitation as requested, resulting in conforming edits to Table 4 (pg 5), Section IV.C.8 (pg F-35), Table F-16 (pg F-37) and Table F-17 (pg F-41).

[4] DeGraeve GM, Geiger DL, Meyer JS, Bergman, HL. (September 1980). *Acute and embryo-larval toxicity of phenolic compounds to aquatic biota*. Environmental Contamination and Toxicology. Vol.9, Iss. 5. p557-568.