



CONTRA COSTA  
COUNTY

Phillips 66  
San Francisco Refinery  
1380 San Pablo Avenue  
Rodeo, CA 94572

January 6, 2014

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DEPARTMENT OF  
CONSERVATION  
AND DEVELOPMENT

Chair Karen Mitchoff and Members of the  
Contra Costa County Board of Supervisors  
651 Pine Street, Second Floor  
Martinez, CA 94553

**Re: Phillips 66 Propane Recovery Project – County File #LP12-2073 - Phillips 66  
Response to Appeals by the Rodeo Citizens Association and Communities for  
a Better Environment**

Dear Chair Mitchoff and Members of the Board:

This letter and attachments are submitted on behalf of Phillips 66 Company ("Phillips 66") to respond to the separate appeals filed on behalf of the Rodeo Citizens Association and by Communities for a Better Environment (collectively, "Appellants"), with respect to the Contra Costa County Planning Commission's unanimous decision at its meeting on November 19, 2013, to approve the Propane Recovery Project (the "Project") proposed by Phillips 66 Rodeo Refinery (the "Refinery" or "Rodeo Refinery") and to certify the Environmental Impact Report ("EIR") prepared for the Project.

Most of the issues raised in the appeals flow from the Appellants' reliance on generic information relating to oil refining, speculation about how the Rodeo Refinery operates and incorrect assumptions. I am the manager of the San Francisco Refinery for Phillips 66 and have held positions ranging from Process Engineer to Refinery Manager. The Rodeo Refinery employs numerous engineers and other refinery professionals, many of whom have been at the Rodeo Refinery for decades. Collectively, we have personal, hands on, knowledge of the Rodeo Refinery equipment and operations. It is important to correct the misinformation that underlies the appeal petitions so that your Board can make a thoughtful and reasoned decision based on facts.

1. The Project

In the process of refining crude oil (any crude oil) into liquid products (i.e., gasoline, diesel, jet fuel, etc.), a gaseous by-product is produced called refinery fuel gas ("RFG"). Among other constituents, RFG contains propane and butane. The more RFG that is produced, the less transportation fuels (gasoline, diesel, and jet fuel) are produced. Currently, the Rodeo Refinery manages its RFG by using it as fuel in refinery heaters and boilers. In some cases when more RFG is produced than can be used as fuel in refinery heaters and boilers the excess RFG is burned in refinery flares. Maximizing RFG production is not a preferred practice due to the fact that refineries generate more revenue from producing and selling transportation fuels than can be

produced from capturing, processing, and selling propane and butane contained in the RFG. All Bay Area refineries, with the exception of the Rodeo Refinery, currently capture, store, and sell propane and butane normally contained in RFG. The captured gases are often referred to as liquid petroleum gas ("LPG") and are stored in pressurized vessels and shipped from the refineries by rail or truck for sale to third parties. Phillips 66 is not aware of any fires or explosions related to the collection, storage and shipment of LPG from any Bay Area refinery.

The Rodeo Refinery has recovered butane, stored it in a pressurized vessel, and sent it offsite by rail for sale to third parties since the 1970s, and has experienced no adverse issues of any kind related to these activities. The Project would allow the Rodeo Refinery to recover additional butane and for the first time recover propane from its existing RFG, store the LPG in pressurized vessels, and ship it from the Refinery by rail for sale. To the extent necessary for use in the Refinery's heaters and boilers, the LPG removed from the RFG will be replaced by purchased natural gas. The motivation/justification for the Project is the fact that replacement natural gas can currently be purchased by Phillips 66 at prices below that for which LPG can be sold to third parties. [DEIR, pgs. ES-1 through ES-7, 3-1, 3-2 and 3-5; FEIR, Master Response 2.2, pgs. 2-2 through 2-4.]

2. Project Benefits

a. Reduction in Sulfur Dioxide.

RFG contains sulfur compounds which form sulfur dioxide ("SO<sub>2</sub>") when burned in heaters/boilers or flares. SO<sub>2</sub> is one of the 5 criteria pollutants regulated by Federal EPA and the Bay Area Air Quality Management District (the "BAAQMD"). Current scientific evidence links exposures to SO<sub>2</sub> with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. EPA's National Ambient Air Quality Standard for SO<sub>2</sub>, as well as BAAQMD regulation of SO<sub>2</sub>, are designed to protect against exposure to the entire group of sulfur oxides which can react with other compounds in the atmosphere to form small particles that are potentially harmful. SO<sub>2</sub> emissions can also be a cause of odors.

To meet sales specifications for butane and propane, the Rodeo Refinery will need to remove impurities, including sulfur. Phillips 66 will hydrotreat the RFG in a new hydrotreater to remove sulfur compounds from the RFG, including from the propane/butane to be extracted as LPG. This sulfur removal process will precede the butane and propane recovery equipment, which means that the entire RFG stream will be treated by the sulfur removal equipment. RFG combustion is the single largest source of SO<sub>2</sub> emissions from the Rodeo Refinery; accordingly, by hydrotreating the entire RFG steam, the Project will result in a reduction in sulfur emissions from fuel burning sources throughout the Refinery. Although the Rodeo Refinery has been and continues to be in compliance with SO<sub>2</sub> limits imposed by the BAAQMD, the hydrotreating process will result in an approximately 50% reduction in SO<sub>2</sub> emissions from the Rodeo Refinery (roughly 180 tons per year). Without the Project, this reduction in SO<sub>2</sub> will not occur. [DEIR, pgs. ES-1, ES-2, 3-2, 3-5 and 4.3-19 through 4.3-22.]

b. Reduction in Flaring.

Generally, refineries strive to ensure the amount of RFG produced in the refining process is less than the amount combusted in refinery heaters and boilers. However, when some of the combustion units are down for maintenance, or as a result of upsets or breakdowns, there may be more RFG than can be combusted in the heaters and boilers. In this situation, excess RFG is typically combusted in a refinery flare. The capture of propane and butane from the RFG will reduce the volume of RFG combusted at the Refinery. To the extent and when needed, the remaining volume of RFG will be supplemented by purchased natural gas, which is very low in sulfur. The Rodeo Refinery will purchase only the amount of natural gas needed to address any shortfall between RFG production and demand, reducing instances of excess RFG and the associated flaring incidents at the Refinery. [DEIR, pgs. ES-2, 3-5 and 4.6-8; FEIR, Responses B4-29, pg. 3.2-127 and B4-39, pgs. 3.2-129 through 3.2-132.]

c. Reduction in On-site Greenhouse Gas Emissions.

The combustion of propane and butane produces more greenhouse gas ("GHG") emissions than does the combustion of natural gas. Accordingly, by replacing a portion of the RFG with natural gas for Refinery heaters and boilers, the Project will result in a reduction in onsite GHG emissions from the Rodeo Refinery. [DEIR, pgs. 4.8-12 through 4.8-18; FEIR, Responses B4-23, pgs. 3.2-123 & 3.2-124, B4-32, pgs. 3.2-127 & 3.2-128.]

3. Appeal

a. Project Scope

The fundamental premise of the arguments raised by Appellants and their consultants is based on speculation, and erroneous interpretation of the Project scope. Appellants cite the "Fox Report" and the Karras Declaration as evidence that there is insufficient butane/propane in the Refinery's existing RFG. They compound that faulty foundation by then asserting that the project goals can be met only if Canadian Oil Sands are processed. Appellants' premise, the Fox Report, and the Karras Declaration are speculative, erroneous, and false. "Argument, speculation, unsubstantiated opinion or narrative, or evidence this is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence." [CEQA Guidelines, 14 Cal. Code Regs. §15064(f)(5).]

As set forth in the project application, and in the DEIR and FEIR, the Project is designed to recover LPG, and the size of the Project is based on the Refinery's existing RFG produced by the existing Rodeo Refinery crude slate. [DEIR, pg. 3-2; FEIR, Master Response 2.2, pgs. 2-2 through 2-4, Responses B2-12, pg. 3.2-14, B4-5, pgs. 3.2-118 & 3.2-119, B4-11, pg. 3.2-120, B4-19, pg. 3.2-121, B4-39, pgs. 3.2-129 through 3.2-132, B4-40, pgs. 3.2-132 & 3.2-133.] The design of the removal equipment and the amount of propane/butane that can be removed is specified in the Project's BAAQMD permit application, and this amount has been translated into an enforceable condition included in the draft permit prepared by the BAAQMD. The volume is

specified as 14,500 BPD for a consecutive twelve month average. This design and permit limit is based on actual sampling and measurements of propane and butane in the RFG at the Rodeo Refinery taken in 2011. A summary of those measurements is attached to this response on Exhibit "A-1" and it verifies what has been the stated basis of the Project from its outset. I recently reviewed similar data for January through November 2013 which reveals an average of 14,250 BPD and is consistent with the levels of butane/propane measured in August of 2011 and the BAAQMD permit limit. (See Exhibit "A-2").

As referenced above, the economic motivation for the Project is that LPG currently brings a price higher than the cost of natural gas, which would replace it. The Project has nothing to do with changes in the crude slate. The Refinery has no desire or incentive to sustain or increase production of butane and propane because they have a lower value than the liquid fuels (gasoline, etc.) that are the Refinery's primary products. Moreover, regardless of the amount of RFG produced in the future, the design of the removal equipment and BAAQMD permit limits will limit the amount of LPG that can be recovered. If more than 14,500 BPD LPG is produced, the excess will remain in the RFG and be burned in heaters/boilers as it is today. If less than 14,500 BPD is produced, it will all be captured and removed from the RFG. The Project benefits and impacts (or lack thereof), as described in the DEIR, will occur regardless of which crudes or intermediates are processed at the Refinery.

Having incorrectly assumed that Phillips 66 will need to refine heavier crudes to support the Project, Appellants then contend that refining of heavy crude will produce adverse impacts. Based on Phillips 66's many years of experience refining heavy crudes at its various refineries, we do not agree with Appellants' contentions regarding the impacts of refining heavy crude. Even so, we will not provide detailed responses in this letter because the contentions have no relevance or relationship to the Project, the FEIR, or the Land Use Permit. Because the fundamental allegation of the Appellants is false and the entirety of the Project is in fact to recover propane and butane from the existing RFG, the remainder of the "larger project" arguments are not relevant and do not require a response. However, because these additional allegations are also incorrect, for informational purposes and to insure an accurate record, Phillips 66 provides the following:

b. No Crude Processing Equipment.

None of the equipment being installed in connection with the Project in any way affects the ability of the Refinery to process crude either heavier or lighter than that which is currently being processed at the Refinery. Appellants do not contend otherwise. The Refinery currently processes heavy crude and there are no restrictions on the types of crude it can process now or in the future. There are restrictions on the levels of pollutant emissions and discharges contained in applicable permits and regulations issued by the BAAQMD and the Regional Water Quality Control Board, and those restrictions will not change regardless of the type of crude processed. Further, the CEQA baseline for the Project used to determine environmental impacts are actual emissions from the refinery averaged over the last three years. Following implementation of the Project, or without the Project, the Rodeo Refinery will still be able to process the same blend of

crude oils that are currently processed and allowed under existing permits, regulations, and facility design. Rather than enabling or requiring the processing of heavier crude, the Project simply will allow the Refinery to remove LPG and sulfur from the RFG, resulting in the corresponding environmental benefits described in the FEIR irrespective of the Refinery's crude slate. [DEIR, pgs. 3-20 through 3-28, 4.3-12 through 4.3-24, 4.4-25 through 4.4-28, 4.8-12 through 4.8-18, and 4.10-21 through 4.10-24; FEIR, Master Response 2.2, pgs. 2-2 through 2-4, Responses B2-10, pg. 3.2-13 & 3.2-14, B2-11, pg. 3.2-14, B4-5, pgs. 3.2-118 & 3.2-119, B4-11, pg. 3.2-120, B4-21, pgs. 3.2-121 through 3.2-123, B4-25, pgs. 3.2-125 & 3.2-126, B4-39, pgs. 3.2-129 through 3.2-132, B4-40, pgs. 3.2-132 & 3.2-133, and B4-47, pgs. 3.2-135 through 3.2-138.]

c. Advantaged Crude.

The Appellants have excerpted selected language from various Phillips 66 public sites and documents to support its contention that all of Phillips 66's projects on the U.S. west coast are a part of an overall plan to increase use of "Advantaged Crude," including Canadian Oil Sands. However, when the Phillips 66 websites/documents that Appellants cite are read in full, one finds that Advantaged Crude is defined as "crude oils that sell at a discount relative to crude oils tied to the global benchmark." At least 6 different types of crude oils are listed as potential "Advantaged Crude," several of which are considerably lighter than the crude the Rodeo Refinery currently processes. When the Recent Advantaged Crude Activities list cited by the Appellants is read in whole one finds that most of the projects listed involve crude oils that are considerably lighter with lower sulfur contents than what Phillips 66 West Coast refineries currently process. Further, a general corporate goal to purchase crude oils that cost less than the global benchmark is not a "project" as defined in CEQA. Even assuming that Phillips 66 is successful in purchasing crude oils at a discount compared to the global benchmark, which of the qualifying crudes will be purchased and where they will be refined is currently speculation. [See (1) Feature Story - "Phillips 66 Delivers on Advantaged Crude Strategy", (2) Edited Transcript – Thomas Reuters Street events – Q1 2013 Phillips 66 Earnings Conference Call (May 1, 2013), and (3) Transcript of Phillips 66 Presentation at 2013 Barclays CEO Energy-Power Conference, Greg Garland, Chairman and CEO (September 12, 2013), all currently available on the Phillips 66 Company website "Newsroom"; see also FEIR, Master Response 2.2, pgs. 2-2 through 2-4.]

d. Santa Maria and Carson Projects.

Appellants attempt to bolster their claims and erroneous conclusions regarding the Project scope by cobbling the Rodeo Project together with projects at other Phillips 66 refineries in Carson and Santa Maria, California. The only thing these projects have in common is that they have the same owner, they will be constructed in the same general time frame, and they occur in California. Beyond that, they are hundreds of miles apart, and each will proceed or not depending upon the outcome of the environmental review and permitting process by the respective local jurisdictions. The projects will occur in different counties, and are subject to CEQA review by different lead and responsible agencies. Phillips 66 hopes that all these projects will be approved; however, any combination is capable of proceeding because the

projects do not affect one another. Moreover, every one of these projects either has gone through or is undergoing CEQA environmental reviews.

The Carson project consists of the addition of one new tank and increases in throughput of two additional tanks to accommodate the off-loading of very large oil tankers in one call. The size of crude tankers has increased over time, and the Carson operations need to be modified as a result. Currently, two calls are required to offload the very large tankers, and the proposed new and modified tanks will allow the entire contents to be offloaded in one visit. The South Coast Air Quality Management District ("SCAQMD") has issued a 100-page Draft Negative Declaration and is expected to issue its Final Negative Declaration in the near future. [Phillips 66 Los Angeles Refinery - Carson Plant Crude Oil Storage Capacity Project, Draft Negative Declaration, South Coast Air Quality Management District (September 2013).]

A project at Santa Maria involving an increase in refinery throughput was applied for 5 years ago, long before the propane recovery project was conceived. It was approved in 2013, after certification of an Environmental Impact Report by the County of San Luis Obispo. No legal challenge was filed related to that project nor were any comments submitted by Appellants. [Phillips 66 Santa Maria Refinery Throughput Increase Project, Final Environmental Impact Report, Marine Research Specialists (October 2012).]

A second Santa Maria project consists of an expansion of an existing rail terminal at the refinery and is the subject of a Draft Environmental Impact Report issued by the County of San Luis Obispo in November 2013. [Phillips 66 Company Rail Spur Extension Project, Public Draft Environmental Impact Report, Marine Research Specialists (November 2013).] Two full EIRs (one completed and one just issued) have been prepared for the two separate Santa Maria Projects and will cover all environmental impacts from those projects. While there is a pipeline between the Santa Maria Refinery and the Rodeo Refinery, the Santa Maria Refinery only delivers semi-refined products to the Rodeo Refinery. Unrefined crude oil is not sent directly from the Santa Maria Refinery to the Rodeo Refinery and cannot be delivered directly to the Rodeo Refinery without substantial modifications to the Santa Maria Refinery and pipeline. No such changes are proposed, and if they are proposed in the future, they would require new permits/environmental review. Prior to shipment of the intermediates produced at Santa Maria, the semi-refined material is stored in tankage. The tankage has vapor pressure limits imposed by the County Air District which acts as a constraint regarding how much butane/propane can be included in the intermediates. Historically, and currently the Santa Maria refinery operates at or very near these limits. Accordingly, contrary to the contentions of the appellants no new propane/butane can be added to the intermediates sent from Santa Maria to Rodeo regardless of the types of crude that may be processed at Santa Maria.

e. Greenhouse Gas

Another of the consistent themes of the appellants is that the DEIR/FEIR is deficient because it does not include off-site greenhouse gas emissions that could be created by the use of the propane/butane after it is sold by Phillips 66.

With respect to the proposed Project, it is unclear where, how, or by whom the propane/butane produced by the Project might be used. Butane is sometimes used as an additive in chemical manufacturing which does not involve combustion. Further uncertainty exists concerning the locations, quantities and types of fuel that might be replaced by the propane/butane that would be sold by Phillips 66. It is also unknown whether such production and sale would have the potential to impact the overall demand/consumption of propane/butane or the use or non-use of another fuel. These issues are not within the capacity or control of the Project (or of the County as Lead Agency) and are too speculative for inclusion in the EIR analysis. (14 Cal. Code Regs. §15358).

Contrary to Appellants' claims, for the above reasons, the CEQA Guidelines do not require a manufacturer/producer of a product to attempt to determine or be responsible for emissions that occur from the use of the product after it is sold. The California Natural Resources Agency chose not to impose such a requirement when presented with the opportunity to do so as part of the recently-adopted amendments to the CEQA Guidelines intended to address the effects and mitigation of GHG emissions. As stated by the Resources Agency:

"Moreover, even if a standard definition of the term 'lifecycle' existed, requiring such an analysis may not be consistent with CEQA. As a general matter, the term could refer to emissions beyond those that could be considered 'indirect effects' of a project as that term is defined in section 15358 of the State CEQA Guidelines. Depending on the circumstances of a particular project, an example of such emissions could be those resulting from the manufacture of building materials. (CAPCOA White Paper, at pp. 50-51.) CEQA only requires analysis of impacts that are directly or indirectly attributable to the project under consideration. (State CEQA Guidelines, §15064(d).) In some Instances, materials may be manufactured for many different projects as a result of general market demand, regardless of whether one particular project proceeds. Thus, such emissions may not be 'caused by' the project under consideration. Similarly, in this scenario, a lead agency may not be able to require mitigation for emissions that result from the manufacturing process. Mitigation can only be required for emissions that are actually caused by the project." (California Natural Resources Agency, "Final Statement of Reasons for Regulatory Action – Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97," pgs. 71-72 (December 2009).

The Bay Area Air Quality Management District has also issued guidelines for assessing GHG emissions from stationary sources and includes a number of examples of indirect sources that should be considered. Emissions from the post-manufacturing/production that might result from the use of the product produced are not included. (Section 4.2 BAAQMD California Environmental Quality Act Air Quality Guidelines).



An indirect effect must only be considered if it constitutes a reasonably foreseeable impact caused by the project. An indirect physical change determined to be speculative is not reasonably foreseeable. (14 Cal. Code Regs. §§15064(d)(3) & 15358(a)(2)). If a lead agency determines after performing a thorough investigation that an indirect impact is speculative and not reasonably foreseeable, it is authorized to simply note this conclusion and to thereafter terminate its discussion of the impact. (14 Cal. Code Regs. §15145). This was done in the DEIR for this Project. (FEIR, pg. 3.2-123-4 )

4. The FEIR Covers Appellants' Other Arguments

While the vast majority of the Appellants' arguments relate to the fictional "larger project/Canadian Oil Sands" scenario, the Appellants also claim that almost every section of the DEIR or FEIR is inadequate. As this Board is aware, the County and its CEQA consultant have a long history of permitting and conducting environmental review of refinery projects. As part of this process, they have developed considerable expertise in CEQA compliance in general, and refinery project EIRs in particular. The shotgun attacks of the Appellants clearly lack credibility. In Exhibit "B" to this letter, Phillips 66 has responded to those of Appellants' additional arguments which Phillips 66 believes it has particular knowledge as the Project applicant. The references in the Exhibit "B" are to numbering that has been added to the appeals (i.e. Shute, Mihaly & Wineberger –SMW 1, etc.; or Communities for a Better Environment – CBE 1, etc.). In many cases, the responses simply reference sections of the DEIR and FEIR where the issues raised are appropriately addressed, and, in a number of cases, Phillips defers to the County based on its expertise and or CEQA experience.

In conclusion, the Project as described in the DEIR is only to recover for sale propane and additional butane from refinery fuel gas and other process streams and will result in a significant decrease in SO<sub>2</sub> emissions from the Refinery. [DEIR, pg. 3-5.] The Project is not about Advantaged Crude, projects at the Carson or Santa Maria Refineries, or the availability or processing of "Canadian Oil Sands," and none of those topics belong in the environmental analysis of the Project. Speculation of what greenhouse gas emissions may or may not occur related to the use of butane/propane after it is produced sold and distributed to customers is neither required by CEQA nor appropriate. For all of the above reasons it is respectfully requested that the Appeals be denied and the Planning Commission's approval of the Phillips 66 Propane Recovery Project be confirmed.

Very truly yours,



Mark E. Evans  
Phillips 66 San Francisco Refinery Manager



**Exhibit A-1**  
**Refinery Propane and Butane Production - Design Basis August 2011**

Design Period	Refinery Fuel Gas - U233			Refinery Fuel Gas - A			Butane Currently Recovered for Sale <sup>4</sup>	Total Propane + Butane
	Flow <sup>1</sup> MSCFD	Propane mol % <sup>2</sup>	Butane mol % <sup>2</sup>	Flow <sup>1</sup> MSCFD	Propane mol % <sup>3</sup>	Butane mol % <sup>3</sup>		
August 2011	38,592	9.9	2.8	27,299	17.8	10.0	4,899	15,474
		BPD	BPD		BPD	BPD	BPD	BPD
		2,353	2,839		3,192	2,157		

Propane and butane obtained from two refinery fuel gas streams: U233 and RFG-A.

1. Flowrate obtained from continuous flowmeter data.
2. Mol % based on daily lab results
3. Mol % based on on-line continuous gas chromatograph (GC) results
4. Butane recovered for sale obtained from continuous flowmeter data.

**Calculations**

BPD of LPG = {Gas Flow [mscfd] x 1000 [scfd/mscfd] x mol %/100 x MW [lb/lb-mol]} / { 379.5 [scf/lb-mol] x liquid density [lb/gal] x 42 [gal/bbl]}

where:

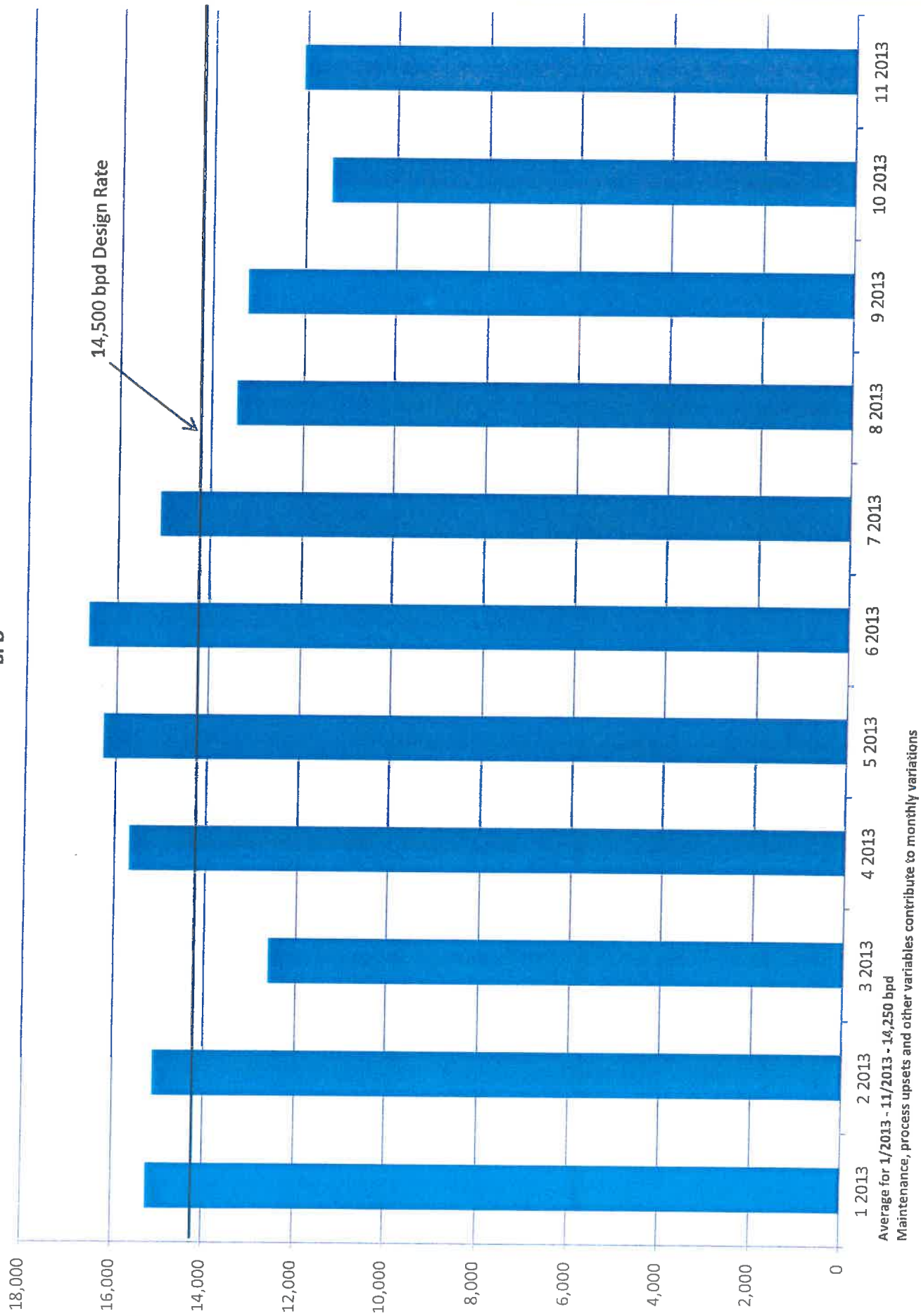
MW = molecular weight, propane = 44 lb/lb-mol and butane = 58 lb/lb-mol

Propane liquid density = 4.2 lb/gal

Butane liquid density = 4.6 lb/gal

379.5 scf/lb-mol is the specific molar volume of an ideal gas at 60 F

**Exhibit A-2**  
**Refinery Propane and Butane Production**  
**BPD**



# EXHIBIT B

ID	Subject	FEIR/DEIR Reference	Response
SMW 1	Feedstocks	DEIR ES-1, 1.1, 3-2, 3.4.2.1- FEIR Master Response 2.2	The propane and butane recovery equipment were sized to handle the amount of LPG in the refinery's current and recent RFG, based on a review of data in 2011 when project design was begun. Thus, the starting premise of Dr. Fox's comments is faulty. Also see Phillips 66 Letter to Board Of Supervisors dated January 6, 2014. See response to SMW-1.
SMW 2	LPG Removal Design	DEIR ES-1, 1.1, 3-2, 3.4.2.1	See response to SMW-1.
SMW 3	Santa Maria	DEIR ES-1, 1.1, 3-2, 3.4.2.1- FEIR Master Response 2.2	
SMW 4	Rail Study Area	DEIR 4.3-19	The analysis of diesel locomotive emissions related to the project within the BAAQMD satisfies CEQA's requirements as published by BAAQMD and used by the County as it covers impacts in the 9 Bay Area Counties included in the jurisdiction of the Bay Area Air Quality Management District. Further, movements of trains from their origination and destination points off the Phillips 66 properties are performed by the Railroads on their property with their employees. The movements of such trains other than on Phillips 66 property are preempted from local and state environmental regulation by the Federal Interstate Commerce Commission Termination Act. (cite to Act) While the DEIR has included emissions within the jurisdiction of the BAAQMD the County as well as other state and local responsible agencies are preempted from imposing mitigation measures, conditions, or regulations related to such rail train movements. See response to F14.
SMW 5	B-401 Reductions	DEIR 4.3,	
SMW 6	Steam Power Plant	FEIR 3.1.6 A6-5 DEIR 4.3.5 Impact 4.3-2	See Response to F15.
SMW 7	SO2 Reduction	DEIR 4.3-19, Table 4.3-7	As discussed in the DEIR, the proposed project will remove sulfur from the RFG, which will result in decreased SO2 emissions from the combustion of this RFG in refinery heaters and boilers. The BAAQMD will impose permit conditions which will limit SO2 emissions and ensure the SO2 emission reductions in the DEIR are real. CEQA does not require that mitigation for air quality impacts be limited to banked emission reduction credits.
SMW 8	CO	DEIR 4.3-15, 4.3-19, FEIR Appendix A-1	BAAQMD CEQA guidelines do not contain significance thresholds for stationary source emissions of CO. CO emissions were provided to the County in the Air Quality Supplement and in the BAAQMD Permit Application as referenced in the DEIR. Also see Appendix A-1 to the FEIR.
SMW 9	H2 usage, SRU	DEIR 3.1.1.2, 3.2.1, 3.4.2.2, 4.3.5 Impact 4.3-2	See Response to F16, F18 and F20.
SMW 10	Propane/butane Lifecycle	FEIR 3.2.4 B4-2 & B4-2E	See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014. As discussed in the previous responses (see SMW 5 - 10), the PRP emissions will not exceed significance threshold and will not conflict with the Bay Area 2010 Clean Air Plan as reported in the DEIR.
SMW 11	Clean Air Plan	DEIR 4.3.4	See Response to F15, SMW 7 and Phillips 66 Letter to Board Of Supervisors dated January 6, 2014. The BAAQMD CEQA Guideline for evaluating a project's health risk impacts requires comparison of the modeled increase in health risk from the project's TAC sources to the significance criteria.
SMW 12	HRA	DEIR Section 4.3, page 4.3-22; FEIR Section 3.1.6, Response A6-3, page 3.1-21; FEIR Section 3.2.4, Response to B4- 9, page 3.2-119.	Background TAC levels monitored by the BAAQMD are presented for information on existing conditions. The average monitored background concentrations of toxics for the closest station to the Project (Crockett) and the five BAAQMD air monitoring stations within 10 miles of Rodeo are included in the attached Tables 1 and 2. The purpose of the health risk assessment under CEQA is to analyze the impact to the public from proposed projects. On-site workers, within the project refinery property boundary are protected by refinery safety practices as well as Occupational Safety and Health Administration (OSHA) regulations.
SMW 13	Odor	DEIR Section 4.3.4, page 4.3- 16	The Project does not add sources of odorous emissions; thus, there would be no change from existing conditions at the refinery, which currently operates sources of odorous emissions. There would not be an increase in odor-causing compounds such as H2S, SO2, or ammonia. As stated in the DEIR, Section 4.3.4, the proposed Project represents an odor improvement over current conditions. Therefore, there would be no odor impacts associated with the Project.

## EXHIBIT B

ID	Subject	FEIR/DEIR Reference	Response
SMW 14	Hazards	DEIR 4.9-10, 4.9-12, 4.9-15, 4.9-21; FEIR Master Response 2.3, Master Response 2.5, FEIR 3.2-128.	See Response to SMW 16-18. The EIR discloses the risk of accident and associated release in DEIR 4.9. The Toxic Release Inventory and other references listed in the comment do not pertain to accidents and associated releases.
SMW 15	Historical Compliance	DEIR 4.9	The paper cited by the commenter (X. Liu et al., Exhibit I) summarizes many factors that can be involved in derailments, with train length being one. There are many root causes for which train length is not factor (e.g., broken rails, bar defects, mechanical breakdowns, human error, and obstructions to name a few). No data or statistics are cited in the paper referenced by the commenter that can be used to quantify any affect train length may have on derailments. Therefore, while train length can be a factor in some derailments, there are many other factors potentially involved. No publicly available data was found that related train length to accidents in a quantifiable manner. The publicly available data from the U.S. Department of Transportation (DOT) discussed in FEIR Master Response 2.6 expressed accident rates in terms of incidents per train-miles, which rolled up trains of various lengths involved in accidents. These data showed an extremely small risk of train derailments leading to a fire. The FEIR also showed on page 2-20 that the number of train accidents involved in the release of hazardous materials has reduced significantly over time as DOT railcar safety standards have been implemented since the late 1970s. The EIR provided a reasonable estimate of train accident frequency from the publicly available data.
SMW 16	Rail	DEIR 4.9.3 - 4.9.6, FEIR Master Response 2.3, 2.6	
SMW 17	Refrigerated C3	DEIR page 4.9-21; FEIR Master Response 2.3; FEIR Master Response 2.5; FEIR page 3.2-128.	
SMW 18	Hazards	DEIR 4.9.2.3, 4.9.4, FEIR Master Response 2.3	The refinery has comprehensive safety procedures that cover all aspects of refinery operation. The purpose of an assessment of hazard impacts under CEQA is to analyze the impact to the public from proposed projects. On-site workers, within the project refinery property boundary, are protected by refinery safety practices as well as Occupational Safety and Health Administration (OSHA) regulations.
SMW 19	Geology	DEIR 4.7.2.3, FEIR 2.5	As described in the DEIR/FEIR, the mere presence of liquefiable soils and/or seismic hazards does not preclude safe construction of critical improvements provided that the appropriate engineering design measures are incorporated into construction specifications. The DEIR states that each of the proposed project components will receive a site-specific geotechnical investigation as required by Law. The investigations and resultant design parameters would be approved by the County Department of Conservation and Development, Building Inspection Division. Construction would be in accordance with objective standards and performance criteria embodied in the regulatory codes.
SMW 20	Hazards	DEIR 4.9.2.3, 4.9.6, 4.15.2, 4.15.4, FEIR 3.1.7, 3.1.11, 3.3.3	The FEIR provided responses to the comments from the Rodeo-Hercules Fire Protection District (RHFD) and the Rodeo Sanitary District regarding potential impacts to public services and facilities. As noted in the DEIR, the proposed Project in and of itself would not necessitate the construction of a new or physically altered fire station.
SMW 21	GHG	DEIR 3.4.2.2, FEIR 3.1.6 A6-5,	See Response to SMW 10, F10, F11, F18.
SMW 22	Biology	FEIR 3.2.4 B4-2 & B4-23	County to respond.
SMW 23	Biology/OTC	DEIR 4.4, FEIR 3.2.4 B4-21	Defer to County Also See Response to CBE 15.
SMW 24	Cumulative	DEIR 5.4 -5.5	Defer to County.
SMW 25	Santa Maria	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.



# EXHIBIT B

ID	Subject	FEIR/DEIR Reference	Response
SMW 26	Crude	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
SMW 27	Ferndale	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014. <b>Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.</b> The WesPac terminal has not yet been built or permitted, but is currently going through a CEQA review. If it is eventually approved and built, which types of crude oils will be delivered to the terminal either by ship or rail is currently unknown and entirely speculative. Further what companies may contract for delivery of such crude from WesPac is equally speculative and unknown. While a pipeline or rights of way for a pipeline to various refineries in the County exists it has been dormant for years and it is currently unknown if it can be reactivated. The pipeline and its use is not covered or analyzed by the WesPac EIR which indicates that any such use will have to be addressed by the pipeline owners in the future. (Recirculated Draft Environmental Impact Report WesPac Pittsburg Energy Infrastructure Project - State Clearinghouse No. 2011072053-July 2013)
SMW 28	WesPac	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	See Response to SMW 4 and F 14
SMW 29	Rail Study Area	DEIR 4.3-19	See Response to F15.
SMW 30	Stream Power Plant NOx	DEIR 4.3.5 Impact 4.3-2	See Response to F15.
SMW 31	Feedstock	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
SMW 32	Santa Maria	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
SMW 33	SO2 Reduction	DEIR 4.3-19, Table 4.3-7	See Response to SMW 7.
SMW 34	Cumulative	DEIR 5.4-5.5	See Response to SMW 24
F1	Feedstock	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F2	LPG Removal Goal	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F3	Santa Maria	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F4	Feedstock/Santa Maria	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F5	Santa Maria	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F6	Project Description	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F7	Feedstock	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F8	RFG Heat Content	FEIR 3.2.4 B4-39 p. 3.2-13C	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F9	Butane/Propane Lifecycle	FEIR 3.2.4 B4-2 & B4-2E	See Response to SMW 10
F10	GHG	FEIR 3.2.4 B4-2 & B4-2E	See Response to SMW 10
F11	B-401 Reductions	FEIR 3.1.6 A6-5, FEIR 3.2.4 B4 2 & B4-23	
F12	B-401 Reductions	DEIR 4.3.2.6, FEIR 3.2.2 B2-10	
F13	Rail Study Area	DEIR 4.3-19	See Response to SMW 4 and F14

# EXHIBIT B

ID	Subject	FEIR/DEIR Reference	Response
F14	Emissions	DEIR 4.3.2.6 Table 4.3-4, 4.3.3	The thresholds of significance that were chosen by the County are those recommended by the BAAQMD's Revised Draft Options and Justification Report (BAAQMD, 2009). These represent the levels at which a project's individual emissions would result in a considerable adverse contribution to the SF Bay Area Air Basin's (SFBAAB) existing air quality conditions. To be consistent with the significance criteria, the focus of the emissions development was to address the emissions impacting the SFBAAB. For criteria pollutants and TACs, this involved assessing emission sources that are located within the SFBAAB. Comparing criteria pollutant emissions from total track length estimates to SFBAAB significance criteria is not appropriate [Fox 13 Table 1]. For GHG, the BAAQMD's recommended interim threshold are to be applied to land uses in the SFBAAB that contribute to GHG emissions within the state, so accounting for emissions to the state boundary were considered appropriate. See also Response to SMW 4.
F15	SPP NOx	DEIR 4.3.5 Impact 4.3-2	The Steam Power Plant (SPP) NOx emissions provided to BAAQMD and the County (5/8/13 via e-mail) are based on actual emission measured : the SPP. The SPP is equipped with SCR for NOx control. Therefore, the NOx emission estimates reported to BAAQMD and the County are accurate and emissions from the SPP are less than those of a new boiler. See Responses to F 17 through F21.
F16	H2 usage, SRU	DEIR 3.1.1.2, 3.2.1, 4.3.5 Impact 4.3-2	Throughput of sulfur at the sulfur recovery units (SRUs) may increase marginally (less than 0.2%) as a result of the reduction of approximately 140 tons per year (tpy) in SO2 to atmosphere from combustion of RFG. Sulfur production will theoretically increase by approximately 135 tons per year compared to current annual throughput of about 87,500 long tons per year of sulfur or 240 long tons per day. This increase is less than one day's worth of production. The projected increase will likely be imperceptible post-project because the it is so small relative to current rates. The increase in SO2 emissions at the SRUs will be less than approximately 2 tpy because the SRUs are greater than 99% efficient at sulfur removal. The 2 tpy increase in SO2 is well below the 140 tpy decrease, therefore there is still a large net reduction in SO2 emissions to atmosphere as a result of this project.
F17	GHG - Lifecycle	FEIR 3.2.4 B4-2 & B4-2i	See Response to SMW 10
F18	H2 Usage	DEIR 3.4.2.2	The DEIR states that there is adequate hydrogen present in the gas streams being hydrotreated and that no increase in demand at the existing Refinery hydrogen plant is expected. A Hydrogen Supply Connection to the Hydrotreater is provided for start-up and shut-down operations, but will not require new hydrogen production. In response to BAAQMD requests, Phillips 66 has proposed limits on the amount of hydrogen that could be added to the hydrotreater by the Start-Up and Shut-Down Hydrogen Supply Connection. The hydraulic flow capacity of the Hydrogen Supply Connection was provided to the BAAQMD as the maximum flow value. As noted in the DEIR above, there will be no increase in hydrogen demand at the existing Hydrogen Plants. There is no inconsistency between the DEIR and the BAAQMD application.
F19	SPP NOx	DEIR 4.3.5 Impact 4.3-2	See F15.
F20	SRU	DEIR 3.1.1.2, 3.2.1, 4.3.5 Impact 4.3-2	See F16.
F21	Indirect GHG	DEIR 4.6.4, 4.8.5, p 4.8-16 - 4.8-18	Defer to County.
F22	Crude	DEIR ES -1, 1.1, 3-2, 3.4.2.1 - FEIR SMW 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
F23	CO	DEIR 4.3-15, 4.3-15	See Response to SWM 8.
F24	SO2 Reduction	DEIR 4.3-19, Table 4.3-7	See Response to SMW 7.
F25	Cumulative	DEIR 5.4-5.5	Defer to County.
CBE 1		N/A	Opinion. No response required.
CBE 2		N/A	Opinion. No response required.
CBE 3	Crude	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
CBE 4	Project Description	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.

## EXHIBIT B

ID	Subject	FEIR/DEIR Reference	Response
CBE 5	Crude	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
CBE 6	Crude	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
CBE 7	Crude	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
CBE 8	GHG - Lifecycle	FEIR 3.2.4 B4-2 & B4-2E DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	See Response to SMW 10
CBE 9	Crude	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
CBE 10	Crude	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
CBE 11	OTC	DEIR 3.4.2.7 4.4.4 and 4.4.5, FEIR 3.2.4 B4-21, -25, -30, -47	As described in the DEIR and FEIR, the project does not include use of a closed-loop system for cooling. It is not part of the project. The commenter's claim that the Project's increased utilization of the existing OTC system "forecloses any replacement" of that system is incorrect and unsubstantiated. The Project use of the OTC does not in any way affect potential future replacement of the system.
CBE 12	Cumulative	DEIR 5.4-5.5	See Response to SMW 24
CBE 13	GHG - Lifecycle	FEIR 3.2.4 B4-2 & B4-2E	See Response to SMW 10
CBE 14	OTC	DEIR 3.4.2.7 4.4.4 and 4.4.5, FEIR 3.2.4 B4-21, -25, -30, -47	The commenter's claim of "deferred mitigation" is not correct. There was no significant impact found in the DEIR, therefore there is no impact to mitigate. The FEIR merely states the fact that the RWQCB has the authority to require modifications to a facility's operations if discharge limitations are exceeded. The DEIR indicates that there will be no impacts or discharge limitations exceeded as a result of this Project. See Response to CBE 11.
CBE 15	Mitigation		Contrary to the Appellants' contentions, reliance on the authority of a specialized public agency, created for the sole purpose of regulating a particular environmental media, is consistent with CEQA's mandates, especially when based on an assessment of the Project's potentially significant environmental impacts and the statutory or regulatory requirements that will be relied upon to mitigate such impacts to less-than-significant levels. See <i>Sundstrom v. County of Mendocino</i> , 202 Cal.App.3d 296, 308-09 (1988) [stating that "[a] condition requiring compliance with environmental regulations is a common and reasonable mitigation measure" and upholding conditions in a use permit requiring compliance with air and water quality standards where "the County possessed 'meaningful information' reasonably justifying an expectation of compliance...[which] would indeed avoid significant environmental effects"]; <i>Mountain Lion Foundation v. Fish &amp; Game Com.</i> , 16 Cal.4th 105, 135 (1997) (citing <i>Sundstrom</i> as standing for the proposition that a "use permit condition requiring compliance with environmental regulations is proper mitigating measure because compliance avoids potentially significant environmental effects").
CBE 16	Project Alternatives	DEIR 6.1-5	
CBE 17	Public Notice	FEIR 2.1	Defer to County.
CBE 18	Project Description	DEIR ES-1, 1.1, 3-2, 3.4.2.1 - FEIR Master Response 2.2	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014.
CBE 19	Project Description	DEIR ES-1, 1.1, 3-2, 3.4.2.1, 3.4.2.7 4.4.4 and 4.4.5 - FEIR SMW 2.2, 3.2.4 B4-21, -25, -30	Also See Phillips 66 Letter to Board Of Supervisors dated January 6, 2014. See Response to CBE 11 and CBE 14. Appellants contend that the FEIR should be recirculated for further public comment. Recirculation of an EIR is required only when significant new information is added to an EIR after public notice is given of the availability of the draft EIR. New information is not significant unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project. [CEQA Guidelines, 14 Cal. Code Regs. §15088.5(a).] For all of the reasons discussed in the response to the appeals, no new significant information has been submitted that would change any of the County's findings of no significant impact with the mitigations referenced in the EIR. Any new information submitted has been only to refute Appellants' claims and speculation and only verifies the facts upon which the DEIR and FEIR are based. [FEIR, Response B4-35, pgs. 3.2-128 & 3.2-129.]
CBE 20	Omissions in FEIR	See all of above.	Summary. See all above.