PHILLIPS 66 PROPANE RECOVERY PROJECT

Recirculated Final Environmental Impact Report
SCH No. 2012072046
County File No. LP12-2073

Contra Costa County
Department of Conservation
and Development

January 2015

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Department of Conservation and Development
Community Development Division
30 Muir Road
Martinez, CA 94553

120546

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Acronyms and Abbreviations Used in This EIR

BAAQMD	Bay Area Air Quality Management District
BCDC	Bay Conservation and Development Commission
BLEVE	Boiling Liquid Expanding Vapor Explosion
BPD	barrels per day
CAAQS	California Ambient Air Quality Standard
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalents
DCD	Contra Costa County Department of Conservation and Development
DPM	Diesel Particulate Matter
DEIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
FEIR	Final Environmental Impact Report
GHG	Greenhouse gas emissions
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
ICCTA	Interstate Commerce Commission Termination Act
IPCC	Intergovernmental Panel on Climate Change
ISS	Inherently Safer System
LPG	Liquefied Petroleum Gas - (light hydrocarbons)
MEIR	maximum exposed individual receptor
MW	Megawatt, a million Watts
NPDES	National Pollutant Discharge Elimination System
NOP	Notice of Preparation
NOx	Nitrogen Oxides
OTC	Once Through Cooling
PG&E	Pacific Gas & Electric Company
PHMSA	Pipeline and Hazardous Materials Safety Administration
PM10	PM less than 10 microns in size
PM2.5	PM less than 2.5 microns in size
POC	Precursor Organic Compounds
ppm	Parts per million
RDEIR	Recirculated Draft Environmental Impact Report
RFEIR	Recirculated Final Environmental Impact Report
RFG	refinery fuel gas
RHFD	Rodeo-Hercules Fire District
RMP	Risk Management Plan or Regional Monitoring Program
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SMF	Phillips 66 Santa Maria Refinery
SO2	Sulfur Dioxide
SPP	Steam Power Plant
TAC	Toxic Air Contaminants
ug/m3	micrograms per cubic meter of air
US EPA	U.S. Environmental Protection Agency
USGS	United States Geological Survey

CHAPTER 1
Introduction

1.1 The CEQA Process

The California Environmental Quality Act (CEQA) of 1970, as amended,[1] guides the process of environmental review in California. All aspects of the preparation and public review of a draft Environmental Impact Report (DEIR), as well as the subsequent steps to prepare a Final Environmental Impact Report (FEIR), are specifically outlined by the CEQA Guidelines.[2]

This Recirculated Final Environmental Impact Report (RFEIR) is the last of multiple steps in the CEQA environmental review process for the Project. This process began in July 2012, when the County issued a Notice of Preparation for the DEIR on July 24, 2012. The DEIR was published on June 10, 2013. The public review and comment period duration for the DEIR began on this date and ended July 25, 2013. A public hearing before the Contra Costa County Zoning Administrator took place during this comment period on July 15, 2013. The Contra Costa County Community Development Division granted a 15-day extension of the comment period to August 9, 2013.

The FEIR was completed on November 6, 2013 and a public hearing was held by the Contra County Planning Commission on November 19, 2013. After evaluating the proposed Project, including all public testimony and evidence in the record, the Planning Commission voted unanimously to certify the FEIR and approve the land use permit. Two appeals to the Planning Commission's decision were filed. Pursuant to County procedures, an appeal hearing before the Contra Costa County Board of Supervisors was held on January 21, 2014. Upon conclusion of public testimony and deliberation by the Board of Supervisors, the hearing was continued to allow staff sufficient time to respond to comments provided in testimony and also to consider and respond to issues raised in a letter received from the Bay Area Air Quality Management District (BAAQMD) on January 14, 2014.

After the Board of Supervisors hearing, staff from Contra Costa County Department of Conservation and Development (DCD) and from BAAQMD met several times to discuss issues related to the January 14, 2014 letter. Based on those discussions, DCD staff concluded that additional assessment of several air quality concerns was needed, including the preparation of a cumulative community health risk assessment. DCD staff determined that this information may constitute new information of substantial importance pursuant to CEQA Guidelines Section 15088.5(a)-(e) and, thus, it was recommended that the EIR should be revised and recirculated for

1 *Public Resources Code, Division 13, Sections (§§) 21000 – 21178*
2 *Title 14. California Code of Regulations, Chapter 3, Sections (§§) 15000 – 15387 and Appendices*

public comment. A lead agency is required to recirculate an EIR when significant new information is added after public notice has been given of the availability of the draft EIR for public review (CEQA Section 15088.5). On June 3, 2014 the County Board of Supervisors directed staff to prepare a Recirculated Draft Environmental Impact Report (RDEIR) addressing cumulative health risk and other environmental issues raised in testimony and comments which had not been fully considered in the prior 2013 Draft and Final EIRs.

On October 17, 2014, the Contra Costa County Department of Conservation and Development, Community Development Division released the RDEIR on the proposed Project. In accordance with CEQA Section 15088.5, and as for reasons provided in Section 1.1, the RDEIR was recirculated to agencies and interested individuals, including all commenters on the 2013 Draft and Final EIR. Written comments on this RDEIR were accepted during the 45-day public review period, which began on October 17, 2014 and closed on December 5, 2014.

A FEIR is an informational document prepared by a lead agency that must be considered by decision-makers before approving or denying a proposed project. CEQA Guidelines Section 15132 specify the following:

> "The final EIR shall consist of:
>
> (a) The DEIR or a revision of the draft.
> (b) Comments and recommendations received on the DEIR either verbatim or in summary.
> (c) A list of persons, organizations, and public agencies commenting on the DEIR.
> (d) The responses of the lead agency to significant environmental points raised in the review and consultation process.
> (e) Any other information added by the lead agency."

This RFEIR has been prepared pursuant to these CEQA Guidelines. This document incorporates comments from public agencies and the general public, and contains appropriate responses by the County, the lead agency, to those comments. A decision on the certification of the RFEIR will be made by the County Board of Supervisors at a public hearing, on February 3, 2015.
Public notification will be provided in accordance with State law upon confirmation of the hearing date.

1.2 Public Review and Response to Comments

In response to the publication of the RDEIR for public review, a number of comments have been received from public agencies and members of the public. CEQA and its Guidelines set forth the obligations of the agencies involved in the preparation of a DEIR, and provide guidance for agencies and the public in the review of a DEIR. The CEQA Guidelines focus the review (Guidelines Section 15204) and provide a framework for consideration of public and agency comments.

The CEQA Guidelines describe the duties of the lead agency to prepare adequate responses to comments (Guidelines Section 15088). The lead agency is to respond to “significant

environmental points" in a level of detail commensurate to that of the comment. However, it is not necessary for the lead agency to respond to personal opinions or speculation about the project, to provide all of the information requested by reviewers or to respond to comments presented without necessary factual support.

1.3 List of Commenters

The County received 29 comment letters on the RDEIR for the proposed Project. In addition, oral comments were made by individuals who attended the publicly-noticed November 17, 2014 public hearing conducted by the County Zoning Administrator. Comments made at the meeting were recorded and a written transcript prepared.

The following agencies, organizations and individuals (Table 1-1) submitted written and/or oral comments on the RDEIR:

TABLE 1-1
AGENCIES, ORGANIZATIONS AND INDIVIDUALS THAT COMMENTED ON THE PHILLIPS 66 PROPANE RECOVERY PROJECT RECIRCULATED DRAFT EIR

Comment Letter	Commenter	Date Received
Agencies		
A1	East Bay Municipal Utility District	November 24, 2014
A2	San Francisco Bay Conservation and Development Commission	December 2, 2014
A3	Bay Area Air Quality Management District	December 2, 2014
A4	Rodeo-Hercules Fire Protection District	December 5, 2014
A5	City of San Pablo	December 2, 2014
A6	City of Berkeley	December 5, 2014
Organizations		
B1	Adams, Broadwell, Joseph & Cardozo	December 1, 2014
B2	Communities for a Better Environment	December 3, 2014
B3	Shute, Mihaly & Weinberger LLP	December 3, 2014
B4	Adams, Broadwell, Joseph & Cardozo	December 3, 2014
B5	Benicians for a Healthy and Safe Community	December 3, 2014
B6	Shute, Mihaly & Weinberger LLP	December 5, 2014
B7	Sierra Club	December 5, 2014
B8	Crockett-Rodeo United to Defend the Environment	December 5, 2014
B9	Communities for a Better Environment	December 5, 2014
B10	Communities for a Better Environment	December 10, 2014
B11	Adams, Broadwell, Joseph & Cardoza	December 5, 2014

TABLE 1-1 (Continued)
AGENCIES, ORGANIZATIONS AND INDIVIDUALS THAT COMMENTED ON THE PHILLIPS 66 PROPANE RECOVERY PROJECT RECIRCULATED DRAFT EIR

Comment Letter	Commenter	Date Received
Individuals		
C1	Chris Lish	December 1, 2014
C2	James Neu	December 2, 2014
C3	Madelyn Morton	December 1, 2014
C4	Catherine DeMartini	December 2, 2014
C5	Tom	December 2, 2014
C6	Tom	December 1, 2014
C7	Fred Clerici	December 2, 2014
C8	Teagan Clive	December 5, 2014
C9	Elizabeth Genai	December 5, 2014
C10	Carla Garbis	December 5, 2014
C11	Peter Turner	December 5, 2014
C12	Charles Davidson	December 5, 2014
Public Hearing		
Lin	Roger Lin	November 17, 2014
Neil	Jim Neil	November 17, 2014
Pinkham	Bill Pinkham	November 17, 2014
Griffith	Tom Griffith	November 17, 2014
Rieser	Nancy Rieser	November 17, 2014
Wechsler	Shoshana Wechsler	November 17, 2014
Garrett	Jonathan Garrett	November 17, 2014
Morton	Madelyn Morton	November 17, 2014
Callaghan	Janet Callaghan	November 17, 2014
Monroe	Elsa Monroe	November 17, 2014
Lai	Ratha Lai	November 17, 2014
Buckner	Ethan Buckner	November 17, 2014
Soto	Andres Soto	November 17, 2014
Martinez	Eduardo Martinez	November 17, 2014
Williams	Raemona Williams	November 17, 2014
Davidson	Charles Davidson	November 17, 2014
Callaghan	Janet Callaghan (Letter from Rodeo Citizens Association)	November 17, 2014
Gray	Carmen Gray	November 17, 2014
Tannenbaum	Janet Pygeorge read a letter from Ed Tannenbaum	November 17, 2014

1.4 Method of Organization

This RFEIR for the proposed Project contains information in response to concerns raised during the public comment period, including the November 17, 2014 public hearing. In addition to the RDEIR, which has been published and released for public review, the whole of the RFEIR also includes the contents of this document, as follows:

Chapter 1 contains brief descriptions of the CEQA and the Public Review processes and also lists those agencies, organizations and individuals that commented on the RDEIR. This chapter also describes the organization of this RFEIR.

Chapter 2 contains six Master Responses prepared to address specific topical issues based on comments from a number of agencies, organizations, and individuals on the RDEIR. The following Master Responses were prepared to address these issues:

- Extension of the RDEIR Comment Period;
- Piecemealing of the Proposed Project;
- Non-CEQA Issues;
- Relationship of Crude Feedstocks to the Proposed Project;
- Accidents and Hazards; and
- Cumulative Impacts.

Chapter 3 contains all comment letters received during the comment period, as well as the County response to each. Each letter is marked in its margin with its identifying code from the table above and each comment on the letter is uniquely labeled with that code and a sequence number. The County responses to each comment from each letter are presented in the pages that immediately follow that comment letter.

Chapter 4 contains text changes to the RDEIR that reflect necessary minor additions, corrections, and clarifications resulting from the analyses that the County conducted in order to prepare these responses to comments. These changes are incorporated as part of the RFEIR.

Appendices include the 2013 DEIR and 2013 FEIR, the RDEIR, County responses to requests for extension of the comment period, attachments to Comment Letters B5, B6, B7, B9, and B11, which are voluminous and therefore are provided in a separate appendix, and the Mitigation Monitoring and Reporting Program.

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CHAPTER 2
Master Responses

A number of individuals, organizations, and agencies submitted comments on the Recirculated Draft Environmental Impact Report (RDEIR). Many of these comments had common themes or topics. In response to these comments with common themes, six master responses are presented here.

2.1 Master Response – Extension of Public Comment Period

Three commenters asserted that supporting data for the RDEIR had not been either available or provided to the commenter in accordance with California Environmental Quality Act (CEQA) Guidelines. Commenters also stated that the public participation process was inadequate under CEQA because the public was not given enough time to review and respond to the RDEIR. Others requested that the comment period for the Project be extended to allow for more time for public review.

2.1.1 RDEIR Public Review, Supporting Data, and Public Comment Period

The public review period that the County provided for the RDEIR was compliant with State law. "If the draft environmental impact report is submitted to the State Clearinghouse for review, the review period shall be at least 45 days…" (Public Resources Code Section 21091(a)). "The public review period for a draft EIR should not be…longer than 60 days except in unusual circumstances. When a draft EIR is submitted to the State Clearinghouse…the public review period shall not be less than 45 days…" (CEQA Guidelines Section 15105(a)). Within the Notice of Completion for the Project, the County initially scheduled a 45-day review period, which satisfied its statutory obligation under CEQA. Several commenters requested a 45-60 day extension of the public review period. As stated above, a review period longer than 60 days should be granted due only to unusual circumstances. The County provided written responses to all three commenters as shown in Appendix C, in which, the County indicated that it was not able to find that unusual circumstances existed as all supporting data had been provided to requesting parties as is detailed in Appendix C, and therefore requests to extended the review period to 60 days were denied. Thus, the County fulfilled its obligation under CEQA to provide an adequate public review period.

Under CEQA, formal hearings are not required at any stage of the environmental review process. Public comments may be restricted to written communications. (CEQA Guidelines Section 15202(a)). "Public hearings may be conducted on environmental documents, either in separate proceedings or in conjunction with other proceedings of the public agency. Public hearings are encouraged, but they are not required as an element of the CEQA process" (CEQA Guidelines Section 15087).

It is the County's practice to conduct a public hearing to accept comments on the adequacy of a DEIR during the public review period for the report. The County does this in order to provide an additional opportunity for the public to participate in the CEQA process. A special hearing of the Zoning Administrator was held at 3:30 p.m. on Monday, November 17, 2014, providing an opportunity to accept oral testimony on the adequacy of the RDEIR. This hearing was properly noticed through public mailing and posting in the newspaper. It is clear that the County exceeded its statutory obligation to provide opportunity for public comment, as there is no CEQA requirement to hold a public hearing. The November 17, 2014 hearing provided an opportunity to submit oral comments on the adequacy of the RDEIR, but did not limit the opportunity of the public to comment further in writing. The public maintained its right to provide written comments until the close of the public comment period on December 5, 2014.

2.2 Piecemealing of the Proposed Project

Under CEQA, a "project" subject to environmental review must be the "whole of an action." (CEQA Guidelines Section 15378(a).) This CEQA rule of analysis serves to assure that a large project is not chopped up into many smaller ones, resulting in piecemealing or segmenting of environmental review and masking the full scope of project impacts. Put another way, "a narrow view of a project could result in…overlooking its cumulative impact by separately focusing on isolated parts of the whole." (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App.4th 713, 714.) Courts have determined that an EIR must include analysis of the environmental effects of a future action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects. This standard involves determining whether the EIR has left out of the environmental analysis a "crucial element" or "integral part" of the project, without which the project cannot go forward. (*National Parks & Conservation Ass'n v. County of Riverside* (1996) 42 Cal.App.4th 1505, 1519.) Where an action is not a crucial element of the project, but merely contributes to the same pool of cumulative impacts, the action may be included in the EIR's analysis of cumulative impacts instead.

Given the above definition of CEQA piecemealing, a number of commenters on the RDEIR have asserted that several projects approved or under environmental review at the Phillips 66 Santa Maria Refinery (SMF) are integral parts of the proposed Project at the Phillips 66 Rodeo Refinery and assert that the RDEIR has not considered this and is therefore segmenting or piecemealing the environmental analysis contrary to CEQA rules. This assertion by the commenters is theorized in numerous ways including opinions by the commenters that: 1) Phillips 66 is changing the crude oil feedstocks at several facilities including the Rodeo Refinery, 2) existence

of a 200-mile pipeline between the SMF and the Rodeo Refinery essentially makes the two refineries connected components of one single facility, and, 3) Phillips 66 is increasing the size of the once through cooling system to accommodate increased throughput to produce more refinery fuel gas (RFG). Many of these same assertions had been previously made by many of the same commenters on the 2013 DEIR and were responded to as part of the 2013 Final Environmental Impact Report (FEIR) Master Response 2.2 and in the 2013 FEIR responses B4-1 through B4-35, B4-39 and B4-40. In light of comments received on the 2013 DEIR and responded to in the 2013 FEIR, the RDEIR has attempted to further clarify the function and operation of the SMF and the extent of any interdependency between ongoing projects at this facility and the proposed Project. RDEIR Section 3.3.2.19, *Phillips 66 Santa Maria Refinery*, discusses the SMF in detail and concludes:

> "Current information from publically available information indicates only that the crude oil carried by rail would be from domestic sources available in the marketplace. In review of this information on the Propane Recovery Project, there is no request for or discussion of this Project requiring any physical change to the SMF refinery processes or equipment to accept any different crude feedstocks. Consequently, the SMF would continue to operate within its existing approved crude blends."

The RDEIR goes on further in Section 3.4.2.1, *Refinery Fuel Gas Propane/Butane Recovery Unit and Associated Propane Treatment*, to discuss and demonstrate via Figures 3-7 and 3-8 that the design basis for the proposed Project was based on existing Rodeo Refinery process data from 2011, shown on Figure 3-7, which establishes that the Refinery had and continues to have (see Figure 3-8) sufficient *existing* capacity within its RFG supply to provide the feedstock to support the specifics of the Propane Recovery Project's goals for extraction of propane and additional butane *without any changes to the Rodeo Refinery, changes to the SMF, or changes in crude feedstocks*.

The RDEIR also states in Section 3.4.2.1, *Refinery Fuel Gas Propane/Butane Recovery Unit and Associated Propane Treatment*, that the amount of liquefied petroleum gas (LPG [propane or butane]) removal from the RFG is limited by an enforceable condition of the Bay Area Air Quality Management District (BAAQMD) permit:

> "Regardless of the amount of RFG produced in the future, the design of the removal equipment and BAAQMD permit limits would limit the amount of LPG that can be recovered. If more than 14,500 BPD LPG is produced, the excess would remain in the RFG and be burned in heaters/boilers as it is today. If less that 14,500 BPD is produced, it could all be captured and removed from the RFG."

Based on this, the proposed Project has 'independent utility' under CEQA as it is uses an existing RFG stream independent of any changes occurring within the Rodeo Refinery and with all of the existing feedstocks. Furthermore, implementation of the proposed Project would have no effect on the quality, nor the quantity, of materials processed by or received from the SMF, and the type of crude oil processed by the SMF would have no effect on the Project (see Master Response 2.4 for additional information on crude feedstocks). Consequently, the RDEIR has properly reviewed

the proposed Project and has not piecemealed this review by not including current projects at the SMF.

2.3 Master Response – Non-CEQA Issues

2.3.1 Federal Preemption of Railroad Regulation

Federal Preemption of the railroad regulations was present and discussed in the RDEIR in Section 3.3.2.17, Tank Cars:

> "Under the Commerce Clause of the United States Constitution, no state or local government may impose laws or regulations that unduly burden interstate commerce. Because railroads are a key component of the system of interstate commerce, most aspects of railroad operations are governed exclusively by federal law.
>
> With respect to land use requirements, the Interstate Commerce Commission Termination Act (ICCTA) affords railroads flexibility in making necessary improvements and modifications to rail infrastructure, subject to requirements of the federal Surface Transportation Board. Congress afforded railroads this flexibility because of the integrated national nature of the American rail system and the need for uniform and consistent standards across the country. As a general matter, ICCTA broadly preempts state and local regulation of railroads. This preemption extends to "the construction, acquisition, operation, abandonment, or discontinuance of spur, industrial, team, switching, or side tracks, or facilities . . . . [T]he remedies provided under this part with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law.
>
> The courts have repeatedly held that the ICCTA preempts state and local regulation, i.e., "those state laws that may reasonably be said to have the effect of 'managing' or 'governing' rail transportation." *Norfolk Southern Railway Company v. City of Alexandria*, 608 F.3d 150, 157-158 (4th Cir. 2010) (city ordinance and permit regulating the transportation of bulk materials, including ethanol, was preempted by the ICCTA). The ICCTA also preempts state and local regulation of the construction and operation of rail lines. *Emerson v. Kansas City S. Ry. Co.*, 503 F.3d 1126 (10th Cir. 2007); *Friberg v. Kansas City S. Ry. Co.*, 267 F.3d 439 (5th Cir. 2001); *Green Mountain R.R. Corp. v. Vermont*, 404 F.3d 638 (2d Cir. 2005) (preconstruction permitting of a transload facility); *City of Auburn v. United States*, 154 F.3d 1025 (9th Cir. 1998) (environmental and land use permitting). As one court noted, "[i]t is difficult to imagine a broader statement of Congress' intent to preempt state regulatory authority over railroad operations." *CSX Transp. v. Georgia Public Service Comm'n*, 944 F. Supp. 1573, 1581 (N.D. Ga. 1996).
>
> Because of this, railroads have taken the position that, among other types of regulation, any limitation on the volume of product shipped or the frequency, route, or configuration of such shipments is clearly preempted under federal law.

While the County has chosen to consider and explore some of potential impacts of the proposed Project (with particular interest to air quality and hazards based on comments from the BAAQMD and local public concerns) along the railroad route, it should noted that because of Federal Preemption, the County has no authority to impose any mitigation on the railroad once a

train has left the Refinery. A recent California Appellate Court case decision, published[1] after publication of the RDEIR has affirmed this preemption and while this case is still under litigation it should be noted for affirming this principle.

2.4 Master Response – Relationship of Crude Feedstocks to the Proposed Project

Many commenters on the RDEIR have reiterated concerns, theories, and assertions expressed by commenters on the 2013 DEIR and the 2013 FEIR that the Refinery, via the proposed Project, is seeking to change or would be required to change its current crude feedstocks, and that the proposed Project is a deliberate action intended to support the implementation of this change. These concerns include such issues as the source of the crude, e.g., Canadian Tar Sands, or new crudes produced in North America such as the Bakken crudes from North Dakota and other similar new feedstocks, the potential effects from extracting these crudes, and assertions about what potential effects using these crudes as feedstocks for the Refinery could have.

Over the past several years there has been extensive concern over projects which propose the extraction of crude oil from tar sands in Canada and other controversial sources, or which would bring new sources of crudes to refineries in the United States, including California, via new pipelines or by rail. The County acknowledges these public concerns and has conducted the environmental analysis presented in the RDEIR with such concerns in mind as is required by CEQA. However, it is important to note that since first presented to the County by Phillips 66 in 2012, the description of the proposed Project as presented in the 2013 DEIR and 2013 FEIR, and in the RDEIR, has been consistent in that it: 1) is not a project dependent on a source of crude oil feedstock, or a change in crude oil feedstocks, 2) does not involve any request to approve the transport of crude oil by rail into the Rodeo Refinery, 3) makes no request to change the throughput of the Refinery, and most crucially, 4) utilizes an existing RFG stream to extract propane and additional butane without any modifications to other parts of the Refinery. The 2013 FEIR, Master Response 2.2 provides additional details supporting these facts.

As discussed in RDEIR Section 3.4.2.1, *Refinery Fuel Gas Propane/Butane Recovery Unit and Associated Propane Treatment*, and shown in Figure 3-7, the proposed Project's design basis was derived from data taken at the Refinery in August, 2011. In the same section, the RDEIR also provides an update to substantiate this 2011 design basis with the most recent full year (2013) of RFG data from the Refinery in Figure 3-8. This figure shows that for 2013 an average of 13,970 barrels per day (BPD) of propane and butane were available and that monthly this quantity of propane and butane varies. Note that between the 2011 design basis and the 2013 data, no change to crude feedstocks, such as those of concern to commenters, had been made. These data provide the substantial evidence to support the independent utility of this Project and further support the County's opinion that the EIR has not inappropriately piecemealed or segmented this Project (see Master Response 2.2 for more details). These data also show that contrary to assertions of commenters, who assert that the Refinery has to change its feedstocks to provide sufficient RFG

[1] *Friends of Eel River v. North Coast Railroad Authority et al.* (September 29, 2014; 1st DCA Case No. A139222).

to support this proposed Project, quite the reverse is true in that the existing Refinery baseline condition had and has sufficient propane and butane feedstocks to support the extraction rates of propane and butane sought by Phillips 66 for the proposed Project.

2.4.1 Amount of Propane and Butane to be Extracted

Based on comments received on the amount of propane and additional butane to be extracted from the existing RFG feed presented in the 2013 DEIR, the 2013 FEIR attempted to clarify these amounts specifically in 2013 FEIR Response B4-39. When the County elected to prepare the RDEIR, the characterization of the amount of propane and butane proposed for recovery was found to be unclear and a source of confusion. Specifically, the 2013 DEIR stated that the combination of existing and proposed recovery of LPG taken as propane and butane could be misunderstood as a total recovery of 13,500 BPD of LPG (see 2013 DEIR Table 3-2). While these were correct values considered in the discussions within the 2013 DEIR, they did not fully reflect the requested recovery rate being sought by Phillips 66 in their air permit application #25199 with the BAAQMD. In fact as discussed in 2013 communications between the BAAQMD and Phillips 66, the BAAQMD suggested a daily maximum recovery rate of 14,500 BPD of LPG and an associated annual recovery rate of 5,292,500 barrels per year[2] of LPG (BAAQMD, 2013). In a response letter, Phillips 66 responded that this limit would be acceptable (Phillips 66, 2013) and although the BAAQMD air permit is not finalized (nor can be until completion of the County's CEQA process), this daily recovery limit of 14,500 BPD of LPG (propane and butane) was provided in RDEIR Table 3-2 and discussed in Section 3.4.2.1, *Refinery Fuel Gas Propane/Butane Recovery Unit and Associated Propane Treatment,* with the intention of clarifying and aligning the description of the Project's LPG recovery rate to actual permit conditions. Note, as is discussed in Section 3.4.2.1, *Refinery Fuel Gas Propane/Butane Recovery Unit and Associated Propane Treatment*, that this recovery rate also was derived from the 2011 data presented in Figure 3-7. Finally, as concluded in the same section:

> "Regardless of the amount of RFG produced in the future, the design of the removal equipment and BAAQMD permit limits would limit the amount of LPG that can be recovered. If more than 14,500 BPD LPG is produced, the excess would remain in the RFG and be burned in heaters/boilers as it is today. If less that 14,500 BPD is produced, it could all be captured and removed from the RFG."

In summary, the RDEIR provides the best explanation of the basis for the requested Project LPG recovery rates, clarifies information provided in the 2013 DEIR, and presents the basis by which the Project would be operated under its BAAQMD air permit and County Land Use permit.

2.4.2 Relationship of Crude Feedstocks to the Proposed Project

The County has reviewed the assertions and extensive analyses provided by a number of commenters on the effects of different crude feedstocks and has reviewed their assertions regarding connections of these crude feedstocks to future changes at the Phillips 66 refinery in

[2] Determined by multiplying 14,500 BPD by 365days/year = 5,292,500 barrels per year.

Santa Maria (the Santa Maria Facility [SMF]), which as discussed in RDEIR Section 3.3.2.19, *Phillips 66 Santa Maria Refinery*, is connected to the Refinery via a 200-mile pipeline. This existing pipeline is used to ship semi-refined liquid products to the Rodeo Refinery for upgrading into finished petroleum products. Note that this pipeline was in existence during the August 2011 period when Phillips 66 established its design basis for LPG extraction (see Figure 3-7) and also during 2013 when data shown on Figure 3-8 were recorded. In the County's view, Phillips 66's LPG data provide a firm basis to conclude that 1) there is adequate LPG supply at the Rodeo Refinery to support the Project, 2) this design basis was derived with existing crude feedstocks utilized at the Rodeo Refinery, including semi-refined products shipped from SMF, and 3) crude feedstocks currently being used by the Refinery are adequate to support the proposed Project. Furthermore, should some change occur in these feedstocks that would increase the amount of LPG available for extraction by the Refinery, the BAAQMD air permit would limit this extraction to the amount presented in the RDEIR (i.e. 14,500 BPD), and should less LPG be available for extraction, Phillips could only extract what would be available. Therefore, assertions by the commenters of the Project's connection to potentially changing crude feedstocks are not supported by the facts that the proposed Project was designed and based on existing Refinery conditions.

2.5 Master Response – Accidents and Hazards

Many commenters expressed concerns about the risk of accidents associated with the storage and/or transport of LPG, which in the context of the proposed Project would be the propane and butane proposed to be extracted from the Phillips 66 Rodeo Refinery and shipped via tank car to the marketplace. In order to aid understanding, an overview of the assessment methodology for the accidental release scenarios as it was presented in the 2013 DEIR and the RDEIR is provided below.

- **2013 DEIR approach to hazards:** in the 2013 DEIR, the likelihood (probability) of an accidental release was used with the severity of the offsite consequence to determine if the event would be significant within the meaning of CEQA. Using this approach, an accident event with very-low or low consequence would be considered a less than significant impact, regardless of its frequency of occurrence, while an event that has a moderate-to-high consequence and a moderate-to-high probability of occurrence would be considered a significant impact. The risk evaluation matrix presented in the 2013 DEIR was used to categorize these events. See 2013 DEIR Section 4.9, *Hazards and Hazardous Materials*.

- **RDEIR approach to hazards**: RDEIR Section 4.6.5, *Consequence Analysis Methodology*, presented both the methodology used to evaluate safety issues and the results of the evaluation. In addition to the approach presented in the 2013 DEIR, which focused on the likelihood and severity of an event, a firm of experts in the hazards field, Quest Consultants Inc., was engaged to undertake more specific study with the goal being to compute the potential increase or decrease in hazards to the public due to the proposed changes to the facility. A set of mathematical models referenced by the United States Environmental Protection Agency (US EPA) (RMP-Comp) were used to make this determination. The results from this analysis are presented in Figures 4.6-2 and 4.6-3. A second set of calculations were made to determine the risk associated with the Project's rail traffic. This set of models included a BLEVE fireball model (Martinsen and Marx, 1999, as cited in

Roberts, 2000). This additional approach was undertaken in response to comments and concerns voiced on the 2013 DEIR/FEIR and these results are shown in Figures 4.6-4 and 4.6-5 that clearly display these project-related changes in risk along the rail route.

Using these two different hazard analysis methodologies, both EIR's (the 2013 DEIR/FEIR and the RDEIR) provide confirmation that there would not be any significant impacts from the proposed Project associated with hazard risk. One result which warrants further explanation shown in Figure 4.6-3 and listed in Table 4.6-3, is that the distance to the hazard zone for hydrogen sulfide decreases dramatically with the Project as compared to existing conditions. This was due to the proposed removal of the old Unit 240 which would be replaced with the Project's new Propane Recovery unit. Some commenters found this decrease in risk to be counter-intuitive as apparently they perceived that extent of potential hazard zones – in the form of the proposed Project – was being increased. In fact, removal of the old unit lowers the existing impact as shown in Figure 4.6-3.

For the analysis of overpressures resulting from an explosion of operating facilities, all existing flammable fluid sources would have the same overpressure hazard as existing conditions. While the addition of propane tank cars and propane storage tanks does create new overpressure hazard zones as shown by Table 4.6-4, these new hazard zones are within the existing hazard zones of the project-related operating units, or in the case of the propane tank cars are essentially the same as existing butane tank cars currently used by Phillips 66 at the Refinery.

2.5.1 Hazards Analysis Issues of Concern to Commenters on the RDEIR

A number of commenters raised six common issues related the hazards analysis presented in RDEIR Section 4.6, *Hazards and Hazardous Materials.* These are generally related to technical points provided in Comment B11-25 (a technical appendix to Letter B11). The following responses address each of these six points and in doing so; these address the core concerns expressed by the commenters about the hazards analysis.

1. The RDEIR used the incorrect number of tank cars for baseline risk from tank cars.

   This concern is expressed by several commenters but is based primarily on Comments B11-12 through B11-14, where the commenters contend that the RDEIR estimation of locomotive emissions is incorrect. Responses B11-12 through B11-14 respond to these air quality concerns. However, the commenters still contend that the average number of tank cars over a 2-3 year period should be the baseline number of tank cars considered. The commenters misinterpret the hazard analysis at this point as the potential risk from the baseline condition is at its *maximum* capacity not its average capacity and similarly the proposed Project's risk is also at its maximum capacity, i.e., 24 tank cars per day.

2. As many other substances are moved by rail and the RDEIR only considered risk from LPG cars the RDEIR should have considered all tank cars in this analysis.

   The proposed Project includes the transportation of LPG (butane and propane) by tank car. The frequency analysis for the transport of butane and propane by rail in the United States is presented on page 4.6-27. It would not be appropriate or accurate to include frequency data covering derailments, releases, etc. for other types of railcars or other types of

materials into the analysis. This is because the tank car designs are different for many types of commodities carried by rail (see Section 3.3.2.17, on page 3-19 for a discussion of the types of tanks cars) and for other materials (ammonia, ethylene oxide, and chlorine), which have significantly different hazard impacts than propane or butane. Thus, the probability analysis as presented in the RDEIR is correct as it specifically addresses the Project's rail requirements.

3. The accident data set used by the RDEIR is too old and does not consider accidents caused by recent crude by rail accidents.

   Some commenters asserted that rail traffic on the rail tracks that are currently used by the Refinery will increase in the future as a result of increased movement of crude oil by rail other entities. Commenters then stated that this would result in an increased risk of a propane or butane release from trains carrying LPG from the proposed Project. It is important to note that the evaluation of the risk associated with the rail transport of butane and propane is independent of the other commodities carried on the subject rail lines. The evaluation of the frequency of a butane or propane release is based on the historic accident data for propane and butane rail cars (referred to as LPG rail cars). This frequency is developed as 1.04E-8 LPG releases per mile traveled. As described on RDEIR page 4.6-27 this is a historical frequency. The increase in volume of other train traffic will not affect the frequency of a release of the Project's LPG rail cars. If the number of butane and propane rail car shipments associated with the project were to increase or decrease, the release frequency (1.04E-8 LPG releases per mile traveled) would remain the same, only the number of miles traveled (per day, per week, per year, etc.) would change. Standard accepted methodology for this type of analysis deems it incorrect to mix or add the release frequencies for other types of rail cars or DOT-112 rail cars carrying other commodities to the historical butane and propane release frequency. Any attempt to do so would result in an inaccurate analysis of the butane and propane rail car release frequency.

   It is also important to note that while the proposed Project would add tank cars to its existing trains it would not add any new train trips and therefore would not make any contribution to increased traffic on existing rail tracks. Therefore there is no evidence, and none provided by commenters, that the Project would make any contribution to cumulative impacts associated with rail traffic hazards.

4. The RDEIR risk analysis appears to have only considered a very short segment of track and assert that the RDEIR did not consider hazard impacts at other locations along the travel route of trains carrying LPG from the proposed Project.

   The frequency of a propane or butane release from a rail car, 1.04E-8 releases per mile, was developed from historical data as presented on RDEIR page 4.6-27. This data was collected by the Pipeline and Hazardous Materials Safety Administration (PHMSA) over a 20 year period. Over the 20 year period, the PHMSA data base identified 14 LPG releases. Thus, the release frequency (releases per mile) developed on page 4.6-27 is representative of the tank car release frequency of propane or butane in the United States. Furthermore, values such as LPG tank car releases per mile, etc. are not based on any particular stretch of track, but on a compilation of all tracks. So the frequency presented here covers not just a specific section of track for which there may or may not have been any historical accident occurrence but the more general case.

5. The RDEIR does not establish any hazards significance thresholds and tends to trivialize risk.

   A CEQA evaluation is based on the premise of attempting to evaluate the question, "does the new project pose any new hazard to the environment/the public that was not in existence before?" In this respect, the RDEIR hazards analysis evaluates the existing hazard impact to the extent possible, and then compares the proposed Project against that existing hazard impact for the refinery and assesses the Refinery's current rail risk due to transport of LPG against the Project's proposed rail risk associated with LPG.

   Table 4.6-7 was not intended trivialize risk but was provided to aid the readers understanding of the evaluation of the "risks" of the proposed Project in the context and in juxtaposition to other risks commonly present in public life.

   The commenter's reference to the Santa Barbara risk criteria is not applicable as CEQA does not cite any acceptable significance criteria and the Santa Barbara Guidelines do not specifically address rail risk. The 2013 DEIR for the proposed Project made use of the Santa Barbara approach (see 2013 DEIR Section 4.9, *Hazards and Hazardous Materials*) but modified this approach to that used within the RDEIR based on comments on the 2013 DEIR. The selection of one particular methodology or guidance over another, or modification of an existing approach, is common among responsible agencies undertaking CEQA analyses. In any case, as stated earlier, the proposed Project does not add any train traffic to existing rail lines and would not therefore increase the hazard profile along the rail lines for any rail cars or commodities not related to the proposed Project.

6. The RDEIR's accident calculations are misleading.

   Commenters assert that the RDEIR does not present support for its probability analysis. The two release frequencies presented in the RDEIR, 0.04 releases per year, and 0.06 releases per year, simply address the frequency of a potential release of propane or butane during a year along the 671 mile probable rail route within California. The analysis as presented in the RDEIR assumes that members of the public are located along the entire 671 mile rail route. This is a conservative approach which presents a representative risk profile for the rail route through a populated area. For an unpopulated area along the route, the risk would be greatly reduced, and essentially down to zero assuming the area is unpopulated on a long-term basis (i.e. a year or more).

2.5.2 Blast Zone

Several commenters expressed concern that the analysis of potential hazards, including those that could result in a boiling liquid expanding vapor explosion (BLEVE), was improperly limited to within the limits of the Refinery. This concern is unfounded; the analysis evaluated the area of potential impacts including locations well beyond the boundary of the Refinery. As described in RDEIR Section 4.6.5, *Consequence Analysis Methodology,* to describe the worst case hazards at the Refinery, a consequence modeling program developed by the US EPA (RMP-Comp) was used to determine the maximum potential impacts of the current hazardous material processing and storage in the Refinery, as well as those associated with the proposed process unit and storage equipment. Results of this analysis are summarized in RDEIR Section 4.6.5.7, *Summary of Maximum Hazard Zones.* Figure 4.6.1 identifies the Worst Case Hazard Zones for the existing

Refinery layout. The hazards and risks associated with rail car BLEVEs of propane and butane were included in the rail risk assessments in both the 2013 DEIR and RDEIR.

Some commenters questioned the methodology used in the BLEVE analysis and suggested a specific methodology, as presented in a conference paper (Roberts, 2000). It should be noted that the same exact methodology was used in the RDEIR analysis (Martinsen and Marx, 1999). The reference authors of the methodology are experts within Quest Consultants Inc., the hazards firm who prepared the BLEVE analysis for the RDEIR.

It should be noted that, as stated in RDEIR Section 4.6.2.1, *Regional and Local Setting,* BLEVES are extremely rare. As an industrial facility that handles hazardous chemicals, the Refinery must be constructed and operated in accordance with certain codes and standards, which are enforced via administrative mechanisms such as internal audits, design reviews, and building inspections. Operations at the Refinery are subject to extensive regulatory and safety controls (RDEIR Section 4.6.2.2, *Regulatory Setting*), to limit the probability of such an event, and a comprehensive emergency response system is in place to ensure public safety.

2.6 Master Response – Cumulative Impacts and Analysis

Many commenters on the RDEIR have asserted that a number of aspects of the cumulative impact analysis conducted are deficient or incomplete. This Master Response responds to these comments and is also intended to clarify how the RDEIR considered and analyzed the proposed Projects' potential cumulative impacts.

> *15355. CUMULATIVE IMPACTS*
>
> *"Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*
>
> *(a) The individual effects may be changes resulting from a single project or a number of separate projects.*
>
> *(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

Furthermore, Section 5.4, *Cumulative Impacts,* of the RDEIR defined how and the basis for the cumulative impact analysis considered in the RDEIR:

> "This EIR uses a combination of a plan-based approach and a list-based approach to determine whether any significant cumulative impact would occur. From a plan-based perspective, the technical analyst for each resource area considered the Project in light of its consistency or conflict with the assumptions and projections of the Contra Costa County General Plan and other applicable planning documents identified in Section 5.4.1, *General*

> *and Regional Plans Considered in the Cumulative Analysis.* From a list-based perspective, Project impacts were analyzed in combination with the impacts of the other Refinery projects…"

This approach is commonly used in CEQA documents and is essentially the same as that used in the 2013 DEIR.

2.6.1 Assertions by Commenters

Commenters on the RDEIR have made a number of common assertions about the cumulative impact analysis. In many cases these assertions are linked to or based on other assumptions and issues raised by commenters, which are addressed in Master Responses 2.2 and 2.4. First, as is discussed in those responses above, the County has explained that the proposed Project has not been piecemealed or inappropriately segmented for the purposes of CEQA analysis. It is not part of or dependent on any other project within the Refinery nor is it linked in any way to changes currently under review at the Phillips 66 SMF – see Master Response 2.2 for the reasons supporting this conclusion. Second, as is discussed in detail, contrary to many commenters' views, the proposed Project is neither related to nor dependent on changes to crude oil feedstocks as is discussed in Master Response 2.4 (this view was also stated and discussed in Sections 3.2.2, *Project Components* and 3.3.2.17, *Tank Cars* of the RDEIR). In order to respond to commenter's assertions about the cumulative impact analysis, the County's reasoning about the proposed Project discussed in Master Responses 2.2 and 2.4 must be considered.

Assertions made by commenters are summarized as follows:

> **Assertion 1** – The Refinery and the Phillips SMF are connected by a 200-mile pipeline and are therefore essentially one Refinery. The County should have included and analyzed projects at the SMF as part of the cumulative impacts analysis.
>
> **Assertion 2** – The cumulative analysis in the RDEIR omitted a number of projects from its cumulative analysis.
>
> **Assertion 3** – The cumulative impact for the air quality and greenhouse gas emissions analyses were not fully analyzed.

The assertion that the Refinery and the Phillips SMF are not two separate refineries but are connected parts of one refinery is understandable because Phillips 66 itself refers to the combination of the Phillips 66 facility located in Rodeo, California (the Refinery and the location of the proposed Project) and the Phillips 66 facility located in Santa Maria, California (SMF) as 'the San Francisco Refinery.' Furthermore, as the SMF has recently been approved to increase its throughput, and has a project intended to bring crude oil feedstocks via tank car from domestic sources to the SMF (which is currently under CEQA review by San Luis Obispo County), and as is discussed in Section 3.3.2.19, *Phillips 66 Santa Maria Refinery*, is connected to the Refinery by a 200-mile pipeline, many commenters therefore assert that these two facilities are all one refinery. Based on this incorrect assumption, commenters go on to state that because they interpret the proposed Project and the projects at the SMF as related by focusing solely on the

Propane Recovery Project, that the County has segmented its CEQA analysis. As stated above and in more detail in Master Response 2.2, the proposed Project is not dependent on any aspect of the projects underway at the SMF and furthermore, as is discussed in Master Response 2.4, the proposed Project is not linked to nor is reliant on the crude oil feedstocks at either refinery nor in the potential for these feedstocks to change.

It should be noted that some of the commenters who claim that the County has segmented the proposed Project from the proposed crude by rail project at the SMF then also make the contradictory claim that the SMF crude by rail project is a cumulative project and should have been included in the list of cumulative projects considered by the RDEIR analysis. The County has clearly explained why the crude by rail project at the SMF is entirely separate to and independent of the proposed Project, and vice versa. Below, the County has provided an explanation as to how and why the SMF projects were considered within the cumulative analysis of the proposed Project.

In their second assertion that the RDEIR did not consider the SMF projects in the cumulative impact analysis presented in Chapter 5 of the RDEIR, commenters are partly correct in that the two recent SMF projects (refinery throughput increase and crude by rail project) are not listed in Table 5-1 of the RDEIR or discussed in the analysis found in Section 5.4.3, *Areas of Potential Cumulative Impacts*. The SMF throughput increase, while representing a future change to the SMF refinery operation, was not considered cumulative as the proposed Project is based on existing RFG from the Rodeo Refinery alone, is discussed in Master Response 2.4. The crude by rail project at the SMF is discussed in Section 3.3.2.19, *Phillips 66 Santa Maria Refinery*, and as concluded in this section:

> "Current information from publically available information[3] indicates only that the crude oil carried by rail would be from domestic sources available in the marketplace. In review of this information on the Propane Recovery Project, there is no request for or discussion of this Project requiring any physical change to the SMF refinery processes or equipment to accept any different crude feedstocks. Consequently, the SMF would continue to operate within its existing approved crude blends."

In other words, because the proposed Project is based on the existing supply of RFG – at the Rodeo Refinery – and this was determined with the 200-mile pipeline between the two facilities operating (see Master Response 2.4), and the available information about the SMF crude by rail project indicated that it involves no process changes at the SMF, no project-related connection to the SMF projects exists. Furthermore, as the majority of CEQA environmental analysis criteria are spatially defined, in that impacts on these resources are directly related to distance and location (aesthetics, agriculture, biology, cultural, mineral, and forestry resources, geology, hydrology, land use, noise, population and housing, public services, recreation, transportation, utilities and services systems), and generally diminish as distance between projects increases, there is no nexus for evaluation of the proposed Project's cumulative impacts of these resources on projects at the SMF facility located more than 200 miles to the south of the Refinery.

3 http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/railproject.htm

Of the remaining criteria, the air quality analysis in Section 4.1.6, *Cumulative Impacts*, of the RDEIR considered cumulative impacts specifically at the request of the BAAQMD (based on comments in a letter by the BAAQMD on the 2013 DEIR). The analysis used an approach agreed upon by the County and the BAAQMD, and the results were subsequently approved by the BAAQMD in a comment letter on the RDEIR (see Comment Letter A3), in which the BAAQMD states its agreement with the RDEIRs response to issues raised on the 2013 DEIR. Preparation and publication of the RDEIR was in great part driven by the County's need to address the BAAQMD's concerns about cumulative air quality (and greenhouse gas) impacts. Air quality is also a criterion which is local/regional and is evaluated generally on an air district by air district basis depending on the guidelines of these agencies. Greenhouse gas emissions (GHG) on the other hand, are from a CEQA perspective evaluated on a statewide scale, and are essentially cumulative impacts in nature. Section 5.4.3.5, *Greenhouse Gas Emissions,* discusses this and presents cumulative impact results considering the entire state, which ensures that projects at the SMF are already considered in the impact analysis. See Response B9-31 for additional information on the GHG cumulative considerations.

With respect to hazards, potential direct impacts resulting from operations are limited spatially. The cumulative evaluation of impacts associated with hazards is similarly conducted at the local level, as it is not possible for the direct impacts of one project to contribute to cumulative impacts in combination with the direct impacts of another project located more than 200 miles away. The only general similarity between the SMF crude by rail project and the proposed Project is that both involve transportation of potentially hazardous material via rail car. As is discussed in Section 4.6, *Hazards and Hazardous Materials* of the RDEIR and in Master Response 2.5, given that the type of tank car carrying LPG and crude oil are quite different as is discussed in RDEIR Section 3.3.2.17, *Tank Cars,* evaluation of cumulative hazards between these dissimilar tank cars, and quite inclusively, many other commodities carried by rail, cannot be done in any meaningful way. Consequently, the County considers evidence provided by the commenters that the SMF projects need to be considered cumulatively as not substantial and is more related to claims by the commenters that the proposed Project is either part of a larger project or driven by changes to the Refinery's crude slate, for both of these issues see Master Responses 2.2 and 2.4.

In determining which projects to consider cumulatively with the proposed Project, Section 5.4, *Cumulative Impacts,* of the RDEIR reflects the following reasoning which was used to develop a part-plan based and part-list based approach:

> "In reaching a conclusion for each resource area, the following considerations were made: (i) the geographic scope of the cumulative impact area for that resource; (ii) the time frame within which Project-specific impacts could interact with the impacts of other projects; (iii) whether a significant adverse cumulative condition presently exists to which Project impacts could contribute; (iv) the significance of the incremental Project-specific contribution to cumulative conditions; (v) whether the incremental Project-specific impact to an existing adverse cumulative condition is cumulatively considerable; and finally, (vi) whether additional mitigation is available to reduce the Project's cumulatively considerable contribution to an existing cumulative impact. If a resource area has no Project-specific impacts, the Project could not contribute to any existing adverse cumulative impacts."

Most of the projects cited by the commenters as 'omitted' from the RDEIR are located substantial distances from the Refinery and/or are outside of the BAAQMD and most involve transport or refining crude by to some degree; they do not involve the transport of LPG by rail. Comparing potential hazards of transporting LPG and other types of hazardous substances cannot be meaningfully done; this is explained in detail in Master Response 2.5.

For the projects involving transport of crude by rail note that the trips by rail of these projects are generally new trips, whereas the proposed Project utilizes the same train trips by adding tank cars to existing trains and would not increase the total number of train trips. Therefore the proposed Project does not make any contribution to potential cumulative impacts associated with increases in numbers of trains from other projects.

Of those remaining projects cited by the commenters within the BAAQMD air basin, the Westpak and Valero projects were considered in the RDEIR (see Table 5-1) due both to their proximity to the proposed Project and presence within the air basin. Note too, that the Marine Terminal project at the Refinery was also part of the cumulative projects considered in the RDEIR (see Section 5.4.2.1, *Other Phillips 66 Refinery Projects*). Finally, the commenters refer to 'the Kinder Morgan Richmond Terminal' as importing crude oil. This facility, located in Richmond, California, transfers crude oil brought in by rail car where the crude oil is then transferred via truck to the Tesoro refinery located east of Martinez, California. Once again, the nature of this project is different than the proposed Project and although it involves rail transport, consideration of cumulative impacts from the proposed Project (as with other crude by rail projects) is not warranted, as explained in Master Response 2.5.

In response to Assertion 3 – specific issues related to the air quality and greenhouse gas emissions cumulative analyses are provided in Chapter 3 of this RFEIR in context to the comments received and will not be discussed here. See Chapter 3 for detailed responses on the air quality and greenhouse gas emissions cumulative analyses.

2.6.2 Summary

In conclusion, for the reasons stated above, the cumulative impact analysis presented in the RDEIR meets the needs for an adequate CEQA analysis.

References

Bay Area Air Quality Management District (BAAQMD), May 21, 2013. *Letter from Brian K Lusher, BAAQMD, to Brent Estep, Phillips 66, regarding Application 25199, for Facility* #A0016. Page 2, question 6.

Phillips 66, 2013. June 28, 2013 *Letter from Don Bristol, Phillips 66, to Brian Lusher, BAAQMD, Regarding – Response to Incomplete Letter 5/21/13 Application #25199 Phillips 66 Company, Rodeo Facility, Facility* #A0016. Page 5, Response #6/

Martinsen, William E., and Marx, Jeffrey D., 1999, *An Improved Model for the Prediction of Radiant Heat from Fireballs*, Presented At 1999 International Conference and Workshop on Modeling Consequences of Accidental Releases of Hazardous Materials, San Francisco, California, September 28 - October 1, 1999

Roberts, Michael W., 2000, *Analysis of Boiling Liquid Expanding Vapor Explosion (BLEVE) Events at DOE Sites*, EQE International, Inc., 2000, Accessed January 12, 2015, http://www.efcog.org/wg/sa/docs/minutes/archive/2000%20Conference/papers_pdf/roberts.pdf.

CHAPTER 3
Responses to Comments

3.0 Structure of the Comments and Responses

The agencies, organizations, and individuals listed in this Chapter provided written comments on the Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (RDEIR). The written comments are included within this Chapter, in the order listed in Table 1-1.

Each letter is coded with a letter assigned to the commenting agency (group A), organization (group B), individual (group C), or comments both oral and written from the November 17, 2014 Zoning Administrator meeting (name-1), and a number assigned to each discrete comment. For example, the first comment in the first letter, from the East Bay Municipal Utility District is coded as A1-1. Some comments do not address the adequacy of the RDEIR, but make a statement or express an opinion about the proposed Project. Formal responses are not required for such comments. All comments that address the content and adequacy of the RDEIR are responded to in full in the following sections.

Because this is a recirculated Final Environmental Impact Report (RFEIR), some responses in the following sections refer to either the original Draft Environmental Impact Report (DEIR) published on June 10, 2013 or responses to comments on the DEIR found in the Final Environmental Impact Report (FEIR) published on November 6, 2013. Where these documents are noted they are referred to as the 2013 DEIR or 2013 FEIR.

Where a response also includes a text revision to the RDEIR (see Chapter 4), these text revisions are organized by the chapter and page number that appear in the RDEIR. These text revisions use the following conventions, unless otherwise noted:

- Text deleted from the RDEIR is shown in ~~strike-out text~~.
- Text added to the RDEIR is shown in <u>underline text</u>.

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3.1 Response to Agency Comments

EAST BAY
MUNICIPAL UTILITY DISTRICT

November 24, 2014

Lashun Cross, Principal Planner
Contra Costa County Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

Re: Recirculated Draft Environmental Impact Report – Proposed Phillips 66 Company Propane Recovery Project in Contra Costa County

Dear Ms. Cross:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Recirculated Draft Environmental Impact Report for the Proposed Phillips 66 Company Propane Recovery Project located in Contra Costa County. EBMUD commented on the Notice of Preparation of a Draft EIR for the project on August 13, 2012 and on the Draft EIR for the project on June 28, 2013. EBMUD's original comments (see enclosure) still apply. A1-1

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, Water Service Planning at (510) 287-1365.

Sincerely,

William R. Kirkpatrick
Manager of Water Distribution Planning

WRK:TRM:djr
sb14_250.docx

Enclosure

cc: Brent Eastep
Phillips 66 Company
1380 San Pablo Avenue
Rodeo, CA 94572

EAST BAY
MUNICIPAL UTILITY DISTRICT

June 28, 2013

Lashun Cross, Principal Planner
Contra Costa County
Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

Re: Draft Environmental Impact Report - Phillips 66 Company Propane Recovery Project, Contra Costa County (County File No. LP12-2073)

Dear Ms. Cross:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Draft Environmental Impact Report (EIR) for the Phillips 66 Company's Propane Recovery Project (Project) located in the unincorporated Contra Costa County (County). EBMUD's response provided to the County on August 13, 2012 (see enclosure or pages A-19 and A-20 in Appendix A of the Draft EIR) regarding the July 2012 Notice of Preparation of the Draft EIR still apply to the Project. In addition, EBMUD has the following comment regarding Water Recycling that also applies to the Project.

WATER RECYCLING

EBMUD's Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant, fish and wildlife to offset demand on EBMUD's limited potable water supply. Appropriate recycled water uses include landscape irrigation, commercial and industrial process uses, toilet and urinal flushing in non-residential buildings, and other applications.

The Project site is located within the service boundaries of a future EBMUD recycled water supply project that is intended to serve industrial usages such as cooling and boiler make-up water purposes within the refinery. EBMUD will continue its coordination with Phillips 66 to implement a recycled water project when feasible to do so.

375 ELEVENTH STREET . OAKLAND . CA 94607-4240 . TOLL FREE 1-866-40-EBMUD

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, Water Service Planning at (510) 287-1365.

Sincerely,

William R. Kirkpatrick
Manager of Water Distribution Planning

WRK:AMW:sb
sb13_131.doc

Enclosure

cc: Chaz Lemmon and Brent Eastep
Phillips 66 Company
1380 San Pablo Avenue
Rodeo, CA 94572

EAST BAY
MUNICIPAL UTILITY DISTRICT

August 13, 2012

Lashun Cross, Senior Planner
Contra Costa County
Community Development Division
30 Muir Road
Martinez, CA 94553

Re: Notice of Preparation of an Environmental Impact Report for Phillips 66 Company Propane Recovery Project, Contra Costa County

Dear Ms. Cross:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation of an Environmental Impact Report (EIR) for the Phillips 66 Company Propane Recovery Project located in the unincorporated Contra Costa County (County).

GENERAL

EBMUD owns and operates a 24-inch and 48-inch transmission pipeline located in an EBMUD right-of-way (owned in fee) that traverses the Phillips 66 Refinery. These pipelines provide continuous service to customers within the area; the integrity of these pipelines needs to be maintained at all times. Any proposed construction activity within the EBMUD's property would need to be coordinated with EBMUD and may require relocation of the pipelines and/or property at the project sponsor's expense. No buildings or structures shall be constructed in EBMUD's property unless specific approval is given by EBMUD. Furthermore, EBMUD request that the project sponsor provide a set of plans of the proposed construction in the environmental documentation to determine its proximity to EBMUD's property, right-of-ways, and pipelines.

WATER SERVICE

The property currently has water service. If additional water service is needed, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine the costs and conditions of providing additional water service to the development. Engineering and installation of water services requires substantial lead time, which should be provided for in the project sponsor's development schedule. The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the

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project sponsor's expense. Due to EBMUD's limited water supply, all customers should plan for shortages in time of drought.

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, Water Service Planning at (510) 287-1365.

Sincerely,

FOR William R. Kirkpatrick
Manager of Water Distribution Planning

WRK:ELE:djr
sb12_165.doc

cc: Brent Eastep
Phillips 66 Company
1380 San Pablo Avenue
Rodeo, CA 94572

3.1.1 Letter A1– Responses to Comments from East Bay Municipal Utility District (EBMUD)

A1-1 The commenter notes that comments submitted by EBMUD on August 13, 2012 in reply to the Notice of Preparation (NOP), and on June 28, 2013 on the 2013 Draft Environmental Impact Report (DEIR) still apply. This comment is noted. See Responses A1-1 and A1-2 in the 2013 Final Environmental Impact Report (FEIR) for responses to the letters submitted on the NOP and 2013 DEIR.

San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600, San Francisco, California 94102 tel 415 352 3600 fax 415 352 3606

December 2, 2014

Lashun Cross
Contra Costa County
Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

SUBJECT: Recirculated Draft Environmental Impact Report for the Phillips 66 Propane Recovery Project; SCH#2012072046; County File Number LP12-2073
BCDC Inquiry File No. CC.MC.7305.1; BCDC Oil Spill Chron File

Dear Ms. Cross:

Thank you for the opportunity to comment on the *Recirculated Draft Environmental Impact Report for the Phillips 66 Propane Recovery Project* (RDEIR). Although the San Francisco Bay Conservation and Development Commission (Commission or BCDC) has not reviewed the document, the following are staff comments based on our review of the RDEIR in the context of the Commission's authority under the McAteer-Petris Act (California Government Code Sections 66600 et seq.), the federal Coastal Zone Management Act, and the provisions of the Commission's *San Francisco Bay Plan* (Bay Plan).

The Bay Plan contains policies on Bay resources, such as fish, other aquatic organisms and wildlife, and water quality; as well as policies on uses of the Bay and shoreline, including public access and fill for water-related development. The Commission further designates certain shoreline areas for uses that must be located on the waterfront, such as ports and other water-related industrial uses, to avoid potential filling of the Bay to accommodate water-related uses where the waterfront has been developed for uses not necessary to be at the water's edge.

Staff reviewed the original DEIR when it was released and submitted comments at that time. In looking over the changes described in the RDEIR, it does not appear that they would cause us to modify our original comments. As stated in our July 24, 2013 comments, we request a confirmation of the distance of the proposed loading rack and the propane storage facility from the mean high tide line or from any marsh lying between mean high tide and five feet above mean sea level. If no statement will appear in the FEIR regarding the locations of these elements and why or why not a permit would be required from the Commission, or in the response to comments, please alert the project proponent to contact us if they have not already. If Phillips 66 has already provided this information to BCDC staff, my apologies for duplicating the request. A2-1

Also please note in the FEIR or response to comments, that if a federal permit is required or federal funding is provided for the proposed project, this would trigger the need for a Consistency Determination by the Commission under its authority granted by the federal Coastal Zone Management Act. Phillips 66 would need to contact us if this is the case. A2-2

If you should have any questions, please do not hesitate to contact me at 415.352-3644 or lindas@bcdc.ca.gov. Thank you again for the opportunity to review the RDEIR for the proposed Propane Recovery Project.

Sincerely,
LINDA SCOURTIS
Coastal Planner

cc: Katie Shulte Joung, State Clearinghouse

3.1.2 Letter A2 – Responses to Comments from San Francisco Bay Conservation and Development Commission (BCDC)

A2-1 This comment requests confirmation of the distance between the proposed loading rack and propane storage facility and the mean high tide line or from any marsh lying between mean high tide line and 5 feet above mean sea level. Recirculated Draft Environmental Impact Report (RDEIR) Section 4.2.2.3, *Regulatory Setting*, on page 4.2-22 provides information on the jurisdiction of BCDC over land within the vicinity of the proposed Project. Figure 3-3 on RDEIR page 3-6 shows the location of the closest proposed Project component (the loading rack and the propane storage facility) to the shoreline. As described in RDEIR Section 4.2.5, *Discussion of Impacts and Mitigation Measures*, on page 4.2-26, the Project components are proposed for locations entirely within the Refinery and proposed Project components would be separated from urban or wetland habitats (including the mean high tide line) by at least 300 feet, and usually by more than 800 feet, of extensive Refinery operational structures and features. In order to provide additional clarification, page 4.2-22 of the RDEIR has been amended as follows:

> ***San Francisco Bay Conservation and Development Commission***
>
> The San Francisco Bay Conservation and Development Commission (BCDC) is authorized by the McAteer Petris Act to analyze, plan, and regulate San Francisco Bay and its shoreline. It implements the San Francisco Bay Plan, and regulates filling and dredging in the Bay, its sloughs and marshes, and certain creeks and tributaries. San Francisco BCDC jurisdiction includes San Pablo Bay and a shoreline band that extends inland 100 feet from the high tide line. San Francisco BCDC permits would be required for any work within either the Bay or the shoreline band. <u>The proposed Project would be located entirely within the Refinery and separated from urban or wetland habitats (including the mean high tide line) by at least 300 feet, and usually by more than 800 feet, of extensive Refinery operational structures and features. Therefore, the proposed Project is located outside BCDC jurisdiction.</u>

A2-2 No federal permit would be required and no federal funding would be provided for the proposed Project. Therefore, a Consistency Determination by the BCDC would not be necessary.

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

December 2, 2014

Lashun Cross
Principal Planner
Contra Costa County
Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

Subject: Phillips 66 Propane Recovery Project Recirculated DEIR

Dear Ms. Cross,

Bay Area Air Quality Management District (Air District) staff has reviewed Contra Costa County's (County) Recirculated Draft Environmental Impact Report (RDEIR) prepared for the Propane Recovery Project (Project) located at the Phillips 66 Refinery in Rodeo. The proposed Project consists of implementing refinery processing equipment improvements to recover propane and butane for sale off-site. The RDEIR analyzes two options for implementing the Project: use of a new steam boiler; or use of the existing steam power plant if the new boiler is not built. A3-1

Air District staff appreciates the County's responses to the issues raised by the Air District in its previous comment letters regarding the Project. As recommended in the Air District's comment letters (most recently from January 14, 2014), the RDEIR includes a cumulative health risk analysis and additional information on the Project's emission sources and emission estimates. Air District staff agrees with the conclusions of these additional studies.

The RDEIR also addresses the Air District's recommendation that the County fully explain the estimated decrease of GHG emissions anticipated to result from the Project. The RDEIR justifies the Project's GHG emission decrease based on the anticipated change in fuel gas use and the conclusion that accounting for the end use of propane and butane is too speculative to estimate downstream emissions. A3-2

Air District staff is available to assist the County in addressing these comments. If you have any questions, please contact Alison Kirk, Senior Planner, at (415) 749-5169 or akirk@baaqmd.gov.

Sincerely,

Jean Roggenkamp
Deputy Air Pollution Control Officer

cc: BAAQMD Director John Gioia
BAAQMD Director David Hudson
BAAQMD Director Mary Piepho
BAAQMD Director Mark Ross

3.1.3 Letter A3 – Responses to Comments from Bay Area Air Quality Management District (BAAQMD)

A3-1 The commenter expresses appreciation that the issues previously expressed by the Bay Area Air Quality Management District (BAAQMD), including those related to cumulative health risk analysis and additional information on the Project emissions sources and emissions estimates, have been adequately addressed. This comment is noted.

A3-2 The commenter acknowledges that the RDEIR has addressed the BAAQMD's recommendation that the County fully explain the estimated decrease of greenhouse gas (GHG) emissions anticipated to result from the proposed Project. This comment is noted.

Lashun Cross

From: Donna Heymans <heymans@rhfd.org>
Sent: Friday, December 05, 2014 1:33 PM
To: ~~Lashun Cross~~
Subject: RE: Recirculated Draft EIR for the Phillips 66 Propane Recovery Project - SCH # 2012072046/County File #LP12-2073
Attachments: 20141205123833987.pdf

Please find attached the letter version of an earlier email sent to you by Chief Charles Hanley. The original is in the mail today.

Thank you,

Donna Heymans
Administrative Services Officer
Rodeo Hercules Fire Protection District
1680 Refugio Valley Road
Hercules, CA 94547
510-799-4561

RODEO - HERCULES FIRE PROTECTION DISTRICT
1680 REFUGIO VALLEY ROAD, HERCULES, CALIFORNIA 94547
(510) 799-4561 • FAX: (510) 799-0395

December 5, 2014

Ms. Lashun Cross
Contra Costa County
Department of Conservation & Development
30 Muir Road
Martinez, CA 94553

RE: Recirculated Draft EIR for the Phillips 66 Propane Recovery Project - SCH #2012072046/County File #LP12-2073

Dear Ms. Cross:

The Rodeo-Hercules Fire Protection District (Fire District) has reviewed the Recirculated Draft EIR for the Phillips 66 Propane Recovery Project. According to the Recirculated Draft EIR (RDEIR), the refinery currently processes a range of raw materials into gasoline, diesel, and related byproducts for resale in California and other markets. The proposed Project would modify existing facilities and add new facilities to recover propane and butane from refinery fuel gas and Hydrogen Plant feed gas and then ship it by rail for sale (RDEIR ES-2, 3; 1-3). The refinery is located in unincorporated northwestern Contra Costa County, within the community of Rodeo. The southern-most 300- to 600-foot wide portion of the refinery property provides an undeveloped buffer area between the active portion of the refinery and the adjacent Bayo Vista residential area (RDEIR ES-3; Figures ES-1, 2). A4-1

The Fire District provided comments on the 2013 Draft EIR on August 8, 2013. At that time, the Fire District noted that due to financial constraints, it "cannot not provide services to protect or serve the increase in rail and truck traffic, the additional flammable gas (propane and butane) storage and piping for the proposed project." That situation has not changed and is not expected to change until the refinery contributes its fair share to meeting the increased fire protection service needs to the community and refinery that result from refinery operations. A4-2

The Rodeo Hercules Fire District has provided fire protection to the refinery by mutual aid and/or automatic aid since 1927. The refinery and associated properties have been part of the Fire District since their annexation in 1997. Fire District operations are funded primarily by property A4-3

taxes from properties within the District. Therefore, prior to the 1997 annexation, the Fire District did not receive property tax revenue distribution from the refinery. After the annexation, the Fire District assumed responsibility for fire protection to refinery properties; a base taxation year was established and the District receives a percentage growth in ad valorem. Operations at the refinery have not decreased since annexation, and are now proposed to substantially increase. However, the property tax funding from the refinery has decreased dramatically even as the project proposes to expand refinery operations. As a direct result of the continued reassessment of the annual property tax levy of the refinery, $1.34 Million in revenue to the Fire District in 2012 is now estimated to be $438,000 in 2014 – an approximately 2/3 decrease of some $1 million from 2012. The district is being asked to provide services related to the expanded refinery operations and attendant risks within the refinery and to the community based on 1/3 of the funding. By comparison, this tax base is nearly the same as 2007 levels when the revenue from the refinery was $407,256.

In the past 18 years the Fire District has only seen a small percentage of property tax growth over base annually from the refinery with reassessments occurring in alternating years. This see-saw effect has made it increasingly difficult to continue service in the communities of Rodeo and Hercules, which are most directly affected by the refinery operations. As it stands, the Fire District has been burdened with a disproportionate share of the declining property tax reassessment. This puts the Fire District in a precarious position where ongoing and expanded operations and related service needs are not supported by a continuous or adequate revenue stream. As noted in the Fire District's August 8, 2013 letter, for example, Station 75 which serves the refinery, was closed at the time. Station 75 has since temporarily reopened, due to the Fire District's efforts to secure a $3 Million SAFER grant. Once the grant funds are depleted, the station will again close. The refinery operations and expansion (if approved) will not. The continuous reassessments and percentage of growth formula have affected the tax increment received from the refinery and have become an unreliable source of dependable revenue. The Fire District recommends that a mitigation measure be added to the RDEIR to require an equitable redistribution of the amount Phillips 66 pays annually in property tax or, guaranteed annual percentage or a flat fee above the annual ad valorem in order for the Fire District to continue service to the proposed project. As a property tax dependent agency, the Fire District relies on a fixed tax rate with the only other sources of revenue coming from benefit assessments and nominal local permit fees and cost recovery. A change to the distribution rate or flat annual fee would allow for a consistent revenue stream and sustainable emergency response delivery levels for the increased fire service needs to the refinery and the community from the proposed project.

A4-3

CEQA is primarily concerned with the changes that will result from a proposed project; however, the lack of adequate, continuous property tax support from the refinery would require the Fire District to continue to backfill from existing financial and personnel resources, thereby further reducing existing services. Those existing services include day to day emergency response

A4-4

requirements in the community of Rodeo, such as fires, trauma, cardiac and respiratory related medical emergencies and vehicle accidents on Interstate 80 and Highway 4. Already struggling in its day to day operations, the Fire District relies on mutual aid for fires and serious incidents and participates in a shared service agreement with other partners in west Contra Costa County. In nearly all communities in California that serve populations between of 30,000 and 40,000 (38), there exists a full service fire agency with support staff (training, prevention, administration). The Fire District has a Fire Chief, a ½ time Administrative Services Officer and fee funded fire prevention (8 hours per week). The Fire District recently closed Station 75 (reopened temporarily), renegotiated its labor agreement and went to level funding for its retirement contribution. In addition to the SAFER grant that allowed reopening of Station 75, the Fire District sponsored a local revenue measure which the voters passed. These District initiatives are not enough to offset the refinery reassessments, tax increment loss to ERAF and the Former Merged Redevelopment Area (Hercules) and lowered property values.

A4-4

The Fire District provides the above discussion by way of context for requesting that a funding-related mitigation measure be added to the RDEIR. The refinery is an existing heavy industrial use, in continuous use since 1896, according to the RDEIR. The RDEIR further describes refinery operations that routinely involve processing and handling substances that are combustible and/or flammable, with the potential for fires and explosions. Refinery operations also involve processing and handling substances that are acutely toxic with the potential of releasing toxic vapors. As reflected in the Draft EIR and the RDEIR, the consequence of these operations and the proposed expanded operations results in risks not only at the refinery but also in the surrounding community, both of which are served by the Fire District. The Fire District recognizes the unique and extraordinary risks attendant to refinery operations and has equipped itself with appropriate equipment to respond not only to typical community service calls, but also to more specialized calls related to the refinery operations. The Fire District requests the above described mitigation as a means of ensuring that the refinery contributes its fair share to funding the service needs that it creates.

A4-5

The Fire District cannot adequately undertake the additional risk posed by the Phillips 66 Propane Recovery Project under current funding formulas, especially when existing services are adversely affected by the past reductions in property tax revenue from the refinery even though the service demands continue. The additional propane and butane processing and shipping by rail components of the project exceed the Fire District's current capacity, which will be reduced by half when the Rodeo Fire Station 75 is closed due to lack of funding. Funding options include an annual fee from the refinery, or the Board of Supervisors could consider a redistribution formula of the full ad valorem tax increment that more closely represents the other Tax Rate Areas in the Fire District. These measures would help insulate the Fire District against the volatility of the three-phase taxing apportionment (L&I, profit/loss and sale of refineries) that the refinery and the County Assessor use to determine annual tax liability. In short, the Fire District requests a fair, representative share of the refinery annual property tax or other funding

A4-6

source for fire protection provided by the District. This need is even more compelling as the effect of the proposed project would not only increase fire service needs but if inadequately funded, would also continue to decrease availability of service as the Fire District would continue to backfill from existing resources in order to serve the expanded operations.

A4-6

The Fire District does not provide these comments as a judgment or recommendation on whether the proposed project should be approved or not. The District is very simply guided by its mission to provide adequate and appropriate fire protection and emergency response to its service area, including the refinery and nearby community. That response is directly affected by the environmental characteristics and risks of the proposed project; the proposed funding mitigation directly responds to those characteristics and risks.

A4-7

Thank you for the opportunity to comment on the RDEIR. The Fire District is more than willing to discuss its concerns with the applicant, or staff, or other interested parties. Please do not hesitate to contact me for any questions or to follow up on any of the above comments.

Sincerely,

Charles Hanley
FIRE CHIEF
Rodeo Hercules Fire District
510.799.4561

cc: RHFD Board members
Richard Pio Roda, District Counsel
Rodeo Municipal Advisory Council
David Biggs, Hercules City Manager
Federal Glover, Contra Costa County BOS
Susan Bonilla, 14th California Assembly Dist.
Nancy Skinner, 15th California Assembly Dist.
Loni Hancock, California State Senate 9th Dist.
Mark DeSaulnier, California State Senate 7th Dist.
Mike Thompson, Member of Congress 5th Dist.
George Miller, Member of Congress 11th Dist.
Jack Broadbent, BAAQMD

Lashun Cross

From:	Charles Hanley <hanley@rhfd.org>
Sent:	Friday, December 05, 2014 11:08 AM
To:	Lashun Cross
Cc:	Richard D. Pio Roda; Faubion, Kit; Donna Heymans; Jason Crapo
Subject:	Recirculated Draft EIR for the Phillips 66 Propane Recovery Project - SCH # 2012072046/County File #LP12-2073

Ms. Lashun Cross
Contra Costa County
Department of Conservation & Development
30 Muir Road, Martinez, CA 94553
December 5, 2014

RE: Recirculated Draft EIR for the Phillips 66 Propane Recovery Project - SCH #2012072046/County File #LP12-2073

Dear Ms. Cross:

The Rodeo-Hercules Fire Protection District (Fire District) has reviewed the Recirculated Draft EIR for the Phillips 66 Propane Recovery Project. According to the Recirculated Draft EIR (RDEIR), the refinery currently processes a range of raw materials into gasoline, diesel, and related byproducts for resale in California and other markets. The proposed Project would modify existing facilities and add new facilities to recover propane and butane from refinery fuel gas and Hydrogen Plant feed
gas and then ship it by rail for sale (RDEIR ES-2, 3; 1-3). The refinery is located in unincorporated northwestern Contra Costa County, within the community of Rodeo. The southern-most 300- to 600-foot wide portion of the refinery property provides an undeveloped buffer area between the active portion of the refinery and the adjacent Bayo Vista residential area (RDEIR ES-3; Figures ES-1, 2).

The Fire District provided comments on the 2013 Draft EIR on August 8, 2013. At that time, the Fire District noted that due to financial constraints, it "cannot not provide services to protect or serve the increase in rail and truck traffic, the additional flammable gas (propane and butane) storage and piping for the proposed project." That situation has not changed and is not expected to change until the refinery contributes its fair share to meeting the increased fire protection service needs to the community and refinery that result from refinery operations.

The Rodeo Hercules Fire District has provided fire protection to the refinery by mutual aid and/or automatic aid since 1927. The refinery and associated properties have been part of the Fire District since their annexation in 1997. Fire District operations are funded primarily by property taxes from properties within the District. Therefore, prior to the 1997 annexation, the Fire District did not receive property tax revenue distribution from the refinery. After the annexation, the Fire District assumed responsibility for fire protection to refinery properties; a base taxation year was established and the District receives a percentage growth in ad valorem. Operations at the refinery have not decreased since annexation, and are now proposed to substantially increase. However, the property tax funding from the refinery has decreased dramatically even as the project proposes to expand refinery operations. As a direct result of the continued reassessment of the annual property tax levy of the refinery, $1.34 Million in revenue to the Fire District in 2012 is now estimated

to be $438,000 in 2014 – an approximately 2/3 decrease of some $1 million from 2012. The district is being asked to provide services related to the expanded refinery operations and attendant risks within the refinery and to the community based on 1/3 of the funding. By comparison, this tax base is nearly the same as 2007 levels when the revenue from the refinery was $407,256.

In the past 18 years the Fire District has only seen a small percentage of property tax growth over base annually from the refinery with reassessments occurring in alternating years. This see-saw effect has made it increasingly difficult to continue service in the communities of Rodeo and Hercules, which are most directly affected by the refinery operations. As it stands, the Fire District has been burdened with a disproportionate share of the declining property tax reassessment. This puts the Fire District in a precarious position where ongoing and expanded operations and related service needs are not supported by a continuous or adequate revenue stream. As noted in the Fire District's August 8, 2013 letter, for example, Station 75 which serves the refinery, was closed at the time. Station 75 has since temporarily reopened, due to the Fire District's efforts to secure a $3 Million SAFER grant. Once the grant funds are depleted, the station will again close. The refinery operations and expansion (if approved) will not. The continuous reassessments and percentage of growth formula have affected the tax increment received from the refinery and have become an unreliable source of dependable revenue. The Fire District recommends that a mitigation measure be added to the RDEIR to require an equitable redistribution of the amount Phillips 66 pays annually in property tax or, guaranteed annual percentage or a flat fee above the annual ad valorem in order for the Fire District to continue service to the proposed project. As a property tax dependent agency, the Fire District relies on a fixed tax rate with the only other sources of revenue coming from benefit assessments and nominal local permit fees and cost recovery. A change to the distribution rate or flat annual fee would allow for a consistent revenue stream and sustainable emergency response delivery levels for the increased fire service needs to the refinery and the community from the proposed project.

CEQA is primarily concerned with the changes that will result from a proposed project; however, the lack of adequate, continuous property tax support from the refinery would require the Fire District to continue to backfill from existing financial and personnel resources, thereby further reducing existing services. Those existing services include day to day emergency response requirements in the community of Rodeo, such as fires, trauma, cardiac and respiratory related medical emergencies and vehicle accidents on Interstate 80 and Highway 4. Already struggling in its day to day operations, the Fire District relies on mutual aid for fires and serious incidents and participates in a shared service agreement with other partners in west Contra Costa County. In nearly all communities in California that serve populations between of 30,000 and 40,000 (38), there exists a full service fire agency with support staff (training, prevention, administration). The Fire District has a Fire Chief, a ½ time Administrative Services Officer and fee funded fire prevention (8 hours per week). The Fire District recently closed Station 75 (reopened temporarily), renegotiated its labor agreement and went to level funding for its retirement contribution. In addition to the SAFER grant that allowed reopening of Station 75, the Fire District sponsored a local revenue measure which the voters passed. These District initiatives are not enough to offset the refinery reassessments, tax increment loss to ERAF and the Former Merged Redevelopment Area (Hercules) and lowered property values.

The Fire District provides the above discussion by way of context for requesting that a funding-related mitigation measure be added to the RDEIR. The refinery is an existing heavy industrial use, in continuous use since 1896, according to the RDEIR. The RDEIR further describes refinery operations that routinely involve processing and handling substances that are combustible and/or flammable, with the potential for fires and explosions. Refinery operations also involve processing and handling substances that are acutely toxic with the potential of releasing toxic vapors. As reflected in the Draft EIR and the RDEIR, the consequence of these operations and the proposed expanded operations results in risks not only at the refinery but also in the

surrounding community, both of which are served by the Fire District. The Fire District recognizes the unique and extraordinary risks attendant to refinery operations and has equipped itself with appropriate equipment to respond not only to typical community service calls, but also to more specialized calls related to the refinery operations. The Fire District requests the above described mitigation as a means of ensuring that the refinery contributes its fair share to funding the service needs that it creates.

The Fire District cannot adequately undertake the additional risk posed by the Phillips 66 Propane Recovery Project under current funding formulas, especially when existing services are adversely affected by the past reductions in property tax revenue from the refinery even though the service demands continue. The additional propane and butane processing and shipping by rail components of the project exceed the Fire District's current capacity, which will be reduced by half when the Rodeo Fire Station 75 is closed due to lack of funding. Funding options include an annual fee from the refinery, or the Board of Supervisors could consider a redistribution formula of the full ad valorem tax increment that more closely represents the other Tax Rate Areas in the Fire District. These measures would help insulate the Fire District against the volatility of the three-phase taxing apportionment (L&I, profit/loss and sale of refineries) that the refinery and the County Assessor use to determine annual tax liability. In short, the Fire District requests a fair, representative share of the refinery annual property tax or other funding source for fire protection provided by the District. This need is even more compelling as the effect of the proposed project would not only increase fire service needs but if inadequately funded, would also continue to decrease availability of service as the Fire District would continue to backfill from existing resources in order to serve the expanded operations.

The Fire District does not provide these comments as a judgment or recommendation on whether the proposed project should be approved or not. The District is very simply guided by its mission to provide adequate and appropriate fire protection and emergency response to its service area, including the refinery and nearby community. That response is directly affected by the environmental characteristics and risks of the proposed project; the proposed funding mitigation directly responds to those characteristics and risks.

Thank you for the opportunity to comment on the RDEIR. The Fire District is more than willing to discuss its concerns with the applicant, or staff, or other interested parties. Please do not hesitate to contact me for any questions or to follow up on any of the above comments.

Sincerely,

Charles Hanley

Charles Hanley
FIRE CHIEF
Rodeo Hercules Fire District
510.799.4561

Cc: RHFD Board members
Richard Pio Roda, District Counsel
Rodeo Municipal Advisory Council
David Biggs, Hercules City Manager

Federal Glover, Contra Costa County BOS
Susan Bonilla, 14th California Assembly Dist.
Nancy Skinner, 15th California Assembly Dist.
Loni Hancock, California State Senate 9th Dist.
Mark DeSaulnier, California State Senate 7th Dist.
Mike Thompson, Member of Congress 5th Dist.
George Miller, Member of Congress 11th Dist.
Jack Broadbent, BAAQMD

3.1.4 Letter A4 – Responses to Comments from Rodeo-Hercules Fire District

A4-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

A4-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. The commenter notes that the Rodeo-Hercules Fire District is experiencing financial constraints and as a result cannot provide services to protect or serve the increase in rail and truck traffic caused by the proposed Project. The commenter notes that the situation has not changed since their original comments on the 2013 DEIR, on August 8, 2013. The provision of fire protection services was discussed in Section 4.15.4, *Discussion of No Public Services Impacts*, of the 2013 DEIR, which determined that the proposed Project would have no impact on the provision of fire protection services within or outside the Refinery. The proposed Project would not affect service ratios or response times or increase the use of existing fire protection or emergency facilities such that substantial physical deterioration, alteration, or expansion of these facilities would occur. This comment is noted.

A4-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. The commenter provides a summary of their financial difficulties as well as a brief history of the Rodeo-Hercules Fire District. This comment is noted.

A4-4 The commenter notes that California Environmental Quality Act (CEQA) impacts related to the provision of public services are focused on changes caused by the proposed Project and then continues the summarization of services provided by the Rodeo-Hercules Fire District and their financial concerns. Although the County is sympathetic to the financial constraints the Rodeo-Hercules Fire District is currently experiencing, for the purposes of CEQA, implementation of the proposed Project would not result in a potentially significant impact unless it would necessitate the construction of a new or physically altered fire station. The proposed Project in and of itself would not require construction of a new fire station; therefore, no impact would result under CEQA. This issue was not included in the RDEIR.

The *Emergency Reponses Capabilities* discussion on page 4.9-13 of the 2013 DEIR describes Phillips 66's emergency response capabilities and the Refinery's emergency response plan. Phillips 66 provides its own emergency response for Refinery incidents. Its emergency teams are trained and equipped to respond to fires, rescues, hazardous materials releases, and other emergencies that could occur at the Refinery, including any potential incidents involving the proposed Project construction and/or operations. In certain instances, Phillips 66 does accept and utilize assistance from mutual aid emergency response organizations in which it is a member and from Rodeo-Hercules Fire District or other municipal organizations. 2013 DEIR Sections 4.15.2.1, *Fire Protection*,

and 4.15.4, *Discussion of No Public Services Impacts*, summarized the services and infrastructure of the Rodeo-Hercules Fire District and determines that the proposed Project would not affect service ratios or response times or increase the use of existing fire protection or emergency facilities such that substantial physical deterioration, alteration, or expansion of these facilities would occur. The 2013 DEIR determined that no impacts from construction or operation would occur and therefore there is no nexus to require a mitigation measure to address funding for the Rodeo-Hercules Fire District.

A4-5 The commenter notes that the above discussion was provided as the basis for requesting that the RDEIR include a mitigation measure to address funding needed by the Rodeo-Hercules Fire District. 2013 DEIR Section 4.15.2.1, *Fire Protection*, summarized the services and infrastructure of the Rodeo-Hercules Fire District and Section 4.15.4, *Discussion of No Public Services Impacts*, determined that the proposed Project would not affect service ratios or response times or increase the use of existing fire protection or emergency facilities such that substantial physical deterioration, alteration, or expansion of these facilities would occur. The 2013 DEIR determined that no impacts from construction or operation would occur and therefore there is no nexus to require a mitigation measure to address funding for the Rodeo-Hercules Fire District.

A4-6 The commenter states that the Rodeo Hercules Fire District cannot adequately support the additional risk associated with implementation of the proposed Project, especially given the impending closure of Fire Station 75. As discussed above, Section 4.15.4, *Discussion of No Public Services Impacts*, of the 2013 DEIR determined that the proposed Project would not impact the provision of fire services. Further, the Rodeo Hercules Fire District was awarded recently awarded a 2.5 million dollar Federal Emergency Management Agency Staffing for Adequate Fire & Emergency Response Grant and as a result, Fire Station 75 was reopened on October 1, 2014 (RHFD, 2014). The commenter requests that Phillips 66 provide funding to support fire protection services for the proposed Project. The 2013 DEIR determined that no impacts from construction or operation would occur and therefore there is no nexus to require a mitigation measure to address funding for the Rodeo Hercules Fire District.

Rodeo Hercules Fire Protection District (RHFD), 2014. *Rodeo-Hercules Fire District News. Available online at:* http://rhfd.org/2014/09/17/station-75-rodeo-fire-station-re-opening-october-1-2014-1100-a-m-100-p-m/, accessed January 5, 2015.

A4-7 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Lashun Cross

From:	Linda Barrera <LindaB@sanpabloca.gov>
Sent:	Thursday, December 04, 2014 3:26 PM
To:	Lashun Cross
Subject:	City of San Pablo Public Comment County File #LP12-2073
Attachments:	San Pablo_Public Comment_LP12-2073.pdf

Dear Mrs. Cross,

Attached is the City of San Pablo's formal public comment on County File #LP12-2073, Recirculated Draft Environmental Impact Report for Phillips 66 Propane Recovery Project.

Best,

Linda Barrera
Administrative Intern

DEVELOPMENT SERVICES

Planning

CITY of SAN PABLO
City of New Directions

December 2, 2014

Contra Costa County Department of Conservation and Development
Community Development Division
30 Muir Road
Martinez, CA 94553
Attention: Lashun Cross, Principle Planner

Re: Phillips 66 Propane Recovery Project (Recirculated Draft Environmental Impact Report) County File #LP12-2073

Dear Ms. Cross:

The City of San Pablo appreciates the opportunity to comment on the content of the *Recirculated Draft Environmental Impact Report* (RDEIR). Residents and businesses of the City of San Pablo are in close proximity to the Phillips 66 Refinery. As such, our community has a keen interest in understanding the environmental impacts of modifications made to Phillips 66 Propane Recovery Project, especially those that may impact the community's quality of life. A5-1

The City of San Pablo has received numerous Notices of Public Hearings regarding Phillips 66 Company, including County File #LP12-2073 and County File #LP05-2048. It is our understanding that there are several projects that are indeed related to Phillips 66 Refinery (such as the Rodeo Refinery's connection to the Santa Maria Facility). However, it is unclear from the RDEIR how the various Phillips 66 projects are related. It is critical for the RDEIR to fully identify and describe existing and proposed projects and their relationship to Phillips 66 Propane Recovery Project in order to fully evaluate environmental impacts in the RDEIR. Therefore, the RDEIR does not provide a comprehensive analysis of the Project's cumulative environmental impacts, which is required under CEQA. A5-2

This community is directly affected by any increase in rail traffic as a rail line runs adjacent to the entire West side of the City. Considering the increase in oil and refining-related production as well as the two new proposed rail spurs, the RDEIR does not adequately address rail haul's public safety and health. Although the probability of a rail accident may be low, the consequences of such an accident would be catastrophic and, therefore, commands a deeper analysis in the RDEIR. There is currently no requirement A5-3

13831 San Pablo Avenue, Building 3 • San Pablo, CA 94806
Main: 510-215-3030 • *Fax:* 510-215-3031
www.SanPabloCA.gov/Planning

in the RDEIR for shipping hazardous material in double walled containers. Without such mitigation efforts, a rail accident, should one occur, would seriously impact the community's health and safety and would increase the funding required by the City to respond to such an emergency.

A5-3

It is not clear what the air quality or greenhouse gas emission impacts are due to the increased incoming quantity and processing from the proposed Project. This is partially due to the vagueness of the actual production quantity increase. So, in addition to not analyzing significant environmental impacts the RDEIR cannot adequately mitigate significant environmental impacts.

A5-4

Consequently, the City of San Pablo believes the RDEIR fails to include sufficient information to meet CEQA's purpose of promoting informed decision-making and public participation. Should you have any question concerning this letter, please feel free to contact Michele Rodriguez, Development Services Manager, at (510) 215-3031 or via email at micheler@sanpabloca.gov. Thank you.

A5-5

Sincerely,

Michele Rodriguez
Development Services Manager

13831 San Pablo Avenue, Building 3 • San Pablo, CA 94806
Main: 510-215-3030 • *Fax:* 510-215-3031
www.SanPabloCA.gov/Planning

3.1.5 Letter A5 – Responses to Comments from City of San Pablo

A5-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but notes the close proximity of the City of San Pablo to the Project site. This comment is noted.

A5-2 See Master Response 2.2, which discusses the concept of 'piecemealing.'

A5-3 The commenter expresses concerns regarding an increase in rail traffic and that the RDEIR does not adequately address rail haul's public health and safety. The commenter states that a deeper analysis is needed as well as mitigation measures for double-walled containers. 2013 FEIR Master Response 2.3 describes the evaluation of safety associated with propane storage. This issue is further discussed in the RDEIR in Section 4.6, *Hazards and Hazardous Materials.* Specifically Section 4.6.2.2, *Regulatory Setting*, discusses the regulations which are applicable to the proposed Project and which are focused on reducing risks associated with chemical hazards. RDEIR Section 4.6.2.3, *Project Baseline and Proposed Changes*, summarizes existing conditions relative to how hazards are used, handled, stored and transported at the Refinery, and how the proposed Project would change those conditions. This section also describes existing safety management systems at the Refinery.

RDEIR Section 4.6.5, *Consequence Analysis Methodology*, presents the results of a worst-case consequence analysis undertaken to evaluate the proposed Refinery changes with respect to production, storage, and transfer of butane and propane. The objective of the analysis was to compute the potential increase or decrease in hazards to the public due to the proposed changes to the facility. This analysis concluded that the potential off-site hazards associated with the proposed Project are smaller than the potential existing off-site hazards associated with the current Refinery operations; that is to say that the proposed Project would not result in any increase in hazards over existing conditions. Based on this, RDEIR Section 4.6.6, *Discussion of Impacts and Mitigation Measures,* concludes that impacts that could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant and mitigation would not be required.

CEQA requires that an Environmental Impact Report (EIR) includes proposed mitigation measures designed to minimize the Project's environmental impacts. An EIR is not required to discuss mitigation for insignificant environmental impacts. As explained above, the proposed Project would not result in any significant impacts associated with the safety of the propane storage tanks and so development of mitigation is not required under CEQA. For this reason, the commenter's request for a mitigation measure requiring double-walled rail containers is not warranted under CEQA.

A5-4 The proposed Project would not result in an increase in incoming crude to be processed at the Refinery. See Master Response 2.4.

With respect to the proposed increase in production of liquefied petroleum gas (LPG), which includes propane and butane, the exact amount of LPG produced under the proposed Project would be dependent on the amount of refinery fuel gas (RFG) produced at the Refinery in the future; however, the design of the LPG removal equipment and the BAAQMD permit limit would limit the amount of LPG that can be recovered to a maximum of 14,500 barrels per day (BPD). The Refinery currently recovers up to 5,500 BPD of butane; therefore, the proposed Project would result in a maximum net increase of recovered LPG of 9,000 BPD (see RDEIR Section 3.4.2, *New and Modified Facilities and Equipment*). For discussions of the air quality and GHG emissions impacts that would be associated with this proposed increase in LPG, refer to RDEIR Sections 4.1, *Air Quality*, and 4.5, *Greenhouse Gas Emissions*, respectively.

A5-5 The commenter provides a conclusory statement summarizing previous comments that the RDEIR insufficiently informs the public as the Air Quality and GHG analyses do not clearly identify criteria pollutant and GHG emissions associated with increased production. The air quality analysis in the RDEIR used an approach agreed upon by the County and the BAAQMD, and the results were subsequently approved by the BAAQMD in a comment letter on the RDEIR (see Comment Letter A3). See also Response A5-4 above.

CITY OF BERKELEY
Office of the City Attorney

December 5, 2014

Ms. Lashun Cross, Principal Planner
Contra Costa County Department of
Conservation and Development
30 Muir Road
Martinez, CA 94553

Re: Request For Extension in Public Comment Deadline -- Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073)

Dear Ms. Cross:

I am writing on behalf of the City of Berkeley. The City of Berkeley joins in the comments of Communities for a Better Environment and the Rodeo Citizens Association, submitted by Shute, Mihaly & Weinberger. A6-1

Very truly yours,

Zach Cowan
City Attorney

cc: Roger Lin, Communities for a Better Environment
Laurel L. Impett, AICP, Urban Planner, Shute, Mihaly & Weinberger

Tel: 510.981.6998
2180 Milvia Street, Fourth Floor, Berkeley, CA 94704
TDD: 510.981.6903
Fax: 510.981.6960

3.1.6 Letter A6 – Responses to Comments from City of Berkeley

A6-1 The commenter notes their support of comments submitted on the RDEIR by Communities for a Better Environment and the Rodeo Citizens Association, submitted by Shute, Mihaly, & Weinberger, LLP. Support of these comments by the City of Berkeley is noted.

3.2 Response to Organization Comments

Lashun Cross

From: Charissa L. Villanueva <cvillanueva@adamsbroadwell.com>
Sent: Monday, December 01, 2014 4:52 PM
To: John Kopchik; Tiffany Lennear; Lashun Cross
Cc: Rachael E. Koss
Subject: Request for Extension of the Comment Deadline for Phillips 66 Propane Recovery Project RDEIR (County File #LP12-2073 and SCH# 2012072046)
Attachments: 3105-012cv - Request for Extension of Comment Deadline.pdf

Attached is our request regarding the above referenced project. Please contact Ms. Koss to discuss further.

Thank you.

Charissa L. Villanueva
Adams Broadwell Joseph & Cardozo
601 Gateway Blvd., Suite 1000
South San Francisco, CA 94080
(650) 589-1660
cvillanueva@adamsbroadwell.com

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
601 GATEWAY BOULEVARD, SUITE 1000
SOUTH SAN FRANCISCO, CA 94080-7037

TEL: (650) 589-1660
FAX: (650) 589-5062
rkoss@adamsbroadwell.com

DANIEL L. CARDOZO
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
LAURA E. HORTON
MARC D. JOSEPH
RACHAEL E. KOSS
JAMIE L. MAULDIN
MEGHAN A. QUINN
ADAM J. REGELE
ELLEN L. TRESCOTT

SACRAMENTO OFFICE
520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4721
TEL: (916) 444-6201
FAX: (916) 444-6209

December 1, 2014

CONTRA COSTA COUNTY
2014 DEC -2 A 7:51
DEPARTMENT OF CONSERVATION AND DEVELOPMENT

Via Email and U.S. Mail

Mr. John Kopchik
Director Department of Conservation and Development
Contra Costa County
30 Muir Road
Martinez, CA 94553
Email: john.kopchik@dcd.cccounty.us

Ms. Tiffany Lennear
Chief Clerk of the Board
Contra Costa County
651 Pine Street, 1st Floor, Rm. 106
Martinez, CA 94553
Email: tlenn@cob.cccounty.us

Via Email Only

Lashun Cross, Principal Planner, lashun.cross@dcd.ccounty.us

Re: Request for Extension of the Comment Deadline for Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File #LP12-2073 and SCH #2012072046)

Dear Mr. Kopchik, Ms. Lennear and Ms. Cross:

We are writing on behalf of Safe Fuel and Energy Resources California ("SAFER California") to request an extension of the December 5, 2014 comment deadline for the Recirculated Draft Environmental Impact Report ("RDEIR") prepared for the Phillips 66 Propane Recovery Project. The California Environmental Quality Act ("CEQA") requires that all documents referenced in an environmental review document be made available to the public for the entire

B1-1

comment period.[1] Once materials are properly made available, CEQA requires a minimum of 45 days for public review and comment.[2]

B1-1

The County issued a Revised Notice of Completion and Availability of the RDEIR on October 21, 2014. On October 28, 2014, we sent a letter to the County requesting immediate access to all documents referenced or relied upon in the RDEIR. We received some documents from the County in response to our request. However, there are several documents referenced or relied on in the RDEIR which were not provided, including:

- Phillips 66, 2014. Data Response #8, July 29, 2014;
- Phillips 66, 2012. Ambient Monitoring Data for 2009 through 2011;
- Supporting data for Table 4.1-1 (heat rate and NOx CEMS data in an Excel spreadsheet);
- All materials related to Marine Terminal II (cited on RDEIR pages 4.1-32, 33, 34); and
- All materials related to Marine Terminal III (cited on RDEIR pages 4.1-32, 33, 34).

B1-2

The County has not made all documents referenced or relied on in the RDEIR available for public review during the entire public review period, as required by CEQA. Without access to all documents referenced in the RDEIR, the public cannot meaningfully review the RDEIR's analyses, conclusions and mitigation measures. Therefore, we request that the comment deadline be extended 45 days from the date that all documents referenced in the RDEIR are made available for public review.

Thank you for your attention to this matter. Please feel free to contact me at (650) 589-1660 to discuss further.

Sincerely,

Rachael E. Koss

REK:clv

[1] *See* Pub. Resources Code, § 21092(b)(1); 14 Cal. Code Reg., § 15073.
[2] Pub. Resources Code, § 21091(a).
3105-012cv

3.2.1 Letter B1 – Responses to Comments from Adams, Broadwell, Joseph & Cardoza

B1-1 The commenter is addressing the public review process. This comment does not address any concern or issue specifically related to the adequacy of the Recirculated Draft Environmental Impact Report (RDEIR) or the proposed Project. Although a response to this comment is not required, the County is responding in order to clarify California Environmental Quality Act (CEQA) requirements. See Master Response 2.1, which provides a detailed discussion of the requirements for the public review period for 2013 Draft Environmental Impact Report (DEIRs) and describes the public comment process and public participation activities for the proposed Project.

B1-2 The commenter is addressing the public review process. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. Although a response to this comment is not required, the County is responding in order to clarify CEQA requirements. The commenter suggests that the County failed to completely respond to a Public Records Act request dated October 28, 2014. As explained in the County's December 3, 2014 reply to the comment letter (see Appendix C), all of the requested documentation and the complete administrative record were provided on November 3, 2014. The commenter also asserts that the County has not made all of the documents referenced or relied upon in the RDEIR available for public review, as required by CEQA. CEQA does require that the RDEIR's reference documents be accessible to the public, and accordingly they are available upon request, but neither CEQA nor the CEQA Guidelines require that all reference materials be circulated for comment or be posted online for the duration of the public comment period.

The commenter further asserts that the public has been given inadequate time to review the RDEIR's reference documents. The documents were promptly provided in response to the commenters October 28, 2014 Public Records Act request, as well in response to the commenters June 12, 2014 Public Records Act request.

The commenter states that the County failed to provide supporting data for RDEIR Tables 4.1-4 and 4.1-5 that provide the underlying data necessary to verify the figures and conclusions in the RDEIR. CEQA Section 15148 states that the preparation of EIRs is dependent upon information from many sources, and that these documents should be cited, but are not required to be included in an Environmental Impact Report (EIR). The RDEIR cites all the documents used in its preparation and they were included in the administrative record, but references cited within the RDEIR's referenced documents were not included, because CEQA does not require them to be. Hence, the appendices to the Marine Terminal initial study were not included in the administrative record.

COMMUNITIES FOR A
BETTER
ENVIRONMENT

December 3, 2014

Lashun Cross
Principal Planner Contra Costa County Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

RE: Request for Extension of Time to Comment on the Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073)

Dear Ms. Cross,

Communities for a Better Environment respectfully requests an extension of time in order to provide comments on the above referenced document. Significant data is either missing from the recirculated document, or improperly claimed as protected information by the project proponent. B2-1

This data is necessary to verify the document's analyses that pose potentially significant risks to worker and public health and safety. This is also a tar sands crude by rail project. That scale and the absence of data to verify impacts warrants the County's finding of "unusual circumstances" requiring the maximum amount of time available for public comment under CEQA Guidelines section 15105. Please let me know if this is possible at your earliest convenience. B2-2

Sincerely,

/s/

Roger Lin
Staff Attorney

3.2.2 Letter B2 – Responses to Comments from Communities for a Better Environment

B2-1 The commenter is addressing the public review process. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. Although a response to this comment is not required, the County is responding in order to clarify CEQA requirements. See Master Response 2.1, which provides a detailed discussion of the requirements for the public review period for DEIRs and describes the public comment process and public participation activities for the proposed Project.

B2-2 The commenter states that data is missing from the RDEIR. The commenter does not provide any details as to what data is considered to be missing but does assert that this is data that has been improperly claimed as protected information by the Applicant. The County has not been denied access to any necessary information or documentation by the Applicant. The County has made all of the documents referenced or relied upon in the RDEIR available for public review, as required by CEQA. CEQA does not require that all reference materials be circulated for comment or be posted online for the duration of the public comment period, but that the RDEIR's reference documents merely be accessible to the public, and accordingly they have been available upon request. The commenter's statement that this is a tar sands crude by rail project is noted. See Master Response 2.4, which discusses crude feedstocks in relation to the proposed Project.

SHUTE, MIHALY & WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
T: (415) 552-7272 F: (415) 552-5816
www.smwlaw.com

LAUREL L. IMPETT, AICP
Urban Planner
impett@smwlaw.com

December 3, 2014

Ms. Lashun Cross, Principal Planner
Contra Costa County Department of
Conservation and Development
30 Muir Road
Martinez, CA 94553

Re: Request For Extension in Public Comment Deadline -- Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073)

Dear Ms. Cross:

We submit this letter on behalf of the Rodeo Citizens Association to request a 30-day extension in the deadline for providing comments on the Recirculated Draft Environmental Impact Report ("RDEIR") for the proposed Phillips 66 Propane Recovery Project. It has come to our attention that pertinent data required to verify the accuracy of the RDEIR's air quality and health risk analyses have not been included in the RDEIR. These data include:

B3-1

B3-2

- Supporting data for Table 4.1-4 (heater baseline emissions)
- Supporting data for Table 4.1-5 (rail baseline emissions)
- Supporting materials for Table 4.1-13 and Table 4.1-14 relative to Marine Terminal III.

We would greatly appreciate the County providing us with the aforementioned data and extending the comment period for thirty days to allow us to evaluate the adequacy of the RDEIR's air quality and health risk analyses. B3-2 B3-3

We appreciate your consideration of this request.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Laurel L. Impett, AICP,
Urban Planner

cc: Janet Pygeorge, Rodeo Citizens Association

643762.1

3.2.3 Letter B3 – Responses to Comments from Shute, Mihaly & Weinberger LLP

B3-1 The commenter is addressing the public review process. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. Although a response to this comment is not required, the County is responding in order to clarify CEQA requirements. See Master Response 2.1, which provides a detailed discussion of the requirements for the public review period for DEIRs and describes the public comment process and public participation activities for the proposed Project.

B3-2 The commenter states that data that is relevant to the RDEIR's air quality analysis was not included in the RDEIR. All of the supporting documentation and data referred to by the commenter, as well as the complete administrative record, were provided to the commenter in response to a March 19, 2014 Public Records Act request. The County has made all of the documents referenced or relied upon in the RDEIR available for public review, as required by CEQA. CEQA does not require that all reference materials be circulated for comment or be posted online for the duration of the public comment period, but that the RDEIR's reference documents merely be accessible to the public, and accordingly they have been available upon request. The RDEIR cites all the documents used in its preparation and they were included in the administrative record, but references cited within the RDEIR's referenced documents were not included, because CEQA does not require them to be.

B3-3 The commenter is addressing the public review process. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. Although a response to this comment is not required, the County is responding in order to clarify CEQA requirements. See Master Response 2.1, which provides a detailed discussion of the requirements for the public review period for DEIRs and describes the public comment process and public participation activities for the proposed Project.

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
601 GATEWAY BOULEVARD, SUITE 1000
SOUTH SAN FRANCISCO, CA 94080-7037

TEL: (650) 589-1660
FAX: (650) 589-5062
rkoss@adamsbroadwell.com

SACRAMENTO OFFICE
520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4721
TEL: (916) 444-6201
FAX: (916) 444-6209

DANIEL L. CARDOZO
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
LAURA E. HORTON
MARC D. JOSEPH
RACHAEL E. KOSS
JAMIE L. MAULDIN
MEGHAN A. QUINN
ADAM J. REGELE
ELLEN L. TRESCOTT

December 3, 2014

Via Email and U.S. Mail

John Kopchik
Director Department of Conservation and Development
Contra Costa County
30 Muir Road
Martinez, CA 94553
Email: john.kopchik@dcd.cccounty.us

Tiffany Lennear
Chief Clerk of the Board
Contra Costa County
651 Pine Street, 1st Floor, Rm. 106
Martinez, CA 94553
Email: tlenn@cob.cccounty.us

Via Email Only

Lashun Cross, Principal Planner, lashun.cross@dcd.ccounty.us

Re: Follow-up to Request for Extension of the Comment Deadline for Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File #LP12-2073 and SCH #2012072046)

Dear Mr. Kopchik, Ms. Lennear and Ms. Cross:

We are writing on behalf of Safe Fuel and Energy Resources California ("SAFER California") to follow up on our request for an extension of the December 5, 2014 comment deadline for the Recirculated Draft Environmental Impact Report ("RDEIR") prepared for the Phillips 66 Propane Recovery Project. As we explained in our December 1, 2014 letter, the California Environmental Quality Act ("CEQA") requires that all documents referenced or relied upon in an environmental review B4-1 B4-2

3105-013cv

document be made available to the public for the entire comment period.[1] Once materials are properly made available, CEQA requires a minimum of 45 days for public review and comment.[2]

B4-2

Our letter listed several documents which were not provided to us in response to our October 28, 2014 request for immediate access to all documents referenced or relied upon in the RDEIR. I spoke with Ms. Cross yesterday, who guided me to two of the document sets we requested, which were mislabeled on the CD that the County provided to us, including: (1) Phillips 66, 2014, Data Response #8, July 29, 2014; and (2) Phillips 66, 2012, Ambient Monitoring Data for 2009 through 2011. Not only were the files mislabeled, but unfortunately, the second document set (ambient monitoring data for 2009 through 2011) is not in a readable format and we cannot open the documents. Please provide the data in a usable format.

B4-3

Further, as I told Ms. Cross yesterday, the County also failed to provide other documents referenced or relied upon in the RDEIR, including the supporting data for Table 4.1-4 and Table 4.1-5. While the RDEIR lists sources for these tables, those sources do not contain the underlying data necessary to verify the figures and conclusions in the RDEIR. For example, Table 4.1-4 (heater baseline emissions) cites BAAQMD, 2012b as the reference source. However, BAAQMD, 2012b, which is the Initial Study for the Marine Terminal Offload Revision Project, does not contain the underlying data for the heater baseline emissions necessary to verify Table 4.1-4 (i.e., the heat rate and NOx CEMS data in a useable Excel spreadsheet).[3] Also, Table 4.1-5 (rail baseline emissions) cites Appendix B for the calculations used to estimate rail emissions associated with baseline butane shipments. Appendix B includes a table called Baseline Annual Rail Emissions from Butane Transport (see p. B-2), which cites Phillips 66, 2014d as the reference source. However, Phillips 66, 2014d contains the same information as Appendix B and neither Phillips 66, 2014d nor Appendix B provide the underlying data to verify Table 4.1-5 (i.e., the amount of butane recovered and shipped by rail from the refinery (barrels per each baseline year)).

B4-4

[1] *See* Pub. Resources Code, § 21092(b)(1); 14 Cal. Code Reg., § 15073.
[2] Pub. Resources Code, § 21091(a).
[3] I received an email from Ms. Cross this morning stating that Appendix C to BAAQMD, 2012b contains the data to support Table 4.1-4. However, Appendix C is not included in the BAAQMD, 2012d document that the County provided to us. If Appendix C does, in fact, include the heat rate and NOx CEMS data to support Table 4.1-4, please provide it to us in a useable Excel spreadsheet.
3105-013cv

Finally, the County failed to provide the underlying data related to Phillips 66 Marine Terminal III to support Tables 4.1-13 and Table 4.1-14 of the RDEIR. In response to my conversation with Ms. Cross yesterday regarding this information, she sent me Phillips 66's application to BAAQMD for the Marine Terminal III project. However, the application contains no emissions data or calculations. B4-5

The County still has not made all documents referenced or relied on in the RDEIR available for public review during the entire public review period, as required by CEQA. As I stressed in my previous letter and during my conversations with Ms. Cross, without access to all documents referenced or relied on in the RDEIR, the public cannot meaningfully review the RDEIR's analyses, conclusions and mitigation measures related to the Project's air quality, greenhouse gas emissions and public health impacts. Therefore, we reiterate our request that the comment deadline be extended 45 days from the date that all documents referenced or relied on in the RDEIR are made available for public review. B4-6 B4-7

Thank you for your attention to this matter. Please feel free to contact me at (650) 589-1660 to discuss further.

Sincerely,

Rachael E. Koss

REK:clv

3105-013cv

3.2.4 Letter B4 – Responses to Comments from Adams, Broadwell, Joseph & Cardoza

B4-1 The commenter is addressing the public review process. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. Although a response to this comment is not required, the County is responding in order to clarify CEQA requirements. See Master Response 2.1, which provides a detailed discussion of the requirements for the public review period for DEIRs and describes the public comment process and public participation activities for the proposed Project.

B4-2 The commenter states that all documents referenced or relied upon in an environmental review should be made available to the public. The County has made all of the documents referenced or relied upon in the RDEIR available for public review, as required by CEQA. CEQA does not require that all reference materials be circulated for comment or be posted online for the duration of the public comment period, but that the RDEIR's reference documents merely be accessible to the public, and accordingly they have been available upon request.

B4-3 As explained in a December 3, 2014 letter sent from Contra Costa County to the commenter, the documents provided are in a readable format. The ambient monitoring data for 2009 through 2011 can be opened with Microsoft Notepad, a free software program that is provided with all versions of Microsoft Windows. In addition, any of the files included with the ambient monitoring data can be opened with Microsoft Word.

B4-4 As explained in a December 3, 2014 letter sent from Contra Costa County to the commenter (see also Response B4-3), the underlying data for the heater baseline emissions has been provided. Although not in Excel spreadsheet format, the data can easily be copied into a spreadsheet. Similarly, the calculations used to estimate rail emissions have also been provided as part of the administrative record.

B4-5 The commenter claims that the County failed to provide the underlying data needed to support Tables 4.1-13 and 4.1-14 in RDEIR Section 4.1, *Air Quality*. However, the administrative record includes the data to support the values for the Phillips 66 Marine Terminal health risks as included in the tables cited.

B4-6 As explained in Contra Costa County's December 3, 2014 letter to the commenter, and in our Responses B4-3, B4-4, and B4-5, the RDEIR includes all relevant documents referenced and relied on for its preparation. See also Master Response 2.1.

B4-7 See Response B4-1 and Master Response 2.1.

Lashun Cross

From:	Marilyn Bardet <mjbardet@comcast.net>
Sent:	Thursday, December 04, 2014 11:20 AM
To:	Lashun Cross
Cc:	Greg Karras; Roger Lin; Andrés Soto; Diane Bailey; Jess Dervin-Ackerman; Ethan Buckner; BAAQMD coalition; Roger Straw; Katherine Black; Kathy Kerridge; Nancy Rieser; Agnes Ann Puntch; Teagan Clive; Teagan Clive; Jim Neu; Ed Ruszel; Jan Cox-Golovich; John_Gioia
Subject:	Comments on Recirculated DRAFT EIR for Phillips66 (Rodeo) "Propane Recovery Project"
Attachments:	Expert Rpt of G Karras112414.pdf; BSHC Response to DEIR 091514-2.pdf

December 4, 2014

TO: Contra Costa County Board of Supervisors

SUBJECT: Comment on the Recirculated DRAFT EIR for Phillips66 (Rodeo) "Propane Recovery Project"

Dear Ms. Cross,

This letter, submitted on behalf of Benicians for a Safe and Healthy Community [BSHC], represents formal endorsement of the official comments submitted by Communities for a Better Environment [CBE], the expert comments by CBE's senior scientist, Greg Karras, and the independent report of Phyllis Fox, Phd, on the recirculated DEIR for Phillips 66's proposed "Propane Recovery Project" for their Rodeo refinery and also, Phillips 66's twin project for their Santa Maria refinery in Nipomo, the "Rail Spur Extension Project." The obvious and necessary connection of Phillip 66's two proposed projects for their twin refineries is without question, if CEQA guidance with regard to evaluation of cumulative impacts of what are perceived by common sense and the law to be sequential or linked or "phased" projects has any meaning whatsoever. B5-1 B5-2

As a long-time civic activist in Benicia on public health and safety issues especially concerning air pollution and refinery safety, I co-authored extensive comments submitted by BHSC to the City of Benicia on the Valero Crude By Rail Project DEIR (comments submitted Sept. 15th and herewith included below). Having thoroughly reviewed Valero's CBR proposal and DEIR, I am well aware how the number and intensity of refinery expansion projects that are now under simultaneous review in our Bay Area region and in Southern California would inevitably further risk public safety and air quality, and that those cumulatively considerable negative impacts owing to the number of related projects have been both downplayed, falsely dismissed as "insignificant" or ignored by those projects' respective DEIRS.

In effect, it is our informed view that each project under current CEQA review is being erroneously presented as a "stand alone" without regard to cumulative impacts—*the additional risks, both acute and chronic, posed on a daily basis* that these projects in the aggregate, if approved, would represent to the respective host fenceline communities *and to surrounding communities* threatening public safety and further degradation of air quality locally and regionally. (For example the initial DEIR for the WesPac-Pittsburg LLC "Energy Infrastructure Project" for creating a rail, marine and pipeline import/export terminal operation at Pittsburg's waterfront gave no serious consideration to the proposal by Valero to also import crude oil by rail. Concomitantly, the DEIR for the Valero CBR project did not evaluate cumulative impacts that would accrue if the WesPac project were approved.) B5-3

The recirculated DEIR for the Phillips 66 Propane must discuss the credible, realistic, evidence-based "worst case" scenarios for public safety (increasing rail transport of LPG and refinery processing of heavy, sulfur-laden corrosive feedstocks) and the cumulative impacts to air quality from refining dirtier unconventional "extreme" diluted bitumen (tar sands dilbits). The statements made to industry investors by CEOs of Valero Energy Corp and Phillips 66 (for Phillips 66's linked Rodeo and Santa Maria refineries) have made clear that their projects intend the importation and processing of tar sands and/or Bakken oil, receiving those crudes by rail, marine vessel or pipeline. B5-4

The recirc DEIR for the Propane Recovery Project must evaluate the Santa Maria Rail Spur Extension Project's contribution to cumulative impacts, since it essentially constitutes a great part of "the whole" of the Propane Recovery Project, in that it would supply the Rodeo refinery via the energy-intensive circuitous routing of dilbits into Santa Maria via rail from Northern California and subsequent delivery for storage at Santa Maria then transport via pipeline back up to Rodeo for refining. Those cumulative impacts and risks, both acute and chronic, must be evaluated for how they would *daily add to existing safety threats and pollution impacts* to Bay Area and fenceline communities.

Impact analysis must include effects on residents and businesses located in documented "blast zone" areas surrounding rail routes carrying flammable gas liquids and crude oil as well as surrounding the location for the proposed extension and expansion of the existing LPG tank farm. Thus, impact analysis must take into full consideration the cumulative effects of *added risks* posed to local residents of Rodeo and to surrounding areas, including Crockett, Richmond, Martinez and Benicia. B5-5

Thank you for this opportunity to comment.

Respectfully,
Marilyn Bardet
333 East K Street
Benicia CA 94510
(707) 745-9094

3.2.5 Letter B5 – Responses to Comments from Benicians for a Healthy and Safe Community

B5-1 The commenter confirms that the comment letter is an endorsement of several other comments (see Appendix D for those letters). This comment is noted.

B5-2 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other refinery facilities. Also see Response B5-3, below.

B5-3 The commenter claims that the proposed Project is being evaluated as a "stand alone" project without regard to cumulative impacts. With regard to air quality, cumulative air impacts are addressed in the RDEIR for both criteria pollutants and health risks. The cumulative air impact analysis was conducted using guidance provided by the Bay Area Air Quality Management District (BAAQMD). In addition, BAAQMD has provided feedback, guidance, and review of the cumulative air quality analyses and agrees with the conclusions of those studies (see Comment A3-1). See also Master Response 2.2 and Master Response 2.6, which discusses cumulative impacts.

B5-4 See Master Responses 2.2, and 2.4, which discusses crude feedstocks in relation to the proposed Project and Response B5-3.

B5-5 Impacts associated with risks to the public are discussed in Section 4.9, *Hazards and Hazardous Materials* of the 2013 DEIR and in Section 4.6, *Hazards and Hazardous Materials,* of the RDEIR. See Master Response 2.5, which also discusses hazards, and Master Response 2.6, which discusses cumulative impacts.

Lashun Cross

From: Juanito H. Maravilla <maravilla@smwlaw.com>
Sent: Friday, December 05, 2014 2:55 PM
To: Lashun Cross
Cc: Janet Pygeorge (pypy@sbcglobal.net); Laurel L. Impett; Ellison Folk
Subject: Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073)
Attachments: Letter to L Cross re Phillips 66 Propane Recovery Project RDEIR.pdf

Ms. Cross:

On behalf of Rodeo Citizens Association, please find attached Letter re Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073) **WITHOUT** exhibits. Due to file size, we will also send a hard copy of the attached letter with a disc containing the exhibits to the letter via U.S. Mail.

We ask that you please confirm receipt of this email and are able to open the attached letter.

Thank you for your time on this matter.

Juanito Maravilla
Shute, Mihaly & Weinberger LLP
396 Hayes Street
San Francisco, CA 94102-4421
v: 415/552-7272 x 225
f: 415/552-5816
www.smwlaw.com

SHUTE, MIHALY
& WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
T: (415) 552-7272 F: (415) 552-5816
www.smwlaw.com

December 5, 2014

Ms. Lashun Cross, Principal Planner
Contra Costa County Department of
Conservation and Development
30 Muir Road
Martinez, CA 94553

Re: Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073)

Dear Ms. Cross:

We submit this letter on behalf of the Rodeo Citizens Association to provide comment on the Recirculated Draft Environmental Impact Report ("RDEIR") for the proposed Phillips 66 Propane Recovery Project ("Project"). It is our opinion that the RDEIR fails to comply with the requirements of the California Environmental Quality Act ("CEQA"), Public Resources Code § 21000 *et seq.* and the CEQA Guidelines, California Code of Regulations, title 14, § 15000 *et seq.*) ("CEQA Guidelines"). B6-1

To date, this firm has submitted four letters to the County identifying numerous deficiencies in the EIR.[1] We were optimistic that the County's decision to recirculate the EIR would lead to meaningful revisions in the analysis of and mitigation for the Project's extensive environmental impacts. Unfortunately, the RDEIR provides very few substantive revisions. Like its predecessor, the RDEIR fails to adequately identify, analyze, and mitigate the Project's significant environmental impacts. Thus, the EIR remains thoroughly inadequate, and cannot support approval of the Project. The County must, once again, revise the EIR and recirculate it for review and comment. B6-2

This letter does not seek to reiterate each of the issues identified in our prior letters. Few, if any of these issues are resolved in the new EIR. This letter therefore B6-3

[1] *See* letters dated August 9, 2013, November 18, 2013, November 22, 2014 and January 20, 2014.

highlights some of the EIR's most egregious deficiencies. In addition, we have reviewed the report prepared by Phyllis Fox, Ph.D., PE and Petra Pless, D. Env., for Adams Broadwell Joseph & Cardoza and concur with its analyses and findings. That report is hereby incorporated by reference into this letter. B6-3

As an initial matter, the County appears unwilling to provide the data and documentation necessary to verify the adequacy and accuracy of the Project's environmental impact analyses. This is an extraordinary complex project with complicated environmental review. Consequently, analyzing the sufficiency of the impact analyses has been quite time consuming. Within the last few days, we became aware that certain supporting data have not been made available in the RDEIR or its appendices. Without these data, we are unable to verify the accuracy of the air quality and health risk analyses. We immediately requested the relevant information. The County responded by stating that it had already provided the data and reference materials to us. Unfortunately, this is not the case. The County's failure to provide this critical information, or even access to this information, defeats the underlying purpose of an EIR to serve as an informational document. *See* Letter to Lashun Cross, dated December 3, 2014 and Letter from John Kopchik dated December 3, 2014, attached as Exhibit A. B6-4

I. The EIR's Project Description Remains Legally Inadequate.

An EIR must describe a proposed project with sufficient detail and accuracy to permit informed decision-making. *See* CEQA Guidelines § 15124. Indeed, "[a]n accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal.App.4th 713, 730 (1994), quoting *County of Inyo v. City of Los Angeles*, 71 Cal.App.3d 185, 193 (1977). As a result, courts have found that, even if an EIR is adequate in all other respects, the use of a "truncated project concept" violates CEQA and mandates the conclusion that the lead agency did not proceed in a manner required by law. *San Joaquin Raptor*, 27 Cal.App.4th at 730. Furthermore, "[a]n accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity." *Id.* (citation omitted). Thus, an inaccurate or incomplete project description renders the analysis of significant environmental impacts inherently unreliable. Here, the RDEIR fails entirely to meet this mandate. B6-5

Our prior letters requested that the EIR make publicly available the technical specifications regarding the proposed Project, including information about the refinery's existing and future crude supply. Rather than provide these details that are needed to B6-6

understand the Project and its environmental effects, the County still has not provided this information or even an explanation as to why it will not make the information available. B6-6

Making matters worse, the RDEIR identifies an important change in the description of the Project relating to the amount of propane and butane that would be recovered from the refinery operations. The prior EIR identified the Project as recovering 4,200 barrels per day of propane and 3,800 barrels per day of additional butane. DEIR at 3-23. The RDEIR, however, identifies the amount of propane and butane to be removed from the refinery as 14,500 barrels per day ("BPD") for a consecutive twelve month average. RDEIR at 3-33. This is a tremendous increase in the amount of propane and butane that would be recovered, yet the RDEIR does not identify the corresponding changes in the Project's operations, including, for example, the associated increase in the number of daily train trips. In addition, with this increase in the amount of propane and butane processed and recovered, the Project would be expected to result in greater environmental effects. These impacts include but are not limited to increased emissions from train operations, increased emissions from the use of propane and butane and increased risks to public safety resulting from the storage and transport of greater volumes of propane and butane. B6-7 B6-8

II. The RDEIR Fails to Describe the Refinery's Regulatory History and Record of Violations.

Like the original EIR, the RDEIR fails to disclose Phillip 66's Rodeo facility's record of legal and regulatory non-compliance. Based on our research, the Bay Area Air Quality Management District ("BAAQMD") issued the Rodeo facility at least 201 Notices of Violation between December 2003 and July 2014. *See* BAAQMD Compliance Memorandum dated May 5, 2011(attached to this firm's November 18, 2013 letter). In addition, the Rodeo refinery has had several incident reports since 2011.[2] *See* BAAQMD Incident Report Information attached as Exhibit B. B6-9

According to the U.S. Environmental Protection Agency ("EPA"), the Rodeo Refinery ranks as the 8th most toxic polluter of all California facilities with large

[2] Before 2013, these lists did not include each NOV issued, but noted facilities that had received one or more during a three-month reporting period. That means that for 2012 and the part of 2011 not included in your original number, we know that at least five new violations occurred, it is not possible to determine the exact number.

chemical releases. [3] Phillips 66 was ranked 11th on the Toxic 100 Air Polluters index. *See* Political Economy Research Institute Toxic 100 Air Polluters, attached as Exhibit C. This index, prepared by the Political Economy Research Institute, identifies the top U.S. air polluters among the world's largest corporations and ranks corporations based on the chronic human health risk from all of their U.S. polluting facilities.

B6-9

There can be no doubt that processing, storage and transport of increased amounts of propane and butane has the potential to result in increased public health threats and safety risks. In the absence of a thorough discussion of the refinery's existing regulatory and safety record, there is no evidentiary basis to conclude, as the RDEIR does, that the Project will result in less than significant public health and safety impacts.

III. The RDEIR, Like the Original EIR, Fails to Identify, Analyze and Mitigate the Project's Increase in Greenhouse Gas Emissions.

As we explained in our prior letters, the EIR fails to quantify the increase in greenhouse gas ("GHG") emissions that would occur from the use of the propane and butane that would be recovered by the refinery. The EIR incorrectly assumes that the Project's increase in GHG emissions would be offset by removing butane and propane from the fuel gas system and replacing it with natural gas. Yet, a reduction in GHG emissions would only occur if the propane and butane are not used as fuel, which is their usual end use.

B6-10

The RDEIR actually acknowledges that the combustion of propane and butane as a fuel source would result in GHG emissions. RDEIR at 4.5-13. Yet, the EIR suggests that these emissions cannot be estimated because Phillips 66 does not know the amounts of propane and butane that would ultimately be used and that such an estimate would require a substantial amount of speculation. RDEIR at 4.5-13. It is true that CEQA does not require analysis if an impact is too speculative for evaluation, but an agency is excused from this analysis only after it has conducted a "thorough investigation." CEQA Guidelines section 15145. Here, the EIR provides no evidence that *any* investigation was conducted.

B6-11

Certainly, Phillips 66 has some indication which retailers and wholesalers are likely to purchase the propane and butane recovered by the Project. We can find no

[3] *See* EPA Toxic Release Inventory Facility Report (California) available at http://www.epa.gov/region9/tri/report/11/tri-ca.html, accessed December 4, 2014.

logical explanation as to why the County could not then make a reasonable attempt at determining how the propane and butane would be used and calculating the expected emissions that would result from this use.

CEQA is clear that the County cannot evade its obligation to analyze the Project's increase in GHG emissions because the task is too difficult. Following this convoluted reasoning, the greater the environmental harm contemplated by an agency, the lesser the obligation of conducting environmental review. The California Supreme Court has clearly rejected such an approach. As explained by the Court in *Laurel Heights Improvement Ass'n of San Francisco v. Regents of the University of California*, 47 Cal.3d 376, 399 (1988), "[w]e find no authority that exempts an agency from complying with the law, environmental or otherwise, merely because the agency's task may be difficult." Rather, the County must "use its best effort to find out and disclose all that it reasonably can" regarding the Project's GHG emissions. *Citizens to Preserve the Ojai v. Ventura*, 176 Cal.App.3d 421, 431 (1986). The County must make some attempt to quantify the GHG emissions that would occur as a result of the recovered propane and butane. B6-11

IV. The RDEIR Fails to Adequately Analyze the Project's Cumulative Environmental Impacts.

A project has a significant cumulative effect if it has an impact that is individually limited but "cumulatively considerable." *Id.* §§ 15065(a)(3), 15130(a). "Cumulatively considerable" is defined as meaning that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." *Id.* § 15065(a)(3). Cumulative impacts analysis is necessary because "environmental damage often occurs incrementally from a variety of small sources [that] appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact." *Communities for a Better Env't v. Cal. Res. Agency* 103 Cal.App.4th 98, 114 (2002). Here, the RDEIR's analysis of cumulative impacts is incomplete, cursory and superficial. B6-12

The RDEIR identifies 14 potential projects for its cumulative effects evaluation. RDEIR at 5-5, Table 5-1. Yet, as with the original EIR, the RDEIR never actually examines the environmental impacts from these projects together with the impacts of the Phillips 66 Project. Of particular concern are the cumulative effects that would result from these projects' criteria air pollutant and GHG emissions. Set forth below are B6-13

examples of the many projects that would be expected to result in cumulatively significant air quality and/or GHG impacts.

Phillips Santa Maria Refinery Throughput Increase Project

Phillips 66 proposes a project at its Santa Maria Refinery ("SMR") facility that would increase the daily maximum limit of crude oil throughput by 10 percent, from 44,500 bpd to 48,950 barrels per day ("BPD"). Additionally, the 12-month rolling average of crude throughput would increase from 16,220,600 barrels per year ("BPY") to 17,866,750 BPY. *See* Phillips Santa Maria Refinery Throughput Increase Project FEIR at ES-2, excerpts attached as Exhibit D.

The SMR Throughput Project would result in a substantial increase in GHG emissions. The San Luis Obispo County Air Pollution Control District ("SLOCAPCD") identifies a 10,000 metric tons per year ("MT/yr") of carbon dioxide equivalent ("CO2e") threshold of significance for stationary-source projects. FEIR at 4.1-37. The SMR Throughput Project would result in a 20,470 MT/yr increase of CO2e, more than double the SLOCAPCD significance threshold. *Id.* at 4.1-45; 46. The FEIR proposes mitigation but explains that it is not clear that these emissions could be reduced to below the thresholds (at 4.1-47), which suggests that this increase in CO2e emissions would be a significant and unavoidable impact of the Project.

B6-13

Phillips Santa Maria Refinery Rail Project

Phillips 66 proposes a second project at its SMR facility that would include an eastward extension of the existing rail spur, a railcar unloading facility, and associated above-ground pipelines. *See* Phillips SMR Rail Project RDEIR at ES-4, excerpts attached as Exhibit E. Trains would deliver crude oil to the SMR for processing. The unloaded material would be transferred from the proposed unloading facility to existing crude-oil storage tanks via a new on-site above-ground pipeline. The proposed tracks and unloading facilities would be designed to accommodate unit trains and manifest trains. Unit trains consist of approximately 80 tank cars and associated locomotives. *Id.*

According to the SMR RDEIR, the Phillips Santa Maria Refinery Rail Project would result in an increase of 23,993 MT/yr of CO2e. RDEIR at 4.3-74. Although the SMR RDEIR purports to mitigate for this increase in GHG emissions, the mitigation measure is vague, unenforceable and lacks performance standards. *Id.* Consequently,

there is no evidence to support the RDEIR's conclusion that the SMR Rail Project's increase in GHG emissions would not be significant and unavoidable.

WesPac Pittsburg Energy Infrastructure Project, City of Pittsburg

The WesPac Pittsburg Energy Infrastructure Project would modernize and reactivate the existing marine terminal, oil storage and transfer facilities at the NRG Pittsburg Generation Station in Pittsburg, California. It would also construct a new rail car transload facility in an existing rail yard owned by BNSF Railway Company. Excerpts of the WesPac project RDEIR are attached as Exhibit F.

- The Westpac Project's construction-related activities would result in a significant and unavoidable increase in precursor organic compounds ("POC") and nitrogen oxide ("NOx") emissions. RDEIR at 4.0-44, 45, 4.0-53.

- Although not identified as significant (since the RDEIR provides no significance thresholds), the Project's construction-related GHG emissions in 2013, 2014 and 2015 would be 7,798 metric tons per year (MT/yr) of CO2e emissions. *Id.* at 5.0-13. The Project- related emissions would be 35, 441 MT/yr of CO2e emissions. *Id.* at 5.0-14. B6-13

Valero Crude by Rail, City of Benicia

The Valero Crude by Rail Project would enable the refinery to receive up to 70,000 barrels per day of crude oil by tank car. *See* excerpts of the Valero Benicia Crude by Rail Project DEIR at 3-1, excerpts attached as Exhibit G. The Project involves the installation of rail spur tracks, a tank car unloading rack, pumps, connecting pipelines, and infrastructure. If approved, the Valero Project would accept up to 100 tank cars of crude oil a day in two 50-car trains. The crude oil unloaded from the tank cars would be pumped to the existing crude oil storage tanks in the refinery via a new crude offloading pipeline, connected to existing piping located within the refinery. Valero would operate the Project components 24 hours per day, 7 days per week, and 365 days per year. *Id.* at 3-1.

- Construction of the Valero Project would result in an increase of 52 pounds per day of NOx emissions. *Id.* at 4.1-15. These emissions would remain unmitigated as they do not exceed the CEQA threshold of 54 pounds per day. *Id.*

- The Project's operational NOx emissions within the Yolo Solano and the Sacramento Valley Air Basins would be significant. *Id.* at 4.1-20.

- The Project would also result in a cumulatively considerable net increase of criteria pollutant emissions and this impact would be significant and unavoidable. *Id.* at 4.1-22.

B6-13

These are just a few of the projects that should have been included in the Phillip 66 Project's RDEIR's cumulative impact analysis. There are many other projects, including those identified in the RDEIR, that would be expected to contribute to cumulatively considerable increases in criteria air pollutant and GHG emissions. We can find no logical explanation for the RDEIR's failure to analyze the cumulative environmental effects from these projects.

B6-14

V. Additional RDEIR Deficiencies

- The RDEIR fails to identify the Rodeo refinery's existing criteria air pollutant and toxic air contaminant emissions. The document identifies baseline emissions only for the process heater, the steam power plant and rail. It does not identify baseline emissions for refinery operations, which will likely dwarf, the emissions from these other sources. These existing emissions are the basis against which the proposed Project's air quality and health risk impacts should have been assessed. Without these data, the EIR cannot do its job. *See, e.g.,* the Chevron Refinery Modernization Project EIR at 4.3-48 – 4.3-51, as an example of an EIR that appropriately identified baseline emissions. Excerpts of this document are attached as Exhibit H.

B6-15

- Like the original EIR, the RDEIR inappropriately takes credit for NOx emission credits that occurred in connection with the shutdown of process heater B-401. As we explained in our November 18, 2014 letter, these NOx emission reductions were already claimed to mitigate the Marine Terminal Project. Nonetheless, the RDEIR relies on these emission credits to conclude that the Project's NOx emissions would be less than significant. This is a fatal flaw which must be rectified in a revised EIR.

B6-16

- The RDEIR's analysis of the Project's operational rail-related emissions remains deficient. For reasons explained in the Fox/Pless report, the RDEIR substantially overstates baseline locomotive emissions. The average number of railcars loaded

B6-17

for the past three years is 4 cars per day rather than the 16 cars the RDEIR assumes. In addition, the Project would permit a far greater increase in propane and butane than acknowledged in the EIR. Consequently, the EIR underestimates the amount of emissions that would be generated by the hauling of these additional quantities of propane and butane. Finally, the EIR fails to identify or analyze the full extent of Project-related locomotive emissions because it only quantifies the increase in emissions from within the BAAQMD boundaries. B6-17 B6-18 B6-19 B6-20

- The RDEIR fails to adequately examine the Project's health risks and these impacts are likely to be significant. Notwithstanding the County's failure to provide the supporting documentation for the EIR's health risk assessment ("HSA"), it is clear that the HSA is severely flawed. For example, the HSA inappropriately relies on annual average toxic air contaminant ("TAC") emissions and therefore dismisses the risk that would be posed from short term emissions. In addition, the RDEIR substantially underestimates annual exports of propane and butane and thus the number of rail cars that would be in use as a result of the proposed Project. Consequently, the HSA substantially underestimates the rail-related diesel particulate emissions. Nor does the HSA take into account the potential for increased cancer rates resulting from the refinery's switch to Bakken crudes. As discussed in our November 18, 2014 letter, Bakken crudes contain much higher amounts of TACs including benzene than the crudes the refinery currently processes. B6-21 B6-22 B6-23 B6-24

- The RDEIR fails to evaluate the cumulative health and safety impacts from increased rail operations resulting from the Project and other refining-related rail travel. For example, the RDEIR's rail traffic accident analysis was based on historic 1990 to 2010 rail traffic. As the Fox/Pless report explains, nationwide crude oil shipments have increased from 10,800 car loads in 2009 to about 400,000 in 2013. Continued large increases are expected in 2014. These crude trains will be sharing the tracks with the Project's trains, which will result in a substantially increased risk of accidents. The EIR must be revised to take into account this dramatic increase in crude trains traveling through Rodeo. B6-25

- As discussed in our November 18, 2014 letter, the RDEIR inappropriately segments its environmental review. Philips 66 has developed or is in the process of developing certain projects at its Rodeo and Santa Maria facilities, which are inextricably linked to the proposed Project. By bifurcating environmental review B6-26

of these projects, the EIR substantially underestimates the relationship between these projects and their cumulative environmental effects. B6-26

VI. Conclusion

Like its predecessor, the RDEIR fails to comply with the requirements of CEQA. The Project will cause significant impacts that are not adequately addressed and mitigated in the RDEIR. On behalf of the Rodeo Citizens Association, we respectfully request that the RDEIR be revised to address these concerns, and that the revised document be recirculated, in order to comply with CEQA. B6-27

Thank you for consideration of our comments.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Laurel L. Impett, AICP, Urban Planner

Ellison Folk

cc: Janet Pygeorge, Rodeo Citizens Association

Exhibits:

Exhibit A — Letter to Lashun Cross, dated December 3, 2014 and Letter from John Kopchik dated December 3, 2014.

Exhibit B — BAAQMD Incident Report Information

Exhibit C	Political Economy Research Institute Toxic 100 Air Polluters
Exhibit D	Excerpts of the Phillips 66 Santa Maria Refinery Throughput Increase Project FEIR, October 2012
Exhibit E	Excerpts of the Phillips 66 SMR Rail Project RDEIR, October 2014
Exhibit F	Excerpts of the WesPac Pittsburg Energy Infrastructure Project RDEIR, July 2013
Exhibit G	Excerpts of the Valero Benicia Crude by Rail Project DEIR, June 2014
Exhibit H	Excerpts of the Chevron Refinery Modernization Project DEIR, March 2014

643583.1

3.2.6 Letter B6 – Responses to Comments from Shute, Mihaly & Weinberger LLP

B6-1 The commenter expresses a general opinion that the RDEIR is not compliant with CEQA. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B6-2 The commenter expresses a general opinion that the RDEIR is inadequate and does not properly analyze environmental impacts. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B6-3 The commenter describes and summarizes the contents of the comment letter. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B6-4 The commenter asserts that the County has not provided data and documentation, although they are not specific as to what this missing data is comprised of. The County has made all of the documents referenced or relied upon in the RDEIR available for public review, as required by CEQA. CEQA does not require that all reference materials be circulated for comment or be posted online for the duration of the public comment period, but that the RDEIR's reference documents merely be accessible to the public, and accordingly they have been available upon request. See also Response B3-2.

B6-5 The commenter asserts that the RDEIR project description is inadequate but does not provide any details as to what is inaccurate about the existing project description. This comment is noted.

B6-6 See Master Response 2.4.

B6-7 The design of the proposed Project in terms in the maximum amount of propane and butane that would be recovered has not changed subsequent to the 2013 DEIR. For details, refer to Master Response 2.4.

B6-8 The design of the proposed Project in terms in the maximum amount of propane and butane that would be recovered has not changed subsequent to the 2013 DEIR. For details, refer to Master Response 2.4.

B6-9 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but makes general observations about historical regulatory compliance at the Refinery. This comment is noted.

B6-10 As disclosed in RDEIR Section 4.5, *Greenhouse Gas Emissions* on page 4.5-13, the propane and butane that would be recovered by the proposed Project could be used as fuel or for non-fuel applications. Phillips 66 cannot be certain how the propane and

butane it would manufacture would ultimately be used due to the dynamic nature of the propane and butane marketplace; therefore, quantification of the associated net greenhouse gas (GHG) emissions would be speculative and inclusion of such information in this EIR is precluded by CEQA Guidelines Section 15145. However, for informational purposes, RDEIR pages 4.5-13 and 4.5-14 include discussions of how propane and butane could be used subsequent to being recovered and sold by Phillips 66 under the proposed Project and the general relationships such uses would have relative to the generation of GHG emissions.

The commenter's statement that a reduction in GHG emissions would only occur if the propane and butane are not used as fuel is not necessarily true. As stated on RDEIR page 4.5-13, propane is considered an alternative fuel because when combusted it has lower GHG emissions than other fuels, such as coal, home heating oil, fuel oil, diesel, kerosene, gasoline, and ethanol. Therefore, any propane generated by the proposed Project that would be used as a fuel could partially displace GHG emissions associated with these other fuels.

However, to clarify that the net decrease in GHG emissions would be associated with quantifiable emissions, the following revision has been incorporated to the last sentence of the third paragraph on RDEIR page 4.5-14:

> The proposed Project would result in a net decrease in <u>quantifiable</u> GHG emissions.

B6-11 The County has conducted a thorough investigation regarding the potential uses and associated GHG emissions that would be associated with the propane and butane that would be recovered by the proposed Project. Refer to RDEIR Section 4.5, *Greenhouse Gas Emissions*, pages 4.5-13 and 4.5-14 for a summary of the results of that investigation. As disclosed in the RDEIR, the County's investigation concluded that there would be a substantial amount of speculation involved in assessing the net change in GHG emissions associated with the combustion of butane and propane recovered by the proposed Project. Therefore, pursuant to CEQA Guidelines Section 15145, the County has not attempted to quantify the associated net GHG emissions.

B6-12 The commenter makes a general observation about the analysis of cumulative impacts in the RDEIR and asserts that this is inadequate. This comment is noted. See Master Response 2.6, which discusses cumulative impacts.

B6-13 See Master Responses 2.2, 2.4 and 2.6.

B6-14 See Master Response 2.6.

B6-15 The commenter states that the RDEIR fails to identify baseline emissions for the entire refinery. The commenter is correct in that the RDEIR identifies baseline emissions for those facets of the refinery that would change as a result of the proposed Project. The

RDEIR also shows the net emissions increases from the proposed Project, which is what is required to evaluate the significance of the Projects' air emissions.

B6-16 The commenter claims that the RDEIR inappropriately takes credit for Nitrogen Oxides (NO_x) emission credits that occurred from shutdown of process heater B-401. As stated on page 4.1-23, the Marine Terminal Offload Limit Revision Project permit issued by BAAQMD to Phillips completely offsets that project's 33.2 tons of NO_x per year emissions by committing to permanently shut down the B-401 process heater. However, the three-year average baseline emissions associated with the B-401 process heater equals 44 tons per year (244 pounds per day). Therefore, after offsetting the marine terminal project, there are 10.8 tons per year (62.3 pounds per day) of NO_x offsets available to reduce NO_x emissions for the Project. Those 10.8 tons of NO_x per year (62.3 pounds per day) were used to offset the Project's increase in NO_x emissions. Applicant Proposed Measure-1 (APM-1) on page 3-43 is designed to prevent Phillips 66 from using these NO_x credits for any other project.

B6-17 The commenter states that for the past 3 years the average number of railcars loaded is 4 per day, rather than 16 per day but does not provide any information to support this assertion.

Table 3-3 of the RDEIR shows existing and future railcar and truck usage. As the table shows, the *average* number of railcars will increase from an average of 8 to 12 per day to 16 to 20 per day, a net increase of 8 per day. Similarly, the *maximum* number of railcars per day will increase from 16 per day to 24 per day, also an increase of 8 per day. The emission estimates used in the RDEIR assume that locomotive engines would generate emissions associated with an increase of 12 railcars per day.

B6-18 The commenter asserts that the proposed Project would permit a greater increase in propane and butane than acknowledged by the RDEIR. The commenter does not provide any information to support this assertion. This comment is noted.

B6-19 The commenter states that the proposed Project underestimates emissions associated with hauling propane and butane. However, the railroad emissions are consistent with hauling 12 additional railcars per day.

B6-20 The locomotive emissions associated with hauling the additional 12 railcars per day were calculated for train trips within the boundaries of the BAAQMD. The County acknowledges that emissions could be generated outside of the Bay Area Air Basin related to the transport of propane and butane from the Refinery. In fact, the locomotive GHG emission estimates disclosed in the RDEIR represent those emissions that would be generated within the BAAQMD as well as those that could be generated within other areas of California for a conservative analysis. This is appropriate only for the GHG emissions analysis as opposed to air quality analysis because the effects of GHG emissions are not dependent on the location that the emissions are generated as are the effects of air quality emissions. For example, GHG emissions could be generated

anywhere on Earth and would have virtually the same effect on global warming. For the air quality analysis, evaluation of emissions outside of the San Francisco Bay Area are outside of the scope of this CEQA review because defining such emissions that could be generated within the various air basin jurisdictions would require the use of overly speculative assumptions related to the destination and routing of the propane and butane, which is currently not available.

B6-21 The County has supplied the supporting documentation for the RDEIR's Health Risk Assessment (HRA). That information is included in Tables 4.1-11, 4.1-12, 4.1-13, and 4.1-14, in the text accompanying these tables, and in Appendix B. The BAAQMD has reviewed the air quality analysis and health risk evaluation provided in the RDEIR and agrees with the conclusions of these studies (see Comment A3-1).

B6-22 The commenter states that the HRA inappropriately relies on annual average toxic air contaminant emissions and therefore dismisses the risk that would be posed by short-term emissions. This assertion is incorrect. As shown in Table 4.1-11, the RDEIR evaluates acute hazards for residents and workers, which are based on hourly emissions from the boiler. In addition, as shown in Table 4.1-12, the RDEIR also evaluates acute hazards for residents and workers associated with hourly emissions from increased use of the steam power plant (SPP).

B6-23 The proposed Project's emission estimates and resulting health risks associated with those emissions is based on an increase of 12 railcars per day and the resulting additional load placed on locomotives that would result from hauling those railcars. Consequently, the HRA accurately estimates potential health risks of diesel related emissions. The HRA has been reviewed by BAAQMD and BAAQMD has stated that it agrees with the conclusions of those studies (See Comment A3-1).

B6-24 See Master Response 2.4.

B6-25 See Master Response 2.4. See RFEIR Master Responses 2.6 (cumulative impacts) and Master Response 2.6 in the 2013 FEIR for a discussion on rail operations.

B6-26 See Master Response 2.2.

B6-27 The commenter expresses a general opinion that the RDEIR does not comply with CEQA, is inadequate and does not properly analyze environmental impacts. This is noted.

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1	Suzanne	A'Becket	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2	Alice	Abbott	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
3	Keren	Abra	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
4	Annette	Abrams	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
5	Sally	Abrams	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
6	Dawne	Adam	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.

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1327	Paul	Karsh	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. The "refinery corridor" along the Carquinez Strait is already an area with higher than normal rates of cancer, respiratory diseases, and auto-immune disorders. It is widely believed that the environmental pollution generated by the refineries along this strait is a major contributor to these illnesses. Any refinery expansion in this area will most likely make this situation worse. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1328	Annie	Kaskade	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1329	David	Kaskowitz	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1330	Bronte	Kass	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1331	Zoe	Kastl	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1332	Mary	Kastner	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.

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1848	Jennifer	Miller	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1849	Kylene	Miller	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. They bring in these tar sands primarily from Canada, whose population recognizes the PERMANENT and DEVASTATING environmental effects. Here in California, we just care about money. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. WE have a grossly inadequate fire department to deal with SIX additional tanks. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. We already have brownfields in Hercules, people are unwittingly living on them, and are warned NOT TO CONSUME VEGETABLES GROWN IN THEIR OWN YARDS. Do you really want to EXPAND the influence of companies unconcerned about the messes they created and DIDN'T CLEAN UP in the past? Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces TWICE the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected. WE really don't want to expand a dinosaur-era facility when the ill effects are so very obvious. Phillips has been VERY uncooperative in the past, and shirks it's social AND environmental responsibilities as a matter of course. Invest in clean energy, not the outdated and rapacious energy of the past. Please consider our health, and the future. SAY NO TO THE RODEO PROJECT. Thank you for reading my letter. As the parents of a young child, we're probably going to sell our home and leave Hercules, as the shortsightedness of our local government puts us all at an unacceptable risk. I am NOT the only one voicing this opinion, either. Vibrant growing community or fiscally degraded ghetto? Apparently, it IS your decision. Study this matter a bit further and make the RIGHT decision, say NO to this expansion!
1850	Laura	Miller	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1851	Laura	Miller	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1852	Melissa	Miller	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.no drilling anywhere!

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204	Marie	Bergen	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
205	Dan	Berger	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
206	Lowell	Bergstedt	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
207	Wendy	Berk	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
208	Madeleine	Berke	This proposal should not be approved before a thorough environmental review is conducted! The initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First, this proposal should not be reviewed in isolation. These proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
209	James	Berkheimer	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.

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1273	Marcia	Johnson	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities.I The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1274	Randy	Johnson	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1275	Sage	Johnson	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1276	Torger	Johnson	Please ensure a more thorough Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal to protect Bay Area communities and communities across California. The EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. The Phillips 66 Rodeo refinery produces twice the emissions of larger facilities. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. In the mean time reject these refinery expansion proposals.
1277	John	Johnston	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1278	John	Johnston	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.

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LP12-2073

	First Name	Last Name	Comments
1566	Amy	Li	Please implement a thorough and comprehensive environmental assessment!! I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1567	Karen	Liao	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1568	Pamela	Lichtenwalner	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1569	Naomi	Lidicker	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1570	Jim	Lieberman	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
1571	Alan	Liechty	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.

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Names and Comments
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Note: For address information,
see the "Names and Addresses" document

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2236	Suher	Rasid	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2237	Greg	Ratkovsky	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2238	Greg	Ratkovsky	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2239	Frank	Ratts	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2240	Karen	Ratzlaff	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2241	Robert	Raven	Do a full environmental report, including global warming impact, and health! We should be reducing and closing oil refineries, not expanding them! I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.

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2667	John	Stickney	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2668	Joanna	Stiehl	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2669	Wendy	Stock	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2670	Eve	Stocker	I am concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fence line. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional detailed analysis, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected. These safety risks are unacceptable, and this is even before one considers the climate-change-causing pollution this additional fossil fuel refining would result in. For all the reasons outlined above this project should be rejected.
2671	Luben	Stoilov	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.
2672	David	Stolowitz	I am deeply concerned that the initial Environmental Impact Report for the Phillips 66 Rodeo refinery expansion proposal fails to adequately assess the environmental, health and safety risks to Bay Area communities and communities across California. First and foremost, this proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion as in the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility, like the ones that injured eight people at a propane plant in Florida over the summer and that killed 15 workers in Texas in 2005, which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. The Rodeo project also risks significant water quality impacts. The project relies upon a once-through cooling system that the State wants to eventually decommission because of its significant impacts to water quality and biological resources. Lastly, the Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. In the end, I believe neither project is worth the risks and both should be rejected.

B7-4

3.2.7 Letter B7 – Responses to Comments from the Sierra Club

B7-1 This comment is a form letter submitted by the Sierra Club on behalf of 3,077 individuals (See Appendix D for all comments). The letter consists of one master comment that is repeated by each individual commenter. Individual differences do exist: however, they largely include personal statements, statements of opposition to the proposed Project and various other topics that are not subject to CEQA. According to the CEQA Guidelines (Section 15358 [b]), impacts to be analyzed in an EIR must be "related to physical changes" in the environment. CEQA Guidelines (Section 15131 [a]) do not directly require an analysis of a project's social or economic effects because such impacts are not, in and of themselves, considered significant effects on the environment. The guidelines state:

"Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes caused in turn by economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."

Comments expressed that are not subject to CEQA include: statements of opposition to the proposed Project, personal information and history, comments directed to the Contra Costa County Board of Supervisors regarding the merits of the proposed Project, general statements of opposition for oil development, fracking, oil and gas transportation by rail, and industrial pollution in general, general support for renewable energy development and increased efficiency, general comments about water availability and the drought, comments about gas prices and demand for fossil fuels, general statements about pollution in Contra Costa County, comments about personal health problems and asthma rates, comments about brownfields in Hercules, gas prices, comments about taxes and financial implications, comments that the proposed Project should be located away from population centers, comments about health hazards of living in Contra Costa County and how the area carries more risk than other areas and existing cancer clusters, request for a cost/benefit analysis to be performed, comments that the proposed Project is not needed, and requests for oil companies to be held accountable.

These comments do not address any concern or issues specifically related to the accuracy or adequacy of the RDEIR and are noted. Request for the proposed Project to be denied will be considered by the County but are not within the scope of the CEQA analysis. Such comments on the merits of the proposed Project will be addressed by the County after the environmental review has been conducted. General statements requesting a more in-depth analysis of all issues are noted; however, such comments provide insufficient facts or other details to allow the County to provide a substantive response.

Regarding the master comment submitted by the Sierra Club, the commenter expresses concerns that the EIR does not adequately assess impacts associated with the proposed Project related to the environment and health and safety. The commenter states that the document should have included an assessment of the Santa Maria Refinery expansion in the EIR for the proposed Project. See Master Response 2.2 for a discussion on the concept of 'piecemealing' and other projects. The commenter states that the EIR should assess risks associated with processing tar sands at the Refinery. See Master Response 2.4 which discusses crude feedstocks and the proposed Project.

The commenter notes that the proposed Project would take place in a liquefaction zone near the San Francisco Bay, which would increase the risk of a propane explosion. Potential impacts associated with liquefaction at the proposed Project site are discussed in RDEIR Section 4.4, *Geology and Soils*. See the 2013 FEIR Master Response 2.5, page 2-11. The commenter states that the proposed Project risks significant water quality impacts but does not specifically indicate how the RDEIR analysis is deficient. Impacts to water quality are addressed in RDEIR Section 4.7, *Hydrology and Water Quality*. The commenter notes that the proposed Project relies on a once-through cooling system (OTC) that the State wants to eventually decommission because of significant impacts to water quality and biological resources. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR. The commenter states that the proposed Project would exacerbate air pollution problems and that the BAAQMD HRA was not sufficient to assess health impact of the proposed Project. This comment does not provide sufficient detail for a detailed response. Impacts associated with criteria pollutant emissions and health risks were fully evaluated in RDEIR Section 4.1, *Air Quality*. The commenter asserts that the HRA does not analyze potential impacts from the use of tar sands but does not state why or provide data to support the assertion. See Master Response 2.4 and Response B6-23.

B7-2 This comment responds to Commenter 1327. See Response B7-1. The proposed Project does not propose any expansion of the Refinery. This comment is noted.

B7-3 This comment responds to Commenter 1849. See Response B7-1. The commenter echoes the common response and notes concerns about the ability of the Rodeo Hercules Fire Protection District to provide service to the proposed Project. The provision of fire protection services was discussed in Section 4.15, *Public Services* of the 2013 DEIR, which determined that the proposed Project would have no impact on the provision of fire protection services within or outside the Refinery. The propose Project would not affect service ratios or response times or increase the use of existing fire protection or emergency facilities such that substantial physical deterioration, alteration, or expansion of these facilities would occur. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR. This comment is noted. See Responses A4-1 through A4-7.

B7-4 This comment responds to Commenter 208, 1276, 1566, and 2241. See Response B7-1. The commenter also requests that a full environmental report, including global warming impacts and health be prepared. A complete EIR was prepared for the proposed Project and was circulated for public comment in June 2013. The EIR was recirculated in October 2014 and included additional/revised analysis of the following topics: air quality, biological resources, energy conservation, geology and soils, GHG emissions, hazards and hazardous materials, and hydrology and water quality. An analysis of GHG emissions and impacts of the proposed Project on global warming can be found in Section 4.8, *Greenhouse Gas Emissions* in the 2013 DEIR.

B7-5 This comment responds to Commenter 2670. See Responses B7-1, B7-2, and Master Response 2.5.

December 5, 2014

Lashun Cross
Principal Planner
Contra Costa County Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

Dear Ms. Cross,

Re: County File No: 2012072046 LP12-2073

As one of the co-founders of Crockett-Rodeo United to Defend the Environment (C.R.U.D.E.) I am submitting these comments to the P66 RDEIR.

Extensive written, public comments have been submitted to you this month by Communities for a Better Environment, Rodeo Citizens Association, the Fenceline Community Working Group and our fellow brothers and sisters from many of the fenceline communities along the refinery corridor. I know these parties have addressed thoroughly, and in much detail, the following subjects as they relate to the inadequacies of the RDEIR and the county's failure to follow proper environmental review and they are (but not limited to): B8-1

- Failure to acknowledge that the Rodeo Propane Recovery project (at the "back end" of the San Francisco Refinery) is only half of much larger project that begins actually begins at the "front end"

of the San Francisco Refinery in Nipomo. This project is piecemealed, in violation of CEQA.

The Rodeo RDEIR fails to acknowledge that the "front end" of the refinery (Nipomo) will be receiving Canadian Tar sands by barge, partially processing it at that facility (this is according to the DEIR that was submitted in San Louis Obispo County) and then will shoot the Tar Sands up to Rodeo in 2 ways:

- Through the underground pipeline that directly connects "front half" with the "back half"
- Via oil trains using commuter rail line

- Although Conoco Phillips (of which P66 is a subsidiary) is one of the largest exporters of Canadian Tar Sands …and in fact boasts publically that it intend to process Tar Sands at California refineries… it is silent in the Rodeo EIR about the switch to this particular type of crude feedstock.

B8-1

- The EIR lacks commitment to reducing the horrible emissions this project will cause. As our own U.S. Senator Barbara Boxer put it: *"Tar sands oil contains significantly higher levels of toxic pollutants than conventional crude oil – with 11 times more sulfur and nickel, six times more nitrogen, and five times more lead. The extraction, transport, refining, and waste disposal of tar sands oil have serious health impacts on communities: exacerbating respiratory ailments, aggravating heart disease, and even leading to premature deaths."*

- It fails to acknowledge the cumulative impacts of other refinery projects in the refinery corridor (Chevron, Shell, Tesoro, Valero and Pittsburgh's WesPac).

- It fails to address water treatment issues of the effluent discharge into the Bay.

- It fails to take seriously the consequences of locating the extended rail spur on an earthquake liquefaction zone immediately adjacent to the proposed propane storage tanks.

- It denies the obvious impacts to wildlife that edges both the project and up and down California rail lines.

B8-1

However, in this letter I submitting to you today, I will only focus on only two subjects not listed above:

- The inadequacy of addressing the danger of the fireball and percussive air blast zones
- The risk to down-track communities from oil trains

Not only is the RDEIR is coy in what information it shares about these two topics, it draws false conclusions from scant, cherry-picked data.

B8-2

BLAST ZONES:

The last go EIR go 'round, C.R.U.D.E. specifically asked for blast zone information to be superimposed on a map

of Rodeo. The County's response to our request was that, yes, in fact formulas existed but the community could figure it out for ourselves. That alone was a violation of CEQA, but undaunted C.R.U.D.E. followed the course suggested.

B8-2

C.R.U.D.E. researched the subject and found a paper written by a well-known engineer who actually consults for P66 (Michael Roberts). We presented the fireball and blast zone information, based on the formulas in Mr. Robert's paper, at a Board of Supervisor's meeting. We also presented the estimated mortality rates associated with those zones, again based on Mr. Robert's paper.

(http://www.efcog.org/wg/sa/docs/minutes/archive/2000%20Conference/papers_pdf/roberts.pdf)

B8-3

C.R.U.D.E. is happy to see that a fireball and percussive air blast zones map finally made it into this RDEIR (Figure 4.6-2) and that the zones match the blast zone map C.R.U.D.E. presented last year to the Board of Supes and published on our website, http://crockett-rodeo-united.com/p66-propane-project/

B8-4

But that is where the similarity ends. The RDEIR states that the risks of hazardous materials were primarily confined to "within the limits of the Refinery" (p.6.4-1) and ignores the "risks of hazardous material" exploding as a result of the BLEVE as widespread and would result in high mortality rates as outlined in Mr. Robert's paper.

B8-5

Experts, including Mr. Roberts, liken a large propane BLEVE to a small thermonuclear bomb. To make matters worse, the significant area that would be impacted by a BLEVE of a 2,500 gallon tank propane would be entire portion of Northwest Rodeo where the public lives, travels, shops, wine tastes, goes to church and send their young children to school. B8-5

P66 has a big problem: there is no buffer zone between the refinery and civilians, and that is a problem that no glossy EIR document can just wish away.

To be more specific:

1. The fireball zone (circle 1) encompasses a segment of San Pablo Avenue, one of two non-highway/back roads to Carquinez Bridge and Crockett. Should a civilian driver be driving on that particular stretch of that road when a blast occurs, the car driven will be melted instantly and the driver will be turned to ash. B8-6

2. The first percussive air blast zone (circle 2) will encompass about a mile of the same road, San Pablo Ave. Any civilian driving car in that area and all P66 employees in that radius will most likely be dead, as according to this paper. Concrete structures will collapse and death will be universal (100%) as the air from that blast will be so strong when it's pushed out from the center of the explosion that it will go down windpipes and burst lungs like balloons.

Let me be perfectly clear: all P66 employees, **including emergency responders** will die.

3. The second air blast zone (circle 3) death will be widespread (approx. 80%) due to the same causes. This area covers the entire section of Northwest Rodeo and includes a firehouse, a Head Start school, Water Treatment plant, several churches and restaurants, 1/3 of the downtown small business district, a school administration building, several thousand homes and one mile section of Interstate Highway 80.

B8-6

One can only conclude from this section alone, that neither the County nor P66 wants to admit, publically, that the consequence of an explosion to 3,000 people…80% of them will be killed instantly in an explosion…. as significant.

INCREASE RISK IN ROLLING BOMB TRAINS

The EIR further downplays any danger of trains puncturing, derailing and turning into BLEVES. It in facgt cherry picks 2 decades of uneventful train data ending in the year 2010.

B8-7

Yet the rolling bomb trains that exploded in Lake Megantic Quebec (killing 47 people), Casselton North Dakota and in Western Alabama occurred just in the past few years – outside of P66's carefully selected index window. And in fact:

- In 2012 federal agencies tallied a 44% in increase in oil trains.
- In 2013 that number continued to rise again by 13%.
- Governor Brown advised Californians that oil train traffic will increase 10 fold by 2020 – six years from now.
- Federally proposed train safety upgrades will not go into effect for 7 years.
- The proposed expanded rail spur is located on a liquefaction zone, 7 miles as the crow flies, from the Hayward fault.

B8-7

This RDEIR is seriously flawed. I urge you to completely deny this project.

B8-8

Nancy Rieser, Co-founder of C.R.U.D.E.
444 Alhambra Street, Crockett.

3.2.8 Letter B8 – Responses to Comments from Crockett-Rodeo United to Defend the Environment

B8-1 The commenter summarizes topics already commented on by other groups and provides an introductory statement about their comments. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B8-2 The commenter notes that they requested data pertaining to the blast zones associated with the proposed Project during the public review of the 2013 DEIR. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B8-3 The commenter notes that they found data regarding fire ball and blast zones and presented the data to the Contra Costa Board of Supervisors. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B8-4 The commenter notes their approval of the blast zone data being included in the RDEIR. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B8-5 Risks associated with a potential explosion or boiling liquid expanding vapor explosion (BLEVE) as a result of the proposed Project can be found in Section 4.6, *Hazards and Hazardous Materials* of the RDEIR under Impact 4.6-1. Figures 4.6-1 and -2 visually depict the existing hazard zones associated with the Refinery and those associated with the proposed Project. Figure 4.6-3 shows that the hazard zone associated with the proposed Project would be smaller than the existing hazard zone. See 2013 FEIR Master Response 2.3 and Master Response 2.5 which provide additional discussion of hazards.

B8-6 The commenter provides a summary of the hazard zones and lists sensitive receptors within those zones and describes potential impacts resulting from an accident. See Master Response 2.5.

B8-7 The commenter states that the RDEIR "cherry picked" data to exclude recent accidents. Pursuant to CEQA Section 15125, Environmental Setting, "(a) An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published". The Notice of Preparation for the proposed Project was published on July 24, 2012 and therefore data available at that time and during the preparation of the 2013 DEIR (published June 2013) and during the preparation and publication of the RDEIR (published October 2014) was utilized in the document. Data for 2012 and 2013 were not publically available during preparation of the 2013 DEIR and FEIR and the RDEIR.

B8-8 The commenter states their opinion that the RDEIR is flawed but does not state why or provide sufficient information for a detailed response. This comment is noted.

COMMUNITIES FOR A BETTER ENVIRONMENT

CENTER for BIOLOGICAL DIVERSITY

ForestEthics

SIERRA CLUB FOUNDED 1892

December 5, 2014

Lashun Cross, Principal Planner
Contra Costa County Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

VIA EMAIL
lashun.cross@dcd.cccounty.us

Re: CBE et al. Comments on Phillips 66 Rodeo Refinery Propane Recovery Project Recirculated Draft Environmental Impact Report (State Clearinghouse #2012072046, County File #LP12–2073)

Dear Ms. Cross,

The recirculated draft environmental impact report ("RDEIR") for the Phillips 66 Propane Recovery Project ("Project") still fails to disclose that this is a tar sands crude by rail project. The RDEIR does not correct several deficiencies of the prior draft report, and fails as an informational document under the California Environmental Quality Act[1] ("CEQA") for the additional reasons explained herein. B9-1

The Phillips 66 Rodeo facility is the "back end" of the Phillips 66 San Francisco Refinery ("SFR"). The "front end" is the company's Santa Maria facility, which performs severe processing of oil streams that are then piped to the SFR's Rodeo facility to make into profitable engine fuels. This Project enables the SFR to permanently switch to refining tar sands oil. At Santa Maria, a rail expansion allows the company to get tar sands "dilbit" oils by rail, enabled by the facility's throughput expansion. At Rodeo, this Project relies on the change in oil processing and the SFR's crude slate to be comprised primarily of a different feedstock, in order to allow sufficient resultant byproducts that are otherwise uneconomic to dispose of, to be recovered and sold.[2] The RDEIR, however, still denies the Project's segmentation from this larger project and therefore hides serious local pollution, climate pollution and chemical safety hazards from the public and its own workers. Accordingly, on behalf of Communities for a Better Environment, the Center for Biological Diversity, the Sierra Club and ForestEthics, we request an adequate environmental review of the Project, which is not reflected in the RDEIR. B9-2

[1] Pub. Res. Code § § 21000 *et seq.*
[2] The Phillips 66 Rail Spur Extension and Crude Unloading, Throughput Increase, and Propane Recovery Projects.

As set forth below and in Attachments A-D, which includes the new expert report of Greg Karras ("Karras Rodeo Report 2," Attachment A), the RDEIR suffers from numerous deficiencies that render it inadequate under CEQA and the CEQA Guidelines.[3] We respectfully request that Contra Costa County ("County") reject the RDEIR as an environmental review document, and defer approval of the Project until such time as the RDEIR is revised to comply with CEQA, which includes following the procedures detailed in section I addressing lead agency review of piecemealed projects. B9-3

An EIR is "the heart of CEQA."[4] "The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project."[5] The EIR "is an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return. The EIR is also intended 'to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.' Because the EIR must be certified or rejected by public officials, it is a document of accountability."[6] The RDEIR for the proposed Project still fails entirely to live up to this mandate, and therefore, violates CEQA and several principles of Environmental Justice. B9-4

I. THE COUNTY HAS FAILED TO FOLLOW THE PROCEDURE FOR ENVIRONMENTAL REVIEW OF THIS PROJECT.

On November 19, 2013, the County Planning Commission certified the draft EIR for the Project. Both CBE and the Rodeo Citizens Association ("RCA") timely appealed that determination to the County Board of Supervisors. CBE requested recirculation of the Project EIR to correct numerous deficiencies. In June 2014, the County Board of Supervisors ordered recirculation of the Project EIR. The RDEIR is currently proposed for hearing before the Board of Supervisors on December 19, 2014. This denies the public of one administrative level of appeal. In addition, environmental review of the larger project that this Project is a part of should have proceeded at a programmatic level. B9-5

A. The County's Environmental Review of the Project Does not Meet CEQA's Goals of Informed Decision Making Through Public Participation.

If, subsequent to a period of public and interagency review, the lead agency adds significant new information to an EIR, the agency must issue new notice and must recirculate the revised EIR, or portions thereof, for additional commentary and consultation, and the revised environmental document must be subjected to *the same critical evaluation that occurs*

[3] 14 Cal. Code Regs. § § 15000 *et seq.*
[4] *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 392 ("*Laurel Heights I*").
[5] Pub. Res. Code § 21061
[6] *Laurel Heights I*, 47 Cal. 3d at 392 (citations omitted).

in draft stage, so that public is not denied opportunity to test, assess, and evaluate data and make an informed judgment as to validity of conclusions to be drawn therefrom.[7]

The procedure followed by the County for recirculation has deprived the public of these procedural safeguards. Certainly, this matter is only before the Board of Supervisors because of the appeals of RCA and CBE. CBE requested recirculation of the DEIR; recirculation should have returned this matter to the original administrative level of review for all draft EIR's, which is the Planning Commission. To leave this matter at the Board of Supervisors skips an important administrative level that also provides "critical evaluation." Anything else does not guarantee the same procedural safeguards as at the traditional draft stage of an EIR. For instance, some of the parties that join this comment did not participate at lower administrative levels of this proceeding; yet at the same time, those parties are providing public comment on the draft environmental impact report. Consequently, should the Board of Supervisors deny CBE's appeal, those parties would be denied an administrative level of appeal. Caselaw is clear that such a scenario would not exist had recirculation returned environmental review to the administrative body for the same "critical evaluation that occurs in the draft stage."[8]

B9-5

B. Environmental Review Should Proceed Under a Program EIR.

"A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one larger project."[9] Emphasized throughout this comment, is the crucial fact that the Project is piece-mealed and cannot achieve its objective independently without the Santa Maria components of the SFR.

As the Project is part of "one larger project," it would be more appropriate to analyze it under a Program EIR. This has several advantages: providing a more exhaustive consideration of effect and alternatives than would be practical in an EIR, ensuring adequate consideration of cumulative impacts that "might be slighted in a case-by-case analysis," allowing for an earlier and more practical consideration of mitigation measures, and saving considerable agency resources.[10]

B9-6

Where there could be more than one lead agency, as in this case, the lead agency which acts first on the project shall be the lead agency.[11] On June 8, 2010, the County of San Luis Obispo Planning and Building Department issued the Notice of Preparation for the Refinery Throughput Increase Project. On July 24, 2012, the Contra Costa County Department of Conservation and Development issued a Notice of Preparation and Scoping Session for an EIR for the Phillips 66 Propane Recovery Project. On July 8, 2013, the County of San Luis Obispo Planning and Building Department issued the Notice of Preparation for the Rail Spur Project. The County of San Luis Obispo Planning and Building Department acted first with the first

[7] *Save our Peninsula Committee v. Monterey County Board of Supervisors* (App. 6 Dist. 2001) 104 Cal.Rptr.2d 326 (emphasis added). *See also* CEQA Guidelines 15162, 15163 and 15164.
[8] *Id.*
[9] CEQA Guidelines § 15168.
[10] *Id.*
[11] CEQA Guidelines § 15051.

component of this project, the Throughput Increase project, and is therefore the appropriate lead agency for a program EIR.

Consequently, pursuant to the CEQA Guidelines, it would not only benefit both Counties, but also the potentially affected workers and communities, to withdraw this RDEIR and move forward under a programmatic EIR approach. This would also yield a more accurate assessment of the significant and cumulative impacts and mitigation measures for all communities affected by the SFR's switch to refining tar sands. B9-6

II. THE RDEIR's PROJECT DESCRIPTION IS INADEQUATE

Two fundamental defects pervade this environmental review document: the failures to disclose both the switch in a fundamental refining process - refining tar sands - and the full scope of this project. The RDEIR's consequent analysis of Project impacts is wholly underestimated and inadequate under CEQA. In addition, although the RDEIR asserts a goal of reducing emissions of SO_2, this may simply prove an illusory promise. B9-7

A. The Project Description Fails to Disclose an Industry Shift to a Different Quality Crude Feedstock

In order for an environmental document to adequately evaluate the environmental ramifications of a project, it must first provide a comprehensive description of the project itself. "An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR."[12] As a result, courts have found that, even if an EIR is adequate in all other respects, the use of a "truncated project concept" violates CEQA and mandates the conclusion that the lead agency did not proceed in a manner required by law.[13]

Furthermore, "[a]n accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity."[14] Thus, an inaccurate or incomplete project description renders the analysis of significant environmental impacts inherently unreliable. While extensive detail is not necessary, the law mandates that EIRs should describe proposed projects with sufficient detail and accuracy to permit informed decision-making.[15] The RDEIR's Project Description still fails to meet this standard by still failing to disclose a switch in crude oil feedstock that this Project would enable at the Rodeo refinery. The Project proposes to install and modify operations at the Refinery. It proposes to install a hydrotreater, recovery columns, pressure storage bullets, and a rail loading spur and rack, and would expand Phillips' once-through cooling ("OTC") system.[16] The RDEIR must disclose *every* purpose for each of these components, not just one – recovery of LPG.[17] This is especially the case given the fundamental and interrelated link between refinery crude B9-8

[12] *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 730, quoting *County of Inyo v. City of Los Angeles* (1977) 71 Cal. App. 3d 185, 193.
[13] *Id.* at 730.
[14] *Id.* (citation omitted).
[15] *See* CEQA Guidelines, §15124 (requirements of an EIR).
[16] *See* RDEIR Project Description and Karras Revised Rodeo Report, December 2014 (Karras Rodeo Report 2).
[17] *See* CBE et al. v. City of Richmond,

feedstock, the processing of that feedstock, and the production of LPG.[18] The RDEIR must disclose that this Project is a tar sands project.

The currently proposed Rail Spur Extension at the SMF would allow the SFR to receive tar sands crude by rail.[19] However, the SMF cannot fully process that feedstock for sale. The currently proposed Throughput Increase Project at the SMF would increase the SMF's crude processing rate.[20] This increased volume of oil is partially refined and then sent via Phillips' own pipeline directly to Rodeo. To fully refine these semi-refined oils at Rodeo requires increased coking and other processing. Moreover, publicly verifiable data in the record indicates that the Project cannot recover sufficient LPG without additional cracking process feedstock, additional LPG-rich feedstock, or both, in order to yield the anticipated 14,500 bpd LPG.[21] The RDEIR attempts to provide information to contradict this fact: for instance, it makes assertions regarding "vapor pressure limits" and provides data to support the contrary. As noted further below and in the revised Karras and Fox expert reports, those assertions are incorrect and misleading.

> "Ultimately, the RDEIR's assertion that the Project "would not require the Refinery to change the basic feedstocks that are currently received and processed" because it "does not propose to increase the production of propane or butane" is unsupported and wrong because it ignores ongoing changes in crude feedstock."[22]

B9-8

Instead of disclosing these fundamental process changes, the RDEIR's Project Description is misleading. From the outset, the RDEIR asserts that the Project would not have "any effect on the types and/or quantities of crude oil feedstocks that can be processed," does not "propose to add, change, or modify the operation of other process units, such as the coker" and "has no connection to the transportation of crude oil by rail."[23] Instead, the RDEIR project description, and therefore subsequent analysis, focuses primarily on propane and butane recovery and eventual sale.[24] It states: (the) "main objective for the proposed Project is to have the capability to recover propane and to recover more butane for sale, thus producing more products from the crude oil it currently refines.[25] The RDEIR Project Description even admits the link between feedstock "currently refined" and production of LPG. To the contrary, the RDEIR's narrowed analysis then diminishes the true intent and scope of the Project. This Project expressly enables and locks in refining of tar sands at the SFR: "tar sands oils would likely dominate the new crude source."[26]

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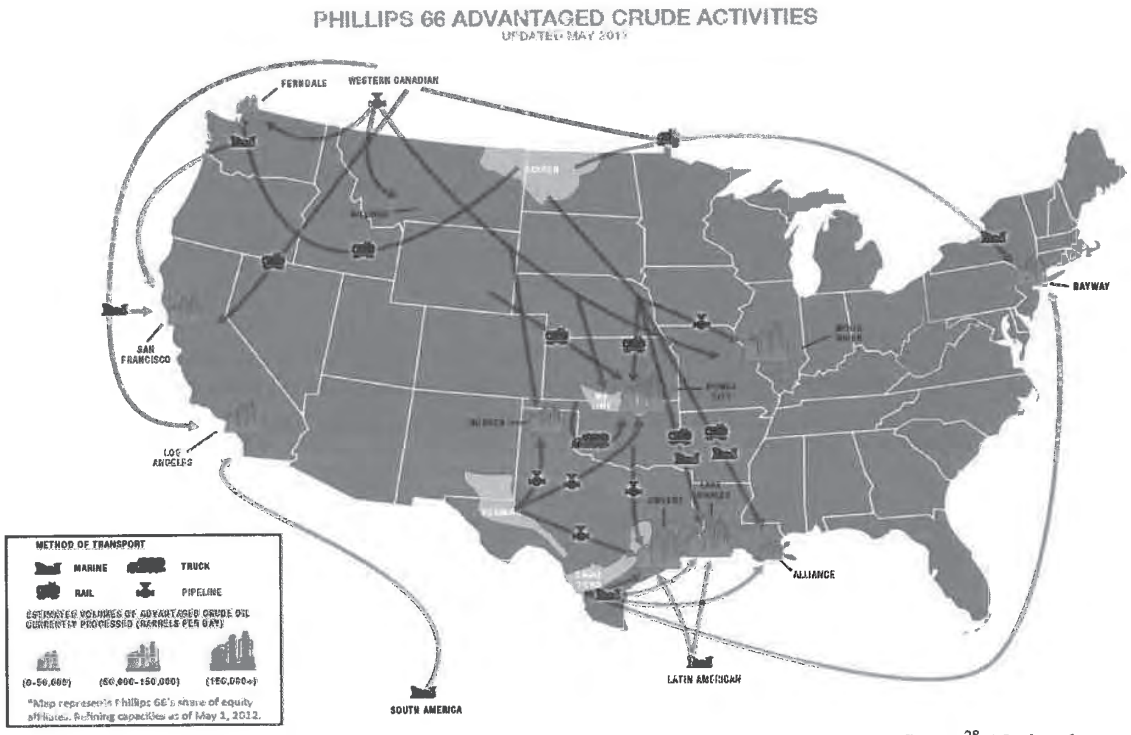
[18] Karras Rodeo Report 2 at 5.
[19] *See Id.* and P66 Santa Maria Rail Spur Extension RDEIR and comments on the RDEIR available at http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/Phillips_66_Company_Rail_Spur_Extension_Project.htm.
[20] *Id.*
[21] Karras Rodeo Report 2 at 5-6.
[22] *Id.*, citing RDEIR at 3-28.
[23] *Id.* at 3-7.
[24] *See Id.* at 3-5, and this comment for discussion of the reduced sulfur emissions and the use of Emission Reduction Credits.
[25] *Id.*
[26] Karras Rodeo Report 2 at 3.

Phillips 66 is currently in the process of implementing a series of projects to allow a switch to refining what its management terms, "advantaged crude." The company emphasizes: "(the) opportunity that we have…is to get…Canadian crudes down into California…We're looking at rail to barge to ship, down to the West Coast refineries..."[27] The map immediately below details this strategy.



Phillips 66 map indicating plans to transport Western Canadian crude oil to San Francisco Refinery.[28] Notice that the icon labeled "San Francisco" identifies the San Francisco Refinery, which includes the Santa Maria facility.

In fact, the company has no choice but to seek such an alternative supply of crude oil feedstock. As stated in the recirculated EIR for the Phillips 66 Santa Maria Rail Spur Extension Project:

> In the long-term, the need for the SMR rail project could be driven by declines in local production of crude oil that can be delivered by pipeline. Production from offshore Santa Barbara County (OCS crude) has been in decline for a number of years. Oil production in Santa Barbara County (both onshore and offshore) peaked at about 188,000 barrels in 1995 (County of Santa Barbara Energy Division website) and

B9-8

[27] September 12, 2013 Transcript, pdf 7, available at: http://www.phillips66.com/EN/investor/presentations_ccalls/Documents/Barclays_091213_Final.pdf.

[28] Phillips 66 Advantaged Crude Activities: Updated May 2013, available at: http://www.phillips66.com/EN/Advantaged%20Crude/index.htm.

currently production is around 61,000 barrels per day for both onshore and offshore oil fields (BOEM Pacific Region and Drilling Edge websites).[29]

This decline in locally available crude stands in stark contrast to the Santa Maria Facility's recent Throughput Expansion that enables the Santa Maria facility to process more crude oil. Certainly, the RDEIR makes a bold assertion: "Phillips 66 expects to continue to receive, blend and process a comparable range of crudes in the future."[30] At the same time, however, those diminishing local sources make up the "bulk" of the crude oil currently processed at the Santa Maria facility.[31]

At the other end of the SFR, the Rodeo facility has two options for receipt of crude oil feedstock: the pipeline to the Santa Maria facility; and the Rodeo refinery's wharf. The latter, however, is limited to 51,182 bpd.[32] The Rodeo facility must rely on the pipeline deliveries from the Santa Maria facility to meet remaining capacity.[33] Those Santa Maria facility deliveries include tar sands crude or its derivatives. If the Santa Maria facility is replacing one feedstock with another, so must the Rodeo facility. A more accurate project description must admit that the company is *replacing* one feedstock with another at the (overall) SFR.

B9-8

In addition, the County must note the extent of this shift in feedstock:

> "…our plan promises…availability and supplies in North America…we're disappointed in the progress to permit our Santa Maria rail rack 40,000 a day, but we have – we're optimistic that we'll get that done. It just takes time in California to get these things permitted…we're making progress in terms of put advantaged crude to the front of our refineries in California."[34]

Bloomberg news service reported that "Phillips's moves will bring a variety of U.S. and Canadian crudes to refineries around the country via pipeline and rail" and that "Phillips's Rodeo refinery near San Francisco could also receive crude deliveries, displacing imports from outside North America."[35]

The company has expressed a clear priority to switch to refining tar sands at the SFR, a priority not only diminished but denied by the RDEIR. Consequently, the RDEIR's omission of this switch to a very different crude oil feedstock violates CEQA in leaving several significant impacts unanalyzed.[36] It is impossible to provide any intelligent evaluation of the

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[29] RDEIR at 2-36.
[30] *Id.* at 2-33.
[31] *Id.* at 2-35.
[32] Karras Rodeo Report 2 at 7.
[33] *See Id.* at 12.
[34] *See* Phillips 66 Presentation to Barclays CEO Energy Power Conference, September 2014, *available at* http://investor.phillips66.com/files/doc_presentations/2014/PSX-BarclaysCEOConfTransSept2014.pdf
[35] *Phillips 66 Signs Deals to Boost Oil Deliveries by Pipe, Rail*, Mar 20, 2013, available at: http://www.bloomberg.com/news/2013-03-20/phillips-66-signs-deals-to-boost-oil-deliveries-by-pipe-rail.html.
[36] *See Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm'rs* (2001) 91 Cal.App.4th 1344, 1355 ("the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process").

potential environmental effects and risks to community and worker health and safety of refining Canadian tar sands in Rodeo, unless the RDEIR *first* discloses the extent of the replacement of feedstock that the Project enables.[37] At a minimum, the RDEIR should have established how this Project would affect the scope and degree of the company's use of tar sands in Santa Maria, and subsequently Rodeo, and evaluate its resulting impacts.[38] Until such adequate disclosure occurs, the Project Description is inaccurate, incomplete and renders the analysis of significant environmental impacts inherently unreliable.[39]

The distinction in crude oil feedstock matters. The chemical composition of raw materials that are processed by a refinery directly affect the amount and composition of the refinery's emissions.

> The amount and composition of sulfur in the crude slate, for example, ultimately determines the amount of [sulfur dioxide] that will be emitted from every fired source in the refinery and the amount of odiferous hydrogen sulfide and mercaptans that will be emitted from tanks, pumps, valves, and fittings. The composition of the crude slate establishes the CEQA baseline against which impacts must be measured.[40]

B9-8

Other significant impacts, such as increased energy consumption, air emissions, toxic pollutant releases, flaring and catastrophic incident risks, are also entirely dependent on the quality of crude oil processed at the facility.[41] As detailed further below, a heavier crude oil feedstock has also been identified as a contributing factor to potentially catastrophic incidents at refineries, and a root cause of the August 6, 2012 fire at the Chevron Richmond Refinery.[42] By failing to disclose this Project-related feedstock switch and providing a sufficient analysis of resulting impacts, the RDEIR fails as an informational document.

Finally, at the close of the June appeal hearing, the Board of Supervisors also requested that the recirculated Project EIR address any connection that this Project has with the WesPac Infrastructure Project currently proposed in Pittsburg, California. This echoes the concerns of the Attorney General and CBE. We had previously submitted supplemental evidence in support of our appeal of this matter. One such submission included a letter from the Attorney General requested whether the Rodeo refinery would receive crude oil feedstock shipments from the proposed WesPac facility. Although the RDEIR provides a brief description of the

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[37] *See Id.*, see *also, Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4 70, 89 (holding that an EIR is insufficient where it obscures the project's enabling of a refinery to process heavier crude).

[38] *Id.*

[39] *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722 (the failure to include relevant information relating to a project's components precludes informed decision making, thwarting the goals of the EIR) and *see* Karras and Fox-Pless Revised Santa Maria Reports.

[40] Fox Rodeo Report at 13.

[41] *See* Fox Rodeo Report, Fox Valero Report and Karras Rodeo Report at 11-13.

[42] *See* Chemical Safety Board, Chevron Richmond Refinery Interim Investigation Report, April 2013, available at: http://www.csb.gov/assets/1/19/Chevron_Interim_Report_Final_2013-04-17.pdf.

Energy Infrastructure Project,[43] it does not go into any further detail regarding any potential link with the Rodeo facility. B9-8

B. The Project is Piecemealed.

Phillips 66's Santa Maria and Rodeo facilities are interdependent. One cannot function without the other. If major reconfigurations occur at both facilities at the same time and those modifications require each other, then they must be part of the same project. CEQA requires that an EIR describe the entirety of a project, including reasonably foreseeable future actions that are part of it.[44] Illegally "chopping a large project into many little ones" creates a narrow view of a project and "fallacy of division…that is, overlooking a project's cumulative impact by separately focusing on isolated parts of the whole."[45] Certainly, any permit by permit review, where those permits constitute a larger project, forecloses this essential focus on cumulative impacts, and also, impacts to already overburdened and vulnerable populations.

In *Laurel Heights I*, the Supreme Court established the following test: while an EIR need not include speculation about future environmental consequences of a project, the "EIR must include an analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effect."[46] Under this standard, "the facts of each case will determine whether and to what extent an EIR must analyze future expansion or other action."[47] A project proponent must analyze future expansion and other such action in an EIR if there is "telling evidence" that the agency has either made decisions or formulated reasonably definite proposals as to such future activities.[48] Further, there must be discussion "in at least general terms" of the future activity, even if the project is contingent on uncertain occurrences.[49] B9-9

This Project wholly depends on both the throughput expansion project and the critical front end of the SFR, the Phillips 66 Santa Maria facility. The SFR consists of two facilities linked by a 200-mile Phillips-owned pipeline. The Santa Maria facility is located in Arroyo Grande, in San Luis Obispo County, while the Rodeo facility is located in Rodeo, in Contra Costa County. "The Santa Maria Refinery and the Rodeo Refinery, linked by the company's own pipeline, comprise the San Francisco Refinery…Semi-refined liquid products from the Santa Maria Refinery are sent by pipeline to the Rodeo Refinery for upgrading into finished petroleum products."[50] The refining processes at Phillips 66's Santa Maria and Rodeo facilities are integrated to a capacity that neither can achieve alone.[51] Further, Phillips 66 reports these

[43] *See* RDEIR at 5-5.
[44] CEQA Guidelines § 15378(a).
[45] *See* Bozung v. Local Agency Formation Commission , 13 Cal. 3d 263, 268 (1975) and McQueen v. Board of Directors of the Mid-Peninsula Regional Open Space District, 202 Cal. App. 3d 1136, 1143 (1988).
[46] *Laurel Heights I*, 47 Cal. 3d at 394-396.
[47] *Id.* at 396.
[48] Id. at 396-397.
[49] *Id.* at 398.
[50] P66 Rail Spur Extension DEIR at 2-3.
[51] *See* Karras Report on Phillips 66 Propane Recovery Project, September 2013, Exhibits 21 through 24. *Oil & Gas Journal*, 2012; and EIA Ref. Cap. 2013. See also orders R2-2011-0027 and R3- 2007-0002. Comparing the references shows "Rodeo" capacities reported to EIA include the Santa Maria facility, attached as part of Attachment A.

two facilities as a single processing entity, the San Francisco Refinery, to industry and government monitors.[52]

The RDEIR's piecemealing of both ends of the same refinery is analogous to the facts of *Laurel Heights I*. In that case, the Supreme Court set aside an EIR for piecemealing the reasonably foreseeable second phase of a multi-phased project. The University of California, San Francisco, had proposed a project to expand into a new building, of which only about a third was initially available to the school. The EIR failed to analyze impacts related to occupying the remaining two thirds, even though it was wholly foreseeable that UCSF would occupy the entire building.[53] Here, Phillips 66 will obtain tar sands crude by rail, must eventually fully refine it for sale, and to do so requires the entire SFR, not only the Santa Maria or Rodeo facilities. Just as it was foreseeable for the University of California to occupy the whole building, it is at least equally foreseeable, if not a surety, that the Rodeo facility will fully refine tar sands imported to the Santa Maria facility by rail.

Moreover, "there is no credible evidence supporting the assertion that during the baseline period, the Rodeo Refinery's refinery fuel gas contained sufficient propane and butane to supply the 14,500 bbl/day design basis of the Project."[54] In order to meet its Project design goals, the Rodeo facility must also receive the lower quality feedstock from Santa Maria. Implementing the Santa Maria facility throughput increase and rail components would boost naphtha and gas oil deliveries to Rodeo and boost *total* gas oil hydrocracking at the Rodeo Facility.[55] As hydrocracking is a significant LPG producer, LPG available for recovery at the Rodeo Facility would increase proportionately more.[56] B9-9

In order for Phillips 66 to implement its "advantaged crude" strategy for the SFR, it requires three pieces: the Santa Maria Refinery Throughput Increase Project, the Rodeo Refinery Propane Fuel Recovery Project, and this Project. Imports of heavy Canadian tar sands are facilitated by the Throughput Increase project. Components of the Rodeo Propane Fuel Recovery Project lock the Rodeo Refinery into a change in oil feedstock processing tar sands anticipated by rail to the Santa Maria Refinery.[57] That lower quality feedstock, gas oils and naptha, is produced at Santa Maria and sent to Rodeo by pipeline, a pipeline owned by the same company.[58] These changes are inter-related, wholly anticipate each other, and together create significant impacts on the environment. As more fully detailed in the accompanying attachments:

- Approximately half of the coking capacity of the SFR is currently at the Santa Maria facility. The Rodeo facility needs this capacity. Gas oil derived at the

[52] *Id.*
[53] *Laurel Heights I*, 47 Cal.3d at 393.
[54] Comments on Revised Draft Environmental Impact Report for the Phillips 66 Propane Recovery Project, prepared for Adams Broadwell Joseph & Cardozo, December 2014, ("Fox-Pless Revised Rodeo Report") at 11.
[55] Karras Rodeo Report 2 at 15.
[56] *Id.*
[57] *See* Karras and Fox Rodeo Reports on Draft and Recirculated EIR for this Project (Karras and Fox 2013 Rodeo Reports attached as part of Attachment C).
[58] *Id.* and Rail Spur Extension project DEIR at 2-29.

SMF is fed directly into the new heavy gas oil hydrocracker at the Rodeo facility; without that feed, this would become a stranded asset.[59]

- Publicly verifiable data in the record indicates that insufficient propane and butane is recoverable in the project baseline to implement Phillips' LPG proposal without the additional cracking process feedstock, additional LPG-rich naphtha/pressure distillate, or both, that its SMF throughput increase and rail spur could supply.[60] The Project cannot be implemented as proposed without the rail spur extension or throughput increase projects at Santa Maria.[61]

- Reformers at the Rodeo facility "could not run properly, efficiently *and* safely" under the current configuration if the throughput increase were implemented. Naphtha streams are fed to the Rodeo reformers now but the revised LPG recovery proposal would instead route them through the new hydrotreater. The diluent in tar sands is typically natural gas condensate, pentanes, or naphtha. The Project would therefore "debottleneck" the processing of naphtha – the "LPG component of the project enables full implementation of the SMF components."[62]

Another link between the import of tar sands dilbit oils at Santa Maria for processing and the Rodeo project involves solving the problem of the disposition of the diluent used to transport the bitumen in these dilbits. Generally, plants that, like Santa Maria's, are not configured to process light crude in any quantity may need to consider disposing of the (very light) diluent, which may, for example, simply be returned for reuse as diluent in future dilbit imports. While such a solution may be economic for pipeline delivery systems it could be quite costly, and hazardous, if the diluent is returned by rail. However, this same diluent is LPG-rich, and presents an opportunity to increase the amount of propane and butane that could be recovered at Rodeo.[63] Furthermore, the refining of dilbits yields much greater amounts of naphtha, "the lighter component of the pressure distillate sent to Rodeo and one of the feedstocks for propane recovery."[64] The Rodeo project, by allowing Phillips to recover and sell that (LPG) portion of the diluent, could significantly improve the cost structure of the "advantaged crude" strategy to be implemented by the Project. B9-9

The RDEIR attempts to provide information to contradict the interdependence of the two parts of the SFR. The RDEIR alleges that, as vapor "pressure limits (of tanks that store naphtha and gas oil) restrict the amount of propane/butane that can be contained in naphtha and gas oils," and, "additional butane and or propane would cause the products to exceed the vapor pressure limits of the storage tanks," suggesting that there is no link between this Project and the Rodeo project.[65] The RDEIR attempts to bolster this claim by asserting that it historically

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[59] Karras Rodeo Report 2 at 12.
[60] *Id.*
[61] *Id.* at 15.
[62] *Id.* at 16.
[63] Fox-Pless Revised Santa Maria Report at 7.
[64] *Id.* at 8, citing RDEIR for the Propane Recovery Project at 3-6.
[65] *Id.* at 2.

and currently operates near these limits, prohibiting any potential increased propane/butane transport to Rodeo.[66] These assertions, however, are incorrect and wrong.[67] Rather, there are either no such vapor pressure limits on the subject tanks, or the materials stored in them have a vapor pressure far below their permitted levels.[68] In addition, the RDEIR fails to contain any support whatsoever for these propositions, which cannot meet CEQA's threshold requirement of substantial evidence.[69] "In sum, the claims made in the RDEIRs in an attempt to decouple the Santa Maria Rail Spur Project and the Rodeo Propane Recovery Project based on vapor pressure limits have no merit."[70]

Evidently, plenty of "telling evidence" exists regarding the intimate connection between the proposed Project, the Throughput Increase Project and the Propane Recovery Project. The facts are again analogous to *Laurel Heights I* and the *San Joaquin Raptor* case: the Rodeo Project depends on the projects at the Santa Maria Facility and vice versa. In the *San Joaquin Raptor* case, the court held that the EIR for a residential development project was invalid because it failed to discuss expansion of the sewer system, even though the developer recognized the necessity for sewer expansion for the overall development project to proceed.[71] The RDEIR's assertions that LPG recovery is unrelated and not dependent on a different quality feedstock that must be received by rail are misleading and incorrect. Just as in *San Joaquin Raptor*, the company has also identified the need to respond to declining local crude supplies and has evidently foreseen each component of the SFR required to refine tar sands Simply, Phillips 66's recently proposed projects depend on one another in an overall plan to refine tar sands at the SFR. This is far removed from court decisions that do not find a piecemealed project on account of an insufficient showing of this "necessity" element.[72] Consequently, these are connected actions that must therefore be analyzed concurrently with the direct and cumulative impacts of the proposed Project itself under a programmatic EIR assessment.[73]

B9-9

[66] *Id.*
[67] *Id.*
[68] *Id.*
[69] *Id.* at 3.
[70] *Id.* at 11.
[71] *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal.App.4th 713, 729 (1994).
[72] In *Communities for a Better Environment et al. v. City of Richmond et al.*, (184 Cal. App. 4th 70, 100-101 (2010)), the Court of Appeal addressed the piecemealing issue with respect to another refinery expansion project. In that case, the EIR for the expansion project identified the potentially significant cumulative impact of a hydrogen pipeline project, but did not provide a complete analysis of the pipeline project's impacts. The Court held that the pipeline project was not piecemealed, that it is a separate project from the overall expansion project. In so holding, the Court reasoned that the expansion and pipeline projects are independent – they perform *entirely different* functions. The Court focused on project objectives: the expansion project's objective was to access a wider range of crude oil and other feedstocks; the pipeline project's objective was to transport excess hydrogen, not required by the expansion project, to other hydrogen consumers in the Bay Area. Ultimately, the Court found that the expansion project did not "depend on" the pipeline project. Similarly, in *Berkeley Jets*, the Court rejected an argument that an airport development plan should have included "long-range plans for potential runway expansions." The Court held that these future expansion plans were neither a crucial element nor a foreseeable consequence of the development plan. (*Berkeley Keep Jets Over the Bay Comm. v. Board of Port Cmrs.*, 91 Cal. App. 4th 1344, 1361 (2010)).
[73] CEQA Guidelines, § 15378, subd. (a) agency must evaluate the environmental impacts of the whole of the action.

Finally, under CEQA, even assuming, arguendo, that the Rodeo Propane Recovery project is not an integral part of this larger project, the RDEIR still failed to adequately discuss the company's proposed projects in Santa Maria, and should at a minimum have discussed how those projects would affect any LPG recovery or environmental impacts in Rodeo.[74] The company's ownership of the pipeline gives the company proprietary rights and ownership of all shipments of semi-refined products to Rodeo. The impacts are cumulatively considerable and should have been assessed in the RDEIR. B9-9

C. The Propane Recovery, Throughput Increase and Rail Spur Extension Projects Lack any Independent Utility.

Under California law, where one part of an arguably larger project serves some "independent utility," the lead agency may focus solely on that smaller part of the project.[75] For the reasons detailed throughout this comment, however, these recently proposed projects bear no independent utility. The Project is piecemealed and the County should review the overall impacts, especially the cumulative impacts, of the larger project. B9-10

D. The RDEIR Lacks Any Enforceable Commitment to Actually Reduce Emissions.

The RDEIR claims a Project objective to reduce fuel gas sulfur emissions; the "removal of the sulfur would decrease SO_2 emissions to the atmosphere by at least 50%...the reduction of SO_2 will lead to a reduction of ambient $PM_{2.5}$ concentrations."[76] In 2013, however, Phillips 66 applied for, and subsequently withdrew, an application to the BAAQMD for Emission Reduction Credits ("ERCs") for the Rodeo facility.[77]

An ERC is a credit granted to a facility that voluntarily reduces emission beyond a certain required level of control; it then provides the authority to emit the regulated pollutant in an amount equal to that original reduction. One principle issue with ERCs is that these emission reductions may have been realized elsewhere from the project location. There may be no real emission reduction in the actual project area. Therefore, the cumulative impact of any emissions increases, addressed by such credit related mitigation measures, remains and goes wholly unanalyzed, along with the emission of any associated, and potentially also separately significant co-pollutants. This is particularly problematic in relation to SO_2 and $PM_{2.5}$ concentrations that are certainly *local* pollution problems. Certainly, the BAAQMD has assessed particulate matter emissions as a cause of death in the Bay Area. B9-11

The RDEIR must clarify whether the company will use ERCs to achieve the project objective of emission reductions. If ERCs are factored into that calculation, the RDEIR must disclose that *and* analyze the resulting local impact of increased pollution, despite the application of any credits.

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[74] *Laurel Heights I*, 47 Cal.3d at 398 (requiring discussion "in at least general terms" of future activity in connection with a project, even if the project is contingent on uncertain occurrences).
[75] Del Mar Terrace Conservancy, Inc. v. City Council of San Diego, 10 Cal. App. 4th 712 (1992).
[76] RDEIR at 3-5.
[77] *See also* Karras Rodeo Report 2.

III. THE RDEIR FAILS TO ADEQUATELY ANALYZE AND PROVIDE MITIGATION FOR SIGNIFICANT ENVIRONMENTAL IMPACTS

In order to effectuate the fundamental purpose of CEQA, it is critical that an EIR meaningfully inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made."[78] Only with a genuine, good faith disclosure of a proposed project's components, can a lead Agency analyze the full range of potential impacts of the project, identify, and implement mitigation measures where necessary, prior to project approval.[79] Agencies, moreover, should not approve projects if there are feasible mitigation measures or project alternatives available to reduce or avoid the significant environmental impacts contained in the project's EIR.[80] B9-12

Nevertheless, because the RDEIR still fails to include integral project components and the SFR's overall switch to tar sands in its analyses, the RDEIR still asks the wrong questions, diminishing or even foreclosing an analysis of the Project's environmental impacts, even those it determines to be significant. In several of those instances, the RDEIR lacks the necessary detail to verify the validity of its analyses. Consequently, the RDEIR fails to include a sufficient analysis of the Project's impacts as required by CEQA.[81] These include significant and unmitigated impacts to: public and worker health and safety, air quality, water quality, biological resources and the local communities surrounding the refinery.

A. The RDEIR's Underestimated Analysis of Hazards to Worker and Public Health and Safety is also Underinclusive.

An EIR must provide sufficient information to evaluate all potentially significant impacts of a project, including public safety risks due to accidents, and it must state sufficient information to determine "how adverse [an] adverse impact will be."[82] This information is critical to the public and agency decision makers as they evaluate the extent and severity of the Project's impacts, specifically as they relate public safety. B9-13

The RDEIR fails to meet this CEQA requirement in three respects. First, the RDEIR fails to consider the increased operational hazards of refining an inherently more dangerous and different lower quality oil feedstock. Second, the RDEIR fails to properly assess the scope of this overall project, and therefore the overall scope of hazards that Project approval brings. This includes the transport of tar sands by rail. Third, the analysis that the RDEIR does

[78] *Laurel Heights Improvement Ass'n v. Regents of University of California* (1993) 6 Cal. 4th 1112, 1123; CEQA Guidelines § 15126.2(a) ("[a]n EIR *shall* identify and focus on the significant environmental effects of the proposed project") (emphasis added throughout).

[79] Pub. Res. Code § 21002 (public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects); Guidelines § 15126.4.

[80] Public Resource Code §§ 21002, 21002.1(a)

[81] *See, Laurel Heights Improvement Assn. v. Regents of Univ. of California, supra,* 47 Cal.3d, at 400 (*quoting* Pub. Resources Code § 21002.1(a); and Guidelines 15002(a)). *See also, Communities for a Better Environment v. Richmond, supra,* 184 Cal.App.4th, at 89 (an "EIR must include foreseeable change in crude processed as part of environmental and impacts analysis").

[82] *Santiago County Water District v. County of Orange* (1981) 118 Cal. App. 818, 831.

conduct regarding anticipated Project hazards wholly underestimates the extent of those impacts and is not supported by substantial evidence.

B9-13

(i) The RDEIR Fails to Discuss the Worker and Public Safety Risks of Refining a Lower Quality Crude Oil Feedstock.

As noted above, a switch to a heavier oil feedstock necessarily implicates a greater risk of corrosion of refinery components.[83] This greater risk of corrosion was identified as a root cause of the August 2012 fire at the Chevron Richmond Refinery that sent 15,000 residents to local hospitals.[84] By denying any shift to a lower quality oil feedstock, the RDEIR fails to adequately discuss the resulting significant impacts of refining this more hazardous material at Rodeo. As a result, the document precludes any meaningful analysis of the significant risks posed by this shift, including any identification or mitigation of the potential risks of catastrophic failure on par with what occurred at the Chevron Richmond Refinery in 2012 and any additional significant risks to public health.

B9-14

Tar sands blended crudes can lead to significant increases of all criteria pollutant emissions, as well as toxic air contaminants ("TACs") and hazardous air pollutants ("HAPs"). These increased emissions result from the increase in energy intensity required for processing and refining, and the increased risks associated with corrosion and potential accidents.[85] The RDEIR should have accounted for these increased hazards to worker and public health and safety.

The RDEIR instead omits the public health hazards that would result from potential accidents, fires and other accidental releases caused by day-to-day project operations. These risks are significant, and so far unanalyzed, impacts. High sulfur and acid levels contained in tar sands crudes and similar semi-refined products dangerously accelerate corrosion of refinery components, contributing to equipment failure and causing more frequent accidental releases. Overall, the RDEIR must account for increased emissions from refining tar sands crudes not only at Rodeo, but throughout the SFR.

(ii) The RDEIR Does Not Adequately Consider the Full Scope of Project Impacts, Including Transporting Tar Sands Crude by Rail.

B9-15

Numerous accidents including fires, explosions, and spills have resulted from a rapid increase in crude transport across North America. Such incidents have been caused by accidents such as derailments, as well as non-accident releases from leaking valves or vents.[86]

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[83] *See supra* Part II.A; Fox Comments on Mitigated Negative Declaration of Valero Crude By Rail Project, Use Permit Application 12PLN-00063.

[84] *See* Chemical Safety Board, Chevron Richmond Refinery Interim Investigation Report, April 2013, available at: http://www.csb.gov/assets/1/19/Chevron_Interim_Report_Final_2013-04-17.pdf.

[85] *See* Fox Rodeo Comments ("more energy will be required and more emissions produced to convert them into the same slate of semi-refined and refined products"), attached as part of Attachment C.

[86] Mike Soraghan, *Crude Mishaps on Trains Spike As Rail Carries More Oil*, E&E (July 17, 2013), *available at* http://www.eenews.net/stories/1059984505

In response to the spike in train car derailments and other accidents causing crude spills, the U.S. EPA recently noted that spills of diluted bitumen require different response action and equipment than conventional oil spills.[87] Indeed, three years after a major spill of DilBit into the Kalamazoo River in Michigan, heavy oil remains at the bottom of the river. Resource intensive cleanup is required to remedy the damage caused by the Kalamazoo oil spill, amounting to $1 billion in costs to public funds.[88]

B9-15

By failing to include a discussion of the full scope of the Project, which includes the Santa Maria Rail Spur Extension Project, the RDEIR necessarily omits a comprehensive analysis of the unique hazards accompanying rail transport, offloading, handling, storage and processing of a lower quality oil feedstock.[89] As a result, the RDEIR's conclusions regarding the relative significance of the Project's impacts and its assessment of mitigation measures to address the same are inherently flawed. The RDEIR must perform a proper study of the risks of transporting tar sands crudes in particular, and it must require actual, specific, and enforceable measures to mitigate those risks.[90]

(iii) The RDEIR's Analysis Underestimates Risks to Worker and Public Health and Safety.

The RDEIR ignores the potentially catastrophic consequences of an accidental release of LPG from a tank car by focusing on the alleged improbability of one occurring.[91] Although the RDEIR lists flash fires, torch fires, pool fires, and explosions, including boiling liquid expanding vapor explosions, it nevertheless determines that these potential impacts are less than significant.

B9-16

However, "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project," constitutes a significant effect on the environment.[92] Probability does not factor into the evaluation of this adverse change alone without consideration for the magnitude of potentially catastrophic harm; the correct inquiry is whether the potential for such an adverse change exists. In this case, the transport of increased amounts of LPG, let alone with potentially increased rail traffic due to the transport of also explosive tar sands crude dilbits, certainly poses such a hazard. The RDEIR should have factored this increased traffic into its analysis, but that is also missing from even the QRA[93] modeling. The QRA model should have accounted for any consequent cumulative/hazard impact. The modeling results also questionably rely upon data that, first, removes the risk of boiling liquid expanding vapor explosions from risk calculations, and second, limits that

[87] EPA, *Comment Letter to US Department of State Regarding the Supplemental Draft Environmental Impact Statement from TransCanada's Proposed Keystone XL project* (2013), *available at* http://www.epa.gov/Compliance/nepa/keystone-xl-project-epa-comment-letter-20130056.pdf.

[88] EPA, *Comment Letter to US Department of State Regarding the Supplemental Draft Environmental Impact Statement from TransCanada's Proposed Keystone XL project* (2013), *available at* http://www.epa.gov/Compliance/nepa/keystone-xl-project-epa-comment-letter-20130056.pdf.

[89] *See supra* Part II.A.

[90] These concerns are more fully detailed in our joint comments on the Phillips 66 Santa Maria Rail Spur Extension RDEIR, attached as Attachment C.

[91] RDEIR at 4.6-27.

[92] CEQA Guidelines section 15382.

[93] The modeling tool used in chapter 4.6 of the RDEIR.

analysis further to fatalities only.[94] In addition, modeling results are "determined by the process conditions at the time of release." Without a proper depiction of process conditions, which undoubtedly includes the lower quality oil feedstock, the modeling conclusions are drawn further into question. Even the RDEIR's narrowed modeling cannot constitute substantial evidence.

In addition, the RDEIR's analysis is based on questionable data. Due to the RDEIR's incorrect assumptions, it overestimates annual average baseline locomotive emissions (for LPG transport) by a factor of about two.[95] The RDEIR's analysis similarly underestimated the increase in daily LPG exports, post-Project, and the additional daily number of rail cars over the baseline.[96] This oversight underestimates both air emissions and increased hazards from increased locomotive traffic. B9-16

Finally, it is remarkable that the RDEIR does not even address first response or other emergency precautions in regards to controlling such accidental releases. This is particularly the case given the potential inability, as recent news and testimony has informed,[97] of first responders to control fires from rail spills or explosions. The RDEIR must be revised again to include such an analysis integral to worker and public health and safety.

B. The RDEIR's Analysis of Air Quality Impacts is Inadequate. B9-17

The RDEIR's analysis of the Project's criteria pollutant impacts is riddled with errors. We highlight the following seven concerns:

(i) The RDEIR Does Not Adequately Analyze Increased Emissions from Refining a Lower Quality Oil Feedstock

The RDEIR fails to analyze the increase in Toxic Air Contaminants ("TACs") and Hazardous Air Pollutants ("HAPs") from refining tar sands at the Rodeo facility. As mentioned throughout this comment, the expert reports, and the comments and expert reports to the DEIR, tar sands crudes are distinct from other more traditional crudes processed at the SFR for two principal reasons: (1) the unique chemical composition of the bitumen itself; and (2) the presence of large quantities of volatile diluent containing high levels of VOCs, TACs and HAPs. When released, these air pollutants cause significant public health and air quality impacts that are inadequately addressed in the RDEIR.[98] B9-18

Tar sands crudes alone are comprised of higher molecular weight chemicals than the current slate processed at Rodeo, including large amounts of benzene, toluene, ethyl-benzene, xylenes,[99] and other heavy metals such as lead. These chemicals are found in both state and

[94] RDEIR at 4.6-28.
[95] Fox-Pless Revised Rodeo Report at 13-14.
[96] *Id.* at 17.
[97] *Cf:* testimony from the Zoning Administrator Hearing on the RDEIR.
[98] To the extent the RDEIR fails to cure errors regarding the Project's public health impacts, raised by CBE in its comment to the DEIR, the same comments are hereby incorporated by reference.
[99] Together referred to as "BTEX" compounds.

federal toxic emissions inventories, and are, therefore, of particular concern to both federal and state regulatory agencies.[100] The U.S. Geological Survey reports that "natural bitumen," the source of all Canadian tar sands-derived oils, contains 102 times more copper, 21 times more vanadium, 11 times more sulfur, six times more nitrogen, 11 times more nickel, and 5 times more lead than conventional heavy crude oil.[101]

When blended with the diluents, tar sands "dilbit" crudes contain even higher concentrations of BTEX compounds, which have a significantly high potential to be released as process related operational emissions that remain unidentified in RDEIR. These contaminants can cause severe impacts on the environment, and can lead to grave human health problems. Moreover, because diluents also have a notably low molecular weight, and a high vapor pressure, they are highly prone to cause fugitive, gaseous releases by increasing vapor pressure in various refinery operation components throughout the SFR.[102]

The RDEIR denies the Project's switch to a lower quality feedstock, thereby still failing to address potentially severe impacts from Project emissions including: the range of potential health impacts from known carcinogens and other harmful pollutants; acid rain; bioaccumulation of the toxic contaminants contained in the Project's potential emissions; the formation of ground-level ozone and smog; visibility impairments; odor impacts affecting residents near the Refinery; accidental releases due to corrosion of refinery equipment; and depletion of soil nutrients.[103] B9-18

Benzene alone has a notably high cancer potency, and is known to cause severe reproductive, developmental and immune systems impacts at even low exposure levels.[104] Systemic benzene poisoning, a long term exposure risk, includes the potential for severe hemorrhages, and may at times result in fatality.[105] Concentrated, acute exposure levels have also been known to cause headaches, and nausea.[106] While less information is available relating to longer term systemic and acute exposure levels to ethylbenzene, toluene and xylene, in California, the toxicity and risk levels of the three are currently under CARB scientific review.[107] The DEIR was recirculated to include an updated health risk assessment, however, without an adequate project description disclosing the switch to a lower quality oil feedstock, such an assessment will always yield underestimated and inadequate results.

[100] *See, e.g.*, United States EPA, Clean Air Act 1990 List of Hazardous Air Pollutants, available at: http://www.epa.gov/ttn/atw/orig189.html, last accessed on Jan 26, 2014; *see also*, California Air Resources Board Toxic air Contaminant Identification List, available at: http://www.arb.ca.gov/toxics/cattable.htm#Note 1, last accessed on Jan 26, 2014.

[101] *See* Fox Santa Maria Report, attached as part of Attachment C.

[102] *Id.* at 22 **(explaining that these contaminants are present in highly dangerous concentrations in "DilBits" as a result of their** composition of both undiluted tar sands bitumen crudes and diluent mixtures.).

[103] *Id.*

[104] Determination of Acute Reference Exposure Levels for Airborne Toxicants, March 1999, Acute Toxic Summary, BENZENE, available at: http://www.oehha.ca.gov/air/acute_rels/pdf/71432A.pdf, last accessed, November 24, 2014.

[105] *Id.*

[106] *Id.*

[107] California Air Resources Board, Toxic Air Contaminant Identification List, available at: http://www.arb.ca.gov/toxics/cattable.htm#Note 1, last accessed, November 24, 2014.

The RDEIR further fails to state specific information necessary to assess the potential worker and public health impacts from the Project, such as information regarding the concentration of diluents that will be present in those crudes. Readers of an EIR should not be forced to rely on outside research and resources to find important components of a thorough environmental analysis.[108] Information regarding the concentration of heavy metals, chemicals and organic compounds contained in the crude is critical to assessing the scope and extent of impacts from potential emissions caused by refining these crudes, and impacting worker and public health in the areas surrounding the SFR facilities.

Moreover, the RDEIR fully omits any impact analysis for other harmful, air pollutants such as lead, which the California Air Resources Board (CARB) and the Center For Disease Control have identified as a pollutant for which there is no safe level of exposure.[109] The potential health impacts from lead are, moreover, deeply concerning, as they can include serious, permanent neurological damage, particularly in children. The RDEIR's failure to identify, much less analyze or mitigate this category of known potential impacts stemming from the change in crude slate enabled by the Project highlights another crucial example of the failings of the RDEIR, which must be corrected, in a revised, and re-circulated document.[110] B9-18

Finally, because the Project's crude slate change will increase TAC and HAP emissions from *all* fugitive components at the SFR, including both the Santa Maria and Rodeo facilities; through compressors, pumps, valves, fittings, and tanks, in far greater amounts than from the current baseline feedstock,[111] the RDEIR must analyze the overall potential and cumulative impact throughout at least California from this shift.

(ii) The RDEIR Fails to Analyze Emissions from All Components

The RDEIR still fails to assess emissions from all integral components of the Project. In assessing air quality impacts, the RDEIR largely limits its focus to LPG recovery related activities.[112] Most blatantly, this fails to assess the air quality impacts of the SFR as a whole, and includes neither an analysis of the emissions that will be caused at the Rodeo component as a result of the rail spur extension, nor the increased emissions of refining increased quantities of tar sands at the Santa Maria component. B9-19

CEQA requires that an EIR consider the impacts of a whole project, not simply its constituent parts, when discussing the environmental effects of the project.[113] As discussed *supra* in Part II, an essential element of this Project is a shift to a different-quality crude slate, and the Santa Maria Throughput Expansion, Rail Spur Extension Project and this Project are at least three integral components of this piecemealed project. Consequently, this DEIR should

[108] *San Joaquin Raptor Rescue Ctr. v. County of Merced* (2007) 149 Cal.App.4th 645, 649; *see also*, *California Oak Found. v. City of Santa Clarita* (2005) 133 Cal.App.4th 1219, 1239.
[109] *Id.*
[110] *See*, *Laurel Heights Improvement Assn. v. Regents of Univ. of California, supra,* 47 Cal.3d, at 400 (*quoting* Pub. Resources Code § 21002.1(a); and Guidelines 15002(a)).
[111] *See* Fox Comments.
[112] RDEIR at 4.1-20 through 4.1-22.
[113] *See* CEQA Guidelines, 14 Cal. Code Reg. § 15003(h); *Citizens Assoc. for Sensible Degvelopment of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151.

include an analysis of the full scope of air quality impacts resulting from this larger piecemealed project, not just the impacts from one component, let alone one *by*product at the back end.

In addition, because the RDEIR does not disclose that tar sands will be brought to the SFR and refined at the Rodeo facility, the RDEIR cannot analyze the associated and severe air quality impacts. The refining of this different quality crude slate can be reasonably expected to require an increase in frequency and magnitude of flaring at both Rodeo and Santa Maria facilities, contrary to one stated Project Objective,[114] since dirtier crude processing would likely increase "malfunction" and "emergency" flaring.[115] Moreover, a malfunction or emergency upset causes the contents of one or more major process vessels to depressurize suddenly, and each flaring event can cause acute exposures to emitted pollutants.[116] Each of these flaring episodes comes with associated and extremely high levels of additional pollution that the RDEIR's analysis ignores.

B9-19

Also, the daily operation and refining of a different quality crude slate will result in increased daily emissions of pollutants, including many toxic/PM precursor/smog-forming air pollutants from burning more fuel per barrel to process the likely denser/dirtier crude feeds.[117] An increase in fugitive emissions and heightened concentrations of toxic VOCs can also be anticipated as a result of the higher pressure processing of denser crudes.[118] The RDEIR does not analyze this effect at either the Rodeo or Santa Maria facilities, and consequently, also fails to discuss mitigation measures for these impacts. As noted above, the RDEIR also fails to include a discussion of the transport of tar sands crude by rail to the SFR.

In fact, the BAAQMD has specifically requested that Phillips 66 provide emissions data on all emissions sources.[119] The RDEIR even fails to comply with this request within the boundaries of the Rodeo facility.[120] The environmental review of this Project presents a critical opportunity to engage in a genuine and thorough review of the full environmental impacts of this Project. By failing to analyze the emissions from all components of the larger project, the RDEIR obfuscates the full extent of air quality impacts, and renders informed decision-making on this Project impossible.

(iii) The RDEIR Fails to Include Relevant Emissions Data.

B9-20

During the public comment period for the RDEIR, CBE requested throughput data for the Rodeo facility from the BAAQMD. The BAAQMD responded that Phillips 66 claims that this data is protected information: "The throughput data has been designated trade secret by Phillips 66 and is exempt from disclosure under Government Code section 6254.7."[121] Throughput data, however, is essential to any calculation of, and therefore constitutes,

[114] *See* RDEIR at 3-5.
[115] *See* Karras Rodeo Report.
[116] *Id.*
[117] *Id.*
[118] *Id.*
[119] *See* BAAQMD Comment Letter to DEIR, March 2014.
[120] *See* Fox-Pless Revised Rodeo Report at 11.
[121] BAAQMD Response to Public Records Request No. 2014-10-0176, November 2014.

emissions data.[122] Emissions data is public information and essential to review of the air quality implications of any project. The failure to disclose a switch in crude quality foreshadows this failure to disclose this data. The RDEIR must be revised to include this data: "if…a project proponent can pick and choose who sees pertinent data-then a stake is driven into the "heart of CEQA" by preventing the information necessary for an informed decision."[123]

B9-20

(iv) The RDEIR Does Not Adequately Analyze Potentially Significant Greenhouse Gas Emissions.

The RDEIR wholly underestimates the significant and irreversible effect that the Project presents to climate change. Although the RDEIR makes passing reference to the findings of the Intergovernmental Panel on Climate Change, its references are outdated, and in fact contradicted by more recent reports. Specifically, the RDEIR fails to acknowledge the Intergovernmental Panel on Climate Change's recently voiced and serious concerns regarding the "irreversible" effects of climate change.[124] The report concluded that "continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts," calling for the need for dramatic cuts in pollution.[125]

In the face of that warning, the RDEIR incorrectly claims that the Project would have no significant impacts on greenhouse gas emissions.[126] This is chiefly due to the RDEIR's calculation that net GHG emissions will decrease as a result of the Project, since the propane and butane that were previously combusted onsite will not be sold, and natural gas will be combusted instead.[127] However, though the RDEIR notes that the propane and butane sold may produce GHG emissions offsite, the document refuses to offer an estimate of those off-site GHGs, since off-site uses are not certain and therefore GHG estimates would be too speculative.[128] Consequently, the RDEIR claims credit for reduction of on-site propane and butane combustion emissions, but disclaims responsibility for any off-site emissions, thus presently an artificially low estimate of the Project's GHG emissions.

B9-21

Additionally, the RDEIR completely fails to take into account the GHG impacts of the change in crude slate that will accompany the Project. The climate change impacts of refining are correlated to the quality of the feedstock refined, as acknowledged in the RDEIR for the Phillips 66 Santa Maria Refinery Rail Spur Project.[129] Refining tar sands at the SFR, compared to refining the more traditional blend, creates far greater GHG emissions and therefore climate

[122] It has been reported in other EIRs, *see eg.* http://chevronmodernization.com/project-documents/.

[123] *See* CBE et al. v. City of Richmond, 184 Cal. App. 70, 88 (2010).

[124] *See eg.* "Effects of Climate Change "Irreversible"' available at http://www.washingtonpost.com/national/health-science/effects-of-climate-change-irreversible-un-panel-warns-in-report/2014/11/01/2d49aeec-6142-11e4-8b9e-2ccdac31a031_story.html?hpid=z1

[125] Report attached as Attachment B.

[126] RDEIR at 4.5-10 to -15 (Impact 4.5-1).

[127] RDEIR at 4.5-15 (Table 4.5-3).

[128] RDEIR at 4.5-13.

[129] Revised Draft Environmental Impact Report for the Phillips 66 Company Rail Spur Extension and Crude Unloading Project at 4.3-70, SCH # 2013071028.

change implications. Until the RDEIR corrects its Project Description regarding the degree of shift to refining tar sands at the SFR, its analysis cannot provide any adequate analysis of the Project's impacts to climate change.

Finally, we also highlight that the Project calls for an increase in 30 million standard cubic feet of natural gas *per day* to fuel a new boiler or existing Steam Power Plant. The RDEIR ignores the potential effect of this enormous increase in natural gas use.

The increased use in natural gas, which is primarily comprised of methane, may cause a significant increase in greenhouse gas emissions. Methane is a powerful greenhouse gas that has 86 times the global warming potential of carbon dioxide over a 20-year period, and 34 times over a 100-year period.[130] Thus, even small leakage rates will lead to significant increases in greenhouse gas emissions. Yet there is no analysis of the leakage rate of methane, nor an analysis of where these leaks are most likely to occur. Furthermore, the RDEIR also fails to analyze the GHG emissions associated with natural gas demand activities. B9-21

The RDEIR's analysis is lopsided and incomplete. It accounts only for the decrease in GHG emissions resulting from removing butane and propane from the gas flow. In contrast, the failure to disclose a switch in crude quality, coupled with the corresponding increase in GHG emissions resulting from the substitution of large amounts of natural gas, leaves a significant impact unaddressed by the RDEIR.

(v) The RDEIR Does Not Adequately Analyze Indirect Emissions.

(a) Indirect Emissions - SFR

CEQA requires an EIR to consider both direct and indirect impacts of a proposed project.[131] Indirect impacts are those that are "caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable."[132] The scale of the Project's activities is large enough that off-site emissions could reasonably be affected. Moreover, the indirect nature of these wholly foreseeable off-site emissions cannot be ignored as "it is inaccurate and misleading to divide the project's air emissions analysis into on-site and secondary emissions for purposes of invoking the presumption the project will have no significant impact."[133] Thus, the RDEIR requires a sufficient analysis and discussion of these sources. For example, in *North Coast Alliance v. Marin Municipal Water District*, the lead agency's analysis of the identification of indirect sources of GHG emissions from electrical demand was found sufficient given that the agency conducted a thorough analysis of the project's demand on a utility's electricity generation and whether it would increase production at any fossil-fuel power plants.[134] B9-22

[130] G. Myhre et al., *Anthropogenic and Natural Radiative Forcing*, in Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change IPCC 714 (Cambridge Univ. Press 2013).
[131] CEQA Guidelines § 15358(a).
[132] CEQA Guidelines § 15358(a)(2).
[133] Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692, 717.
[134] North Coast Alliance v. Marin Mun. Water Dist. Bd. of Directors, 216 Cal.App.4th 614, 652 ("Based on this evidence, the EIR concluded the Project's energy demand would not result in an indirect increase in pollutant emissions.").

Similarly here, an inextricable link exists between the Santa Maria and Rodeo ends of the SFR. Just as it was foreseeable in *North Coast Alliance* that utility demand would be met, it is just as foreseeable, if not a certainty, that the Rodeo facility will exactly meet the demand of the Santa Maria facility's export by the pipeline, owned by Phillips 66, that connects the two facilities. By limiting the study of GHG emissions to Rodeo operations alone—just one component of the overall Project—the RDEIR omits entirely a significant portion of the emissions that will result from the Project, and thus vastly underestimates the Project's significant air quality impacts.

B9-22

Emissions from the Santa Maria facility include increased GHG emissions resulting from the processing of tar sands, as well as the substantial and significant locomotive GHG emissions from the transport of up to 250 crude oil trains each year to the Santa Maria facility from points across North America. The RDEIR must, at the least, identify these foreseeable activities and then adequately analyze and estimate how much the Project is likely to increase emissions from all of these sources, regardless of their location. At a minimum, the RDEIR must address these emissions as reasonably foreseeable cumulative impacts, as more fully addressed below.

(b) Indirect Emissions - LPG

The BAAQMD January 2014 letter regarding LPG emissions states that it is "too speculative" to determine how much propane and butane recovered by this Project will be combusted in the market, and therefore release increased GHGs into the atmosphere. Due to this "speculation," BAAQMD asserts that it is "unreasonable, and probably inaccurate, to assume that their off-site use would increase GHG emisisons. The RDEIR further states that, "Because there would be a substantial amount of speculation involved in assessing the net change in GHG emissions associated with the combustion butane and propane generated by the proposed Project, the County is not further considering these emissions in this RDEIR."[135] This is absurd and requires little further discussion. If these emissions will exist, then CEQA requires that the lead and responsible agencies at least assess whether they will be significant. It is also unreasonable to assume that these additional emissions are zero, based purely on the fact that speculation is required. A more reasoned approach would have identified a range of potential impacts, even starting at a minimum of 10%,[136] and ending at a projected maximum recovery figure. Anything less simply shirks the responsibility of a lead or responsible agency under CEQA.

B9-23

In addition, despite this omission, the RDEIR still fails to account for locomotive emissions outside an adequate study area. The RDEIR analyzed locomotive emissions for the transport of LPG, but "these emissions were underestimated by counting only emissions released within the boundary of the BAAQMD, rather than the entire distance the locomotives will travel within the BAAQMD and elsewhere in California."[137] Even if the County were to

[135] RDEIR at 4.5-14.

[136] *See* Karras Report 2 at 24 ("must admit at least 10% of them could potentially be burned) citing to RDEIR Table 4.5-3 and Karras Rodeo Report.

[137] *See* Fox-Pless Revised Rodeo Report at 22-25.

accept the BAAQMD's above assertion regarding speculation, the RDEIR's analysis was free from any such issue in regards to studying locomotive emissions at least within the boundaries of California.

B9-23

(vi) The RDEIR Relies Upon Underestimated Health Risks and Inadequately Protective Health Risk Thresholds.

The addition of a cumulative health risk assessment (HRA) was the principal reason that this EIR was recirculated.[138] However, the HRA fails to fulfill CEQA's requirement that an EIR include a sufficient analysis of local, direct, indirect, and cumulative impacts for two reasons: first, the HRA drastically underestimates emissions and thus underestimates the Project's health impacts, and second, the HRA relies on significance thresholds that BAAQMD has found to be inadequately protective.[139]

First, the HRA drastically underestimates the emissions associated with the Project. As discussed above, the RDEIR fails to disclose and analyze the emissions associated with the Project's change in crude slate, which means that the HRA relies on inaccurate emission estimates. Significantly, the HRA fails to account for the cancer risks associated with increased benzene emissions from Bakken crudes, which have higher levels of benzene than the baseline crude slate.[140] Additionally, the HRA does not account for full emissions impacts of locomotive transit, including idling emissions from both the on-site switching locomotive and haul locomotives on site or nearby.[141] The HRA also fails identify or analyze health risks associated with existing locomotive and other mobile source emissions at the Refinery.[142] These omissions mean that the HRA's emissions estimates are artificially low, and the HRA thus does not capture the significant health impacts of the Project.

B9-24

Second, the HRA uses inadequate and unprotective thresholds. For example, in evaluating the individual cancer risk caused by the project, the HRA uses a threshold of 100 per million.[143] BAAQMD has publicly declared its 100 per million threshold to be potentially unprotective.[144] Most Air Districts in California use a threshold between 10 per million and 20 per million, and BAAQMD uses the highest cancer risk reduction trigger for cancer risk posed by toxic emissions of any other Air District in the State.[145] The Project's cancer risk of 61 per million would exceed a more protective threshold. By using an inadequately protective

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[138] *See* RDEIR at ES-1.

[139] *See Laurel Heights Improvement Assn. v. Regents of Univ. of California, supra,* 47 Cal.3d, at 400 (*quoting* Pub. Resources Code § 21002.1(a); and Guidelines 15002(a)).

[140] Fox-Pless Revised Rodeo Report at 43.

[141] Fox-Pless Revised Rodeo Report at 42.

[142] Fox-Pless Revised Rodeo Report at 42 (noting the HRA's reliance on a previous health risk assessment conducted for compliance with AB 2588, which does not address mobile source emissions or exempt sources).

[143] RDEIR at 4.1-34, Table 4.1-14.

[144] *See* Karras Rodeo Report 2 ¶ 44; Staff presentations to the BAAQMD Board regarding the Petroleum Refinery Emissions Tracking Rule and Office of Health Hazard Assessment Update, Oct–Nov 2014.

[145] *See* Science and Environmental Health Network Letter to Mayor and BAAQMD Board of Director member Tom Bates, dated May 4, 2009, Re: Bay Area Air Quality Management District Health Risk Reduction Measures Under Toxics Hot Spots Program, 1-4, attached as Attachment D.

threshold, the RDEIR avoids its responsibility under CEQA to mitigate the significant public health impacts of the Project.

The HRA's reliance on low estimates of emissions levels and inadequately protective health standards invalidates the RDEIR's assertion that the Project will have no significant health impacts. Even the underestimated emissions levels would exceed protective health thresholds—the true emissions levels would likely drastically exceed those thresholds. The RDEIR must be revised and recirculated in order to ensure that the public and decision-makers have full and accurate information about the serious risks to human health that are associated with the project.

B9-24

(vii) The RDEIR Uses An Inadequate Baseline.

The RDEIR fails to properly assess Project impacts by failing to employ an accurate baseline in two respects. First, as the RDEIR fails to properly analyze a change in crude quality feedstock at the Rodeo facility, its air quality analysis omits this crucial component, instead focusing on LPG related activities at the Rodeo facility.[146] To adequately disclose a switch in crude quality feedstock, the RDEIR should have identified the baseline quality and resultant emissions/hazards and compared projected increases due to use of a lower quality crude oil feedstock. Anything less violates CEQA.[147]

Second, the RDEIR's baseline with respect to LPG recovery is questionable. The air quality analysis uses a baseline of 2009 through 2012 (a three year baseline given the date of the Notice of Preparation for this Project).[148] The baseline for LPG, however, includes data for 2013.[149] In 2013, the SFR had already begun to boost crude feedstock volume, and did so at least in part on a new tar sands oil feedstock.[150] This inflated baseline for LPG corrupts the RDEIR's overall air quality analysis and cannot amount to substantial evidence to satisfy CEQA.

B9-25

In addition, other factors tend towards the unreliability of the RDEIR's assessed baseline LPG. The RDEIR now "lumps together" propane and butane data.[151] It also includes certain LPG sources into calculations for amounts to be recovered, yet those sources can never even be recovered.[152]

Ultimately, the inclusion of 2013 LPG data inflates the baseline, but also, reflects an industry shift to a lower quality oil feedstock. Perhaps the baseline should also reflect this shift, which would mean that any baseline calculation is not static, but must adequately

[146] *See eg.* RDEIR at 4.1-12 through 14.
[147] See CBE et al. v. City of Richmond, 184 Cal. App. 4th 70 (2010).
[148] *Id.* at 4.1-13.
[149] RDEIR at 3-33.
[150] *See* Karras Rodeo Report 2 at 6, citing Rail Spur RDEIR.
[151] *Id.*
[152] See Fox-Pless Revised Rodeo Report at 9, ("U-233 fuel gas...this propane and butane would not be recovered by the Project, but is included in Phillips 66's summary propane and butane available for recovery...Phillips 66 currently ADDS butane to the fuel gas to control specific gravity. This butane is included in the summary data and clearly is not recoverable under the Project.").

represent the existing condition of a change in crude oil feedstock. During the appeal hearing, CBE submitted the Attorney General's comments on the WesPac project.[153] The Attorney General also identified the need to evaluate "the potential for new or increased impacts to the communities where the crude oil will be refined due to changes in delivered volume or in the composition of the crude" *in the context of existing conditions* driving a purpose "to replace California and Alaska crude stocks, whose volumes are declining, with new sources of crude."[154]

B9-25

C. The RDEIR's Assessment of Biological Resource Impacts is Inadequate.

B9-26

The RDEIR fails to properly assess the Project impacts to biological resources in two distinct respects: first in regards to water quality, and second, in regards to special-status species.

(i) The RDEIR's Assessment of Water Quality Impacts is Inadequate.

The RDEIR fails to sufficiently analyze significant environmental effects on biological resources in and around the San Francisco Bay due to Project expansion of the Refinery's once-through cooling (OTC) system. The OTC system—which draws ambient temperature water out of the Bay, uses it to cool Refinery processes, and then expels the hotter water back into the Bay—causes significant impacts resulting from impingement, entrainment, heat, and possible pollutant discharge.[155] Notwithstanding the widely recognized, harsh environmental impacts of this type of cooling process, the DEIR proposed to invest in an expansion of OTC rather than finding ways to retire the system and replace it with practicable environmentally superior alternatives. That would expand hotter flows and reset the clock on the operational lifetime of the OTC system.[156]

B9-27

This becomes particularly problematic when taking into account the State of California's 2010 Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling.[157] The State's 2010 plan to generally phase out and replace OTC systems has left Phillips 66 as *the only* one of the five refineries linking the Bay that still uses this antiquated technology, let alone relying on it for the Project's success. As noted in the both Karras Rodeo Reports, this is an unnecessary impact on the Bay and easily mitigated through alternative investments. Moreover, the DEIR's analysis was premised on an inaccurate calculation of discharge and intake flows relating to the OTC system, thereby subjecting the Project's analysis to an inaccurate and faulty baseline assessment.[158]

Moreover, while the DEIR admitted that there is a general, potential impact on endangered species caused by the OTC system, it claims that the impact is less than significant. This analysis and conclusion is incorrect for several reasons. First, although the DEIR relies

[153] Supplemental Evidence D, attached as part of Attachment C.
[154] *Id.*
[155] *See* Karras Rodeo Report, and Supplemental Evidence B, attached as part of Attachment C.
[156] *Id.*
[157] *Id.*
[158] *Id.*

on Refinery's compliance with its National Pollutant Discharge Elimination System (NPDES) to reach the conclusion that any impact is insignificant, the NPDES limits are not known to be protective, which is why the NPDES permitting agency for the Refinery, the San Francisco Regional Water Quality Control Board (RWQCB), has ordered the facility to conduct an impact study on the discharge effects.[159] Furthermore, there is indication that the NPDES limits are suspected to be underprotective overall, because the RWQCB has also ordered Refinery to study an OTC replacement. In addition, the DEIR failed to analyze the impact of the Project's conflict with state policy to phase out OTC and Refinery-specific orders that could implement this policy. Finally, the DEIR incorrectly analyzed impacts from only a fraction of the OTC flow that the Project could cause. Because building onto and expanding OTC conflicts with state and RWQCB policy, the Project could foreclose the planned elimination of OTC flow. Therefore, the future impact from the Project could actually be from the *whole* future flow, not just the incrementally increased flow and temperature that the DEIR analyzed. In failing to analyze the Project's full future OTC impact, the DEIR underestimated the possible biological effect of the Project.

B9-27

The RDEIR does not correct these errors. Instead, it also suggests an increased usage and reliance on the OTC system. Cooling system changes described in the DEIR were limited to cooling the proposed new propane recovery[160] while the RDEIR appears to expand this description to cover all cooling "demands for the proposed Project."[161] Furthermore, the Project's OTC expansion would be oversized for the project heat sources disclosed. That excess capacity is needed for heat from processing the project's changing oil feedstock. "The RDEIR's admission that the OTC expansion would be operated to boost heat discharge in proportion to Bay cooling water flow and its additional project revision to route naphtha produced in part from SMF oil feeds to Rodeo emphasizes this point."[162] The RDEIR's analysis fails to explain this change or discrepancy in the project description. This omission further compounds the RDEIR's lack of disclosure regarding the process sources and amount of the additional heat to be transferred to the San Francisco Bay. This is particularly problematic given that, "the publicly verifiable data in the record (which the RDEIR thus ignores) indicate that instead of the 25% increase suggested by its inflated baseline, the Project could increase OTC flow by 40–65%."

(ii) The RDEIR Fails to Adequately Analyze and Mitigate Impacts to Special-Status Species.

B9-28

Under CEQA Guidelines, a project would cause significant adverse impacts to biological resources if it would "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species." The RDEIR's analysis of impacts to special-status species under this significance criterion is flawed because (1) it inadequately analyzes impacts to nesting and foraging birds

[159] *Id.*
[160] DEIR at 3-27.
[161] RDEIR at 3-37.
[162] Karras Rodeo Report 2 at 24.

and concludes without basis that potential impacts are less than significant[163], and (2) fails to analyze impacts to other special-status species likely to be harmed by the project.

The RDEIR acknowledges the potential for Project construction and operation to impact nesting and foraging birds: "Nesting and foraging birds have the potential to occur in other areas of the Refinery and in the RCV, leading to the potential for indirect impacts resulting from noise and visual disturbances resulting from Project construction and operation. These indirect impacts would be significant if they cause nest abandonment or starvation or otherwise decrease fitness and survival among nesting and foraging birds."[164] However, the RDEIR attempts to avoid analyzing these impacts by asserting that the Project components are distant from habitat areas for special-status species, without analyzing whether these distances are sufficient to avoid impacts from Project construction and operation. For example, the Propane Storage tank component is directly adjacent to northern coastal scrub habitat[165] and other vegetated nesting and foraging habitat for birds, including potential habitat for short-eared owls, California horned lark, loggerhead shrike, San Pablo song sparrow, and saltmarsh common yellowthroat as acknowledged in the RDEIR.[166] Given the proximity of the Propane Storage tank site to nesting and foraging habitat, the RDEIR must analyze construction and operational impacts to these species, including increased noise pollution, night lighting, disturbance from human presence, and spread of invasive species from imported soils, and mitigate these impacts, for example by requiring surveys for nesting birds and designating protective buffers around nests.

B9-28

The RDEIR fails to analyze the impacts from the Project on endangered marsh species—notably the California black rail, California clapper rail, and salt marsh harvest mouse—even though the RDEIR acknowledges that potential habitat for these species occurs near the Project site.[167] The Project applicant did not conduct field surveys for these special-status species, and the RDEIR does not require pre-construction surveys. Without USFWS-protocol-level surveys for special-status species, the RDEIR must assume they are present and treat any potential habitat as occupied habitat, and impacts to these species must be fully analyzed and mitigated.

Finally, such omissions also apply to the RDEIR's analysis of impacts of the OTC system, which also fails to analyze impacts on the full range of special-status fish species that are likely to be harmed. The RDEIR states that larval fish are particularly vulnerable to being entrained and killed in the OTC system.[168] The RDEIR also acknowledges that the longfin smelt, which is listed as threatened under CESA and a candidate for listing under the ESA, has high larval concentrations in San Pablo Bay.[169] Despite the significant probability of take of the longfin smelt, the RDEIR fails to mention and analyze the impacts of the OTC system on this threatened species.

[163] RDEIR at 4.2-26-27.
[164] RDEIR at 4.2-26.
[165] RDEIR at 4.2-5.
[166] RDEIR at Table 4.2-1.
[167] RDEIR at Table 4.2-1.
[168] RDEIR at 4.2-28.
[169] RDEIR at 4.2-10.

IV. THE RDEIR FAILS TO ADEQUATELY ANALYZE CUMULATIVE IMPACTS.

An accurate cumulative impacts analysis is one of CEQA's most vital requirements.[170] Its purpose is to avoid considering projects in a vacuum, and to prevent obscuring potentially severe environmental harm that may be caused by piecemealed approval of several projects with seemingly insignificant impacts, which are in fact cumulatively considerable when viewed together.[171]

To satisfy this critical requirement, the RDEIR must demonstrate that all potentially significant cumulative impacts of the Project were "adequately investigated and discussed," and that they were considered "in the full environmental context" surrounding the Project.[172] In conducting its analyses, the lead agency must find that that a project has a significant effect on the environment when, despite appearing less-than-significant on their own, the individual, incremental impacts of the Project are cumulatively considerable in light of the actual and potential effects of past, current, and probable future projects.[173] B9-29

The RDEIR fails to sufficiently analyze the Project's cumulative impacts in three principal ways: First, the RDEIR fails to consider Project impacts in relation to key, related SFR projects; second, the RDEIR fails to conduct its own independent analyses of the Project's cumulatively significant air emissions and air quality impacts, and provides a flawed analysis of cumulative hazards impacts; third, the RDEIR fails to meaningfully consider existing cumulative health and pollution burdens in Environmental Justice communities surrounding the project area.

A. The RDEIR Considers the Project's Cumulative Impacts in Relation to an Incomplete List of Other Projects.

At Table 5-1 the RDEIR provides a list of projects from which the individual, incremental impacts of the Project can be measured, to determine their relative, cumulative significance. While these projects include a number of important current and proposed future projects in the Bay Area, which should be used to measure incremental impact significance, it bears some glaring omissions that render the RDEIR's analysis inherently flawed. B9-30

Notwithstanding the RDEIR's list of other Bay Area refinery projects, the Propane Recovery Project has been piecemealed from at least three related projects that will facilitate

[170] *See* Pub.Res.Code § 21082 (referring to the CEQA Guidelines §§ 15130(a)(1) and 15355 for the applicable definition of cumulative impacts); *see also, Bozung v. Local Agency Formation Commission* (1975) 13 Cal.3d 263, 283 (holding that the cumulative impacts analysis of a project's regional impacts as a "vital provision" of CEQA).

[171] *See e.g.*, CEQA Guidelines § 15130(a)(an EIR must "discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable."); see also, *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th at 720.

[172] CEQA Guidelines § 15125(c).

[173] *See, e.g.*, CEQA Guidelines § 15065(a).

the refining of cost-advantaged crudes at the Phillips 66 SFR, leading to serious omissions in the RDEIR's analyses of the Project's cumulatively considerably air emissions, potential hazards, and biological resource impacts. These projects include: (1) The Santa Maria Throughput Increase Project; (2) The Santa Maria Rail Spur Project; and (3) The Rodeo Marine Terminal Throughput Increase Project.

As explained at the outset of this comment and in the attached technical reports, in addition to sharing a 200 plus mile pipeline, the Santa Maria facility and the Rodeo facility are entirely inter-reliant. The Santa Maria facility for example, depends on the Rodeo facility for transport of fuel production and financially sustainable operation. In turn, the Rodeo facility relies on the Santa Maria facility for sufficient feedstock delivery and deep conversion or "coking" capacity to process its market products.[174] Indeed, all of the crude input at the SRF is necessarily finished at the Rodeo facility to make a financially sustainable product slate.[175] Thus, the Rodeo facility **must** rely on the Santa Maria facility-derived crude.[176]

The Karras report further explains why the process by which LPG is produced at the Rodeo facility depends fully on the quality of crude that is refined at the Santa Maria facility. Yet, despite the clear process-related and physical connections between the two facilities, the RDEIR fails to include either the Santa Maria Rail, or the Santa Maria Throughput Increase Projects in its discussion of potential cumulative impacts from the proposed Propane Recovery Project.[177]

B9-30

The RDEIR also fails to identify or analyze the cumulative Project impacts and their significance in relation to other nearby projects, such as the Kinder Morgan crude by rail terminal – another glaring omission in the RDEIR's Table 5-1 list.[178] This terminal is adjacent to both the Chevron Richmond Refinery and the Richmond Port, and is precisely aligned with the crude-by-rail route identified in the RDEIR, as what would be used by the Project. Despite its proximity, the Chevron Richmond Refinery is prohibited from receiving crude from the Kinder Morgan facility.[179] The RDEIR fails to include this crude by rail terminal, however, in its cumulative impacts analysis and wholly omits any mention of the whether crude delivered by rail to the SMF might be loaded at the Kinder Morgan terminal, the Richmond Port, or both, causing further flaws in its overall analysis.

As Drs. Phyllis Fox and Petra Pless explain, the RDEIR further fails to apply the appropriate methodology to determine whether the Project has significant cumulative impacts, in relation to those projects that **are** included in the list provided in Table 5-1.

According to the Fox-Pless expert report, the RDEIR fails to adequately state, much less analyze an appropriate baseline of cumulative impacts "*i.e.*, impacts from all existing sources at the start of review," to determine whether those, even without the added impacts

[174] *See* Karras Rodeo Report.
[175] *See* Karras Rodeo Report.
[176] *See* Karras Rodeo Report.
[177] *See* RDEIR at Table 5-1 (omitting any mention of SMF projects).
[178] RDEIR at Table 5-1 (omitting mention of the Kinder Morgan Crude by Rail Terminal).
[179] Karras Rodeo Report 2 at (¶41)

from the Project, are significant. Although the RDEIR includes a description of each project it has included in its list, it also fails to state whether and how it determined the relative significance of each of the listed project's impacts, and finally, it fails to explain how or why it determined that the Project's contribution to the baseline impacts from the current and future foreseeable projects would not be "cumulatively considerable."

B9-30

Both because the RDEIR failed to include critical projects that are inherently interrelated to the Project, and because it has either wholly omitted a necessary methodology or simply failed to describe its methodology, it is inadequate for the purpose of stating meaningful environmental review and fails to meet CEQA's requirements.[180]

B. The RDEIR Fails to Adequately Analyze the Project's Cumulative Air Emission and Air Quality Impacts.

The RDEIR further fails to evaluate cumulative air quality impacts, and erroneously concludes that because Project emissions fall under BAAQMD significance thresholds their cumulative impacts are *per se* less-than-significant.[181] The RDEIR states that according to BAAQMD, "if a project exceeds the identified significance threshold… its emissions would be cumulatively considerable."[182] And, that alternatively, if a project does not exceed the identified significance thresholds, "the project would not be considered cumulatively considerable and would result in a less than significant regional air quality impact."[183]

The cited BAAQMD guidance[184] does not supersede CEQA requirements as set forth in Public Resources Code and in the Guidelines. As stated above, CEQA is clear in its definition of "cumulatively considerable" as meaning that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."[185] Because the RDEIR incorporates only selective statements regarding BAAQMD's significance thresholds and fails to consider the actual emissions impacts from the Project in the context of current as well as foreseeable future projects, it fails to comply with CEQA's requirements.[186]

B9-31

Furthermore, the RDEIR impermissibly limits its analysis of potential cumulative impacts from air emissions, to those impacts which occur solely within the boundaries of the BAAQMD. This limitation is done despite the fact that, for example, locomotives that will transport the recovered propane and butane necessary for the Project will travel outside of the

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[180] CEQA Guidelines §15130(a); *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th at 720.
[181] RDEIR at 4.1-30.
[182] RDEIR at 4.1-30, citing BAAQMD, 2009d.
[183] RDEIR at 4.1-30, citing BAAQMD, 2009d.
[184] BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009, Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Revised%20Draft%20CEQA%20Thresholds%20%20Justification%20Report%20Oct%202009.ashx?la=en.
[185] CEQA Guidelines §15065(a)(3)
[186] CEQA Guidelines §15130(a); *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th at 720.

BAAQMD and will thereby emit pollutants in other air districts.[187] As explained in the Fox-Pless Report, the RDEIR must be revised to include an analysis of the Project's cumulative impacts based on these out-of-BAAQMD-boundary emissions.[188]

The RDEIR also contains underestimated air emissions estimates, as explained above, and in the attached expert reports. However, even its underestimated emissions are not analyzed properly in relation existing emission levels from other, current projects, and projected future levels from foreseeable projects.

When analyzed properly, the RDEIR's current, underestimated emissions show that the Project's potential NOx and ROG impacts are significant when compared to the BAAQMD's significance thresholds. This is shown in the Fox-Pless report by following table, which illustrates more accurate emissions calculations in similar form as what is provided in the RDEIR, and uses the RDEIR's current (under-estimated) emission levels:

Cumulative Increase in Annual NOx and ROG Emissions

Project	NOx (ton/year)	ROG (ton/year)	Reference
Marine Terminal II	33	2	Ap. 22904, p. 5
Marine Terminal III	79	5	Ap. 22904[a]
Valero Crude-by-Rail Project	-2	1	Valero RDEIR, Table 4.1-5/6
Total Proposed Projects	**110**	**8**	
Propane Recovery Project	**3**	**8**	RDEIR, Table 4.1-8
Cumulative Increase	**114**	**16**	
BAAQMD Significance Threshold	10	10	
Significant?	**YES**	**YES**	

a (33.16 ton/year)(49,000 bbl/day)/(20,500 bbl/day)

Cumulative Increase in Daily NOx and ROG Emissions

Project	NOx (lb/day)	ROG (lb/day)	Reference
Marine Terminal II	182	11	Ap. 22904, p. 5
Marine Terminal III	434	26	Ap. 22904[a]
Valero Crude-by-Rail Project	-322	-9	Valero RDEIR, Table 4.6-5
Total Proposed Projects	**294**	**28**	
Propane Recovery Project	**37**	**47**	RDEIR, Table 4.1-7
Cumulative Increase	**331**	**75**	
BAAQMD Significance Threshold	54	54	

B9-31

[187] Fox-Pless Revised Rodeo Report at 36.
[188] Fox-Pless Revised Rodeo Report at 36.

Significant?	YES	YES	

a (2,324 ton/year)(49,000 bbl/day)/(20,500 bbl/day)

Notably, these cumulative emissions would also exceed significance thresholds of air districts in the Sacramento and San Joaquin Air Basins, through which the trains would pass, including: for both NOx and ROG in the Yolo-Solano Air Quality Management District, the San Joaquin Valley Air Pollution Control District, and the Sacramento Metropolitan Air Quality Management District; and for NOx alone in the Placer County Air Pollution Control District. The cumulative impacts of the Project are, therefore, significant not only within the BAAQMD, but within adjacent air districts as well.

The RDEIR similarly, erroneously concludes that the Project's contribution to GHG impacts would not be "cumulatively considerable" as the Project would result in a net decrease of carbon dioxide-equivalent emissions, despite the fact that when calculated more accurately, the Project's GHG emissions also show significant cumulative impacts.[189] As explained in the Fox-Pless and Karras reports, this error is in large part due to the fact that the RDEIR fails to account for declining local regional crude supplies, and the Rodeo facility's inability to continue to recover the Project's design-basis amount of propane and butane from its baseline crude. Again, as described throughout this comment and the expert reports, this omission directly relates to the piecemealed nature of the Project under review in the RDEIR, and the need to consider its components specifically in light of other, related crude-slate shifting projects such as the Santa Maria Rail Spur and Throughput Increase projects.[190] B9-31

The RDEIR fails to conduct any analysis to arrive at its "no cumulative GHG impact" conclusion, yet when the Project's potential GHG emissions are considered in light of the GHG emissions from other, nearby project, they are shown to exceed BAAQMD's significance threshold of 10,000 MT CO_2e/year by a factor of almost five. Thus, despite the RDEIR's flawed analyses and inaccurate conclusions, the Project's GHG emissions are cumulatively considerable when analyzed in light of, *inter alia*, the increase in GHG emissions from increased amounts of propane and butane, as well as other process related emissions that stem from a foreseeable change in crude slate at the SFR; the emissions from the downstream use of recovered propane and butane; emissions from Project activities and project components outside of BAAQMD air district boundaries; and increases in GHG emissions from the many other proposed, recently permitted and operating crude-by-rail projects.

[189] RDEIR, p. 5-9.

[190] *See* Karras Report, *see also*, Fox-Pless Revised Rodeo Report, referencing Phillips 66's widely reported plans to replace heavy sour San Joaquin Valley crudes, currently imported by pipeline, with propane- and butane-rich Bakken crudes at its Marine Terminal; a switch that will increase the amount of propane and butane in the refinery fuel gas, even after the Project is fully built out. The RDEIR's GHG emission calculations do not include any increase in GHG emissions from the increase in propane and butane in its refinery fuel gas from refining Bakken crudes as replacements for other heavier crudes, nor does it include an analysis of calculations based on a refinery-wide shift to even heavier, more GHG-intensive Tar Sands crudes such as those that will be transported to the Santa Maria facility, according the RDEIR for the Rail Spur Project.

Because the RDEIR significantly underestimates, or wholly omits critical information regarding the Project's potential cumulative air emissions and air quality impacts, it must be revised and re-circulated. B9-31

C. The RDEIR Incorrectly Concludes that the Project's Cumulative Hazards Impacts Are Less-Than-Significant.

As explained in the Fox-Pless report, the RDEIR's conclusion that "routine operations of the proposed Project would either not result in any impacts associated with hazards or hazardous materials or, would be less than significant…; thus routine operations would not contribute cumulatively to hazards-related impacts" is unsupportable by substantial evidence.[191] The RDEIR reaches its conclusion without considering Project impacts in conjunction with other past, present and reasonably foreseeable projects, as required by CEQA. Guidelines § 15064(h)(1). Thus, the analysis is fundamentally flawed.

Additionally, the RDEIR makes the following errors in an attempt to support its conclusion:

1. The RDEIR bases its analysis on underestimated increase in the risk of tank car accidents that may result from operation of the Project, by a factor of about four.[192] B9-32

2. The RDEIR's analysis of the relative risk of hazards resulting from the Project is based only on the frequency of LPG releases from tank cars.[193] Because there are many other similar substances that are transported by rail, and there are numerous accidents that involve such other substances, limiting the rate of potential material releases to only those which occur from tanks carrying LPG improperly limits the range of analysis of potential risks from the Project's overall tank-car transport. The RDEIR should have based its analysis on all tanks cars, rather than just a small fraction of them.

3. The RDEIR's analysis was based only on historic (1990 to 2010) LPG rail traffic accident data, thus its risks of hazards estimates are based on data from a period when far fewer trains were transporting hydrocarbon products over the same rail lines.[194] The same rail lines that will be used by the propane/butane trains will also be used by unit trains of 80 to 100 tank cars each, carrying crude oil to local refineries, all routed from the same Roseville Rail Yard.[195] These rail lines pass very close to residential and commercial areas in the vicinity of the Project, within feet of the tracks, and as well as elsewhere along the route. Moreover, these crude trains will be sharing the tracks with the Project's propane and butane trains,

[191] RDEIR at 5-9.
[192] *See* Fox-Pless Revised Rodeo Report at 39, citing, RDEIR, Fig. 4.6-4 and explaining that The RDEIR does not provide any support for the assumed baseline, which should be the average number of tank car shipments in the 2 to 3 years prior to the start of CEQA review.
[193] RDEIR, p. 4.6-27.
[194] Fox-Pless Revised Rodeo Report at 40.
[195] RDEIR at 4.6-27.

increasing the probability of accidents involving the use of shared tracks. The cumulative accident impacts of the increase in LPG cars coupled with the post-2010 and future increase in crude rail cars, therefore, must be evaluated.

4. It appears that the RDEIR's analysis was also only based on a short segment of track from the Richmond Rail Yard to the Refinery; however, incoming trains can take multiple routes from the rail yards to the California border. Indeed, many segments of California rail line pass through some of the state's most sensitive ecological areas and parallel the water supply for most of the state. These route segments also contain many high hazard areas for derailments. Emergency response teams have generally good coverage in the urban areas, but none are located near the high hazard areas in rural Northern California that the RDEIR apparently did not analyze.[196] B9-32

5. Finally, the RDEIR's conclusion that an accidental LPG release could occur only once every 25 years and once every 17 years after the Project is operational appears to be based on an inaccurate baseline of current accidental releases. As explained in the Fox-Pless report, correcting the RDEIR's baseline errors, however, shows a more accurate risk of accidental releases occurring once every 10 years—a very high accident probability given the proximity of rail lines to residential communities.

Because these errors drastically underestimate the relative significance of both the individual, incremental risks of accidents, as well as the cumulative risks of accidents and potential hazards caused by Project operations, the RDEIR must be re-drafted and re-circulated.

D. The RDEIR Fails to Adequately Account for Existing Cumulative Health and Environmental Justice Burdens.

Rodeo and its surrounding communities have been identified by the Office of Environmental Health and Hazards Assessment (OEHHA) as bearing a concentrated burden of health hazards resulting from various pollution sources, including the Rodeo Facility.[197] This means that impacts, which may appear insignificant by themselves, are indeed significant when considered in the context of existing sources of environmental impacts, which often tend to be concentrated in some areas, such as those where this facility is located, more than others. Notwithstanding this fact, the RDEIR fails to consider existing health and pollution burdens suffered by Rodeo and surrounding area residents. B9-33

Rodeo is surrounded by already pollution burdended and impaired water bodies; it falls in the top 1% of the state's highest Toxic Release Inventory chemical burdens, and the top 8%

[196] Interagency Rail Safety Working Group, State of California, Oil by Rail Safety in California. Preliminary Findings and Recommendations, June 10, 2014.

[197] OEHHA Cal Enviro Screen 1.1 (now amended), Statewide Zip code Results, Rodeo, CA, available at: http://oehha.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=1d202d7d9dc84120ba5aac97f8b39c56 last accessed, Dec. 3, 2014.

of concentration of hazardous waste facilities in the state.[198] Rodeo residents also suffer from severe asthma rates scoring in the 96th percentile of asthma rates throughout the state, and fall among the top 6% of statewide residents heavily impacted by mobile source pollution from freeway, truck, and rail traffic emissions.

The particular vulnerabilities of this community and the existing pollution burdens, to which its residents are already exposed, require careful attention and full environmental review, to ensure adequate public health protections. As detailed above, the Project's emissions and impacts analysis is incomplete as a result of the RDEIR's failure to disclose information relating to the SFR's overall shift in crude slate, among other inadequacies. Even absent an analysis that includes the SFR's change in crude slate, any increase in emissions that are currently identified in the RDEIR as being less than significant, are not analyzed in the context of the existing pollution burdens in Rodeo, and are, therefore, severely flawed. This analysis is an integral component of CEQA, and without it, the RDEIR cannot be used as informational document, for the purpose of reaching an informed decision relating to the true environmental and human health impacts of this project, prior to the Project's approval.[199]

B9-33

V. THE PROJECT IS STILL INCONSISTENT WITH STATE AND LOCAL PLANS.

The RDEIR remains inadequate for failing to adequately discuss the Project's potential inconsistencies with applicable plans, polices, and regulations including (1) state policy and Regional Water Quality Control Board (RWQCB) orders to retire once-through cooling (OTC) systems, (2) Contra Costa County's Industrial Safety Ordinance (ISO), (3) U.S. Chemical Safety Board guidance regarding risk analyses, (4) the Contra Costa General Plan, (5) the California Global Warming Solutions Act (AB 32), and (6) Executive Order S-3-05. The CEQA Guidelines state:

> The EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans and regional plans. Such regional plans include, but are not limited to, the applicable air quality attainment or maintenance plan or State Implementation Plan, area-wide waste treatment and water quality control plans, regional transportation plans, regional housing allocation plans, regional blueprint plans, plans for the reduction of greenhouse gas emissions, habitat conservation plans, natural community conservation plans and regional land use plans for the protection of the coastal zone, Lake Tahoe Basin, San Francisco Bay, and Santa Monica Mountains.[200]

B9-34

An applicable plan, policy, or regulation is one that has already been adopted and thus legally applies to a project.[201]

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[198] *Id.*
[199] CEQA Guidelines §§ 15064(d), 15125(c); *see also, Kings County Farm Bureau*, 221 Cal. App. 3d 692, 729.
[200] CEQA Guidelines § 15125(d); *see also, San Franciscans Upholding the Downtown Plan v. City & Cnty. of San Francisco* (2002) 102 Cal.App.4th 656, 678.
[201] *Chaparral Greens v. City of Chula Vista* (1996) 50 CA4th 1134, 1145, n7.

As raised in comments to the DEIR for the Project, this Project conflicts with state policy including the RWQCB's orders to fully retire OTC systems, by not only proposing to expand the Rodeo Facility's OTC system, but also by foreclosing the option to end use of the system in the foreseeable future. B9-35

Additionally, the SFR-wide switch to denser, higher sulfur crude, as well as the proposal to store propane in pressurized tanks, conflicts with the Contra Costa County ISO that requires Inherently Safer Systems (ISS). These Project components are also inconsistent with U.S. Chemical Safety Board (CSB) findings that apply to all refineries and call for industrial safety analysis, seeking to drive risk "as low as reasonably practicable" (ALARP). Indeed, the CSB has issued the final regulatory report on its investigation of the August 2012 pipe rupture and ensuing fire at Chevron's Richmond Refinery, in which the agency reinforced its call for a more rigorous approach to safety management at all US refineries. This report was unanimously approved by agency board members on November 10, 2014,[202] and its latest version of recommendations reiterates CSB's previous recommendation for California and US refiners to implement a safety case regulatory regime similar to that already adopted by refiners in Norway, the UK, and Australia.[203] Despite these newly approved requirements, the RDEIR fails to analyze whether Project components may conflict, and if so, how the implementation of the Project might be altered, to avoid substantial conflicts with necessary safety processes. B9-36

Moreover, the Contra Costa County Plan sets goals of increasing the usage of renewable energy such as wind, solar, and biomass methane production, yet the RDEIR still fails to discuss the Project's conflict with these important sections of the County's General Plan and only states generally throughout its analyses that the impacts from conflicts to existing state and local plans are less-than-significant. B9-37

The Global Warming Solutions Act of 2006 (AB 32) has also recognized that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California, and set the current state-wide 2020 greenhouse gas emissions reduction goal into law. As explained in this comment and the expert reports, the RDEIR fails to adequately discuss the Project's foreseeable increase in GHG emissions, and thus fails to adequately address its potential inconsistencies with AB 32. This failure is particularly problematic in light of specific statements made by Phillips 66 executives, including its CEOR Greg Garland, who, when asked what he thought the permitting track would be for delivering US Bakken crude or Canadian heavy crude to California by rail replied: "I think we are pushing it. I think there is some resistance, given the heavy nature of the crudes and the carbon footprint of the crudes and AB 32 cap and trade, et cetera, et. cetara [sic] in California."[204] B9-38

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[202] U.S. Chemical Safety Board Report: "*CSB Releases Boar Approved Regulatory Report on Chevron Refinery Fire – Proposes a More Rigorous Refinery Industry Regulatory System in California*," Washington D.C., November 10, 2014, available at: http://www.csb.gov/csb-releases-board-approved-regulatory-report-on-chevron-refinery-fire---proposes-a-more-rigorous-refinery-industry-regulatory-system-in-california-/

[203] Oil and Gas Journal Online, "*Feds call for revamp in safety regulations at U.S. refineries*," by OGJ Editors, Houston, TX Dec. 17, 2013, available at: http://www.ogj.com/articles/2013/12/feds-call-for-revamp-in-safety-regulation-at-us-refineries.html.

[204] *Transcript of Jan. 30, 2013 Phillips 66 Fourth-Quarter Earnings Conference Call*, last accessed Aug 8, 2013, available at: http://www.phillips66.com/EN/investor/presentations_ccalls/Documents/PSX-Transcript-2013-01-30T.pdf

Executive Order S-3-05 established targets for California to reduce GHG emissions to 80 percent below 1990 levels by 2050. The Court of Appeal recently invalidated an EIR for the lead agency's failure to analyze for consistency with these 2050 targets.[205] Though the RDEIR identifies the Executive Order in its discussion of the regulatory setting for GHG emissions,[206] it fails to analyze the Project for consistency with the Executive Order, which is an applicable plan, policy, or regulation under CEQA.[207] This is a fatal error, and the RDEIR must be revised and recirculated to analyze the Project's potential inconsistencies with the State's 2050 GHG reduction goals. B9-39

VI. THE RDEIR FAILS TO ANALYZE A REASONABLE RANGE OF PROJECT ALTERNATIVES.

An EIR is not considered complete unless it has considered a "reasonable range of potentially feasible alternatives" to a proposed project.[208] The feasibility of an alternative is determined if it is "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."[209] An EIR's alternatives analysis is considered satisfactory as long as it contains "sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project."[210] "The degree of specificity required in an EIR 'will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.'"[211] Therefore, an EIR must contain more details for a specific project than an EIR for an approval of a general plan.[212] B9-40

The alternatives analysis included in the Draft EIR issued last fall was legally inadequate. The DEIR analyzed only three alternatives—a no project alternative, a reduced-project alternative, and a propane truck loading rack alternative.[213] The only significant change that the RDEIR made to the alternatives analysis in the DEIR was to add one more alternative that was considered but rejected on feasibility grounds: a closed-loop cooling system alternative.[214] Consequently, the recirculated document still fails to evaluate a reasonable range of alternatives and consider the alternatives in sufficient detail to allow a meaningful analysis and evaluation.[215]

CEQA does not have an established legal standard for the scope of the alternatives B9-41

[205] *Cleveland Natl. Forest Found. v. San Diego Assoc. of Gov'ts* (Nov. 24, 2014, 1st Dist. Ct. App., Case No. D063288) (publication pending, *available at* http://www.courts.ca.gov/opinions/documents/D063288.PDF).
[206] RDEIR at 4.5-4.
[207] *Cleveland Natl. Forest Found.*, p. 10 ("[T]he Legislature, through AB 32, effectively endorsed the Executive Order and its overarching goal of ongoing greenhouse gas emissions reductions as state climate policy.").
[208] CEQA Guidelines § 15126.6(a).
[209] Cal. Pub. Res. Code § 21061.1.
[210] CEQA Guidelines § 15126.6(d).
[211] *Al Larson Boat Shop, Inc. v. Bd. of Harbor Commrs.* (2d Dist. 1993) 18 Cal.App.4th 729, 746 (quoting CEQA Guidelines § 15146).
[212] *See id.*
[213] *See* RDEIR 6-7 to -8.
[214] *Compare* RDEIR at 6-6 *with* Phillips 66 Propane Recovery Project Draft Environmental Impact Report, June 2013, Part 5.
[215] *See* CEQA Guidelines § 15126.6(d).

considered, but courts have held the scope of the alternative "must be evaluated on its facts," on a case-by-case basis.[216] The rule of reason judges the scope of the alternatives.[217] Parties objecting to the EIR are not responsible for formulating alternatives for consideration—the lead agency bears this burden.[218] Objecting parties will rarely have access to the same information that the lead agency does, and thus will be limited in their ability to suggest sufficiently detailed and specific alternatives.[219] The lead agency is in a better position to make these suggestions since they probably have greater access to information than the objecting parties.[220] However, the following discussion illustrates the inadequacy of the alternatives analysis contained in the RDEIR.

B9-41

Given the dwindling local supply of crude oil feedstock for the SFR and the potentially massive overhaul to a different quality feedstock on account of this and other connected Phillips 66 projects, the point must be made that the existing facility will soon outlive its purpose. Thus, Phillips' proposal presents a choice: should it be allowed to extend this refining operation for several decades by re-purposing the San Francisco Refinery to process tar sands oil that is imported by rail? The RDEIR should have evaluated, instead of obscuring, this choice and its environmental implications. The RDEIR failed to include this and other reasonable alternatives in its analysis, and the document should be revised and recirculated to correct these deficiencies.

B9-42

Additionally, the RDEIR fails to identify an environmentally superior alternative, as required by CEQA.[221] Though the RDEIR designates the Reduced-Project Alternative as the environmentally superior alternative, it then notes that the Reduced-Project alternative "would tend to have many, if not all impacts, at similar levels of significance to the proposed Project, although it is *conceivable* that air emissions and energy usage would tend to be reduced from those of the proposed Project."[222] The RDEIR also notes that the No Project Alternative and the Propane Truck Loading Rack Alternative would have greater impacts than the proposed Project.[223] Thus, according to the RDEIR, the County has chosen three alternatives that all would have greater environmental impacts than the proposed project. The failure to consider even a single alternative with lesser environmental impacts than the proposed project is flagrantly contrary to the purpose of the CEQA alternatives requirement. An EIR must identify a range of reasonable alternatives "which would feasibly attain most of the basic objectives of the project *but would avoid or substantially lessen any of the significant effects of the project*."[224] None of the alternatives considered in the RDEIR would avoid or substantially lessen the impacts of the proposed project, and consequently the range of alternatives considered in the RDEIR is insufficient.

B9-43

[216] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 566.
[217] CEQA Guidelines § 15126.6(a).
[218] *See Laurel Heights I*, 47 Cal.3d at 406.
[219] *Id.*
[220] *See id.*
[221] CEQA Guidelines § 15126.6(e)(2).
[222] RDEIR at 6-7 to 6-8 (emphasis added).
[223] RDEIR at 6-7 to 6-8.
[224] CEQA Guidelines § 15126.6(a) (emphasis added).

VII. CONCLUSION

For the reasons stated above, the RDEIR remains inadequate under CEQA. The County must reject this RDEIR, revise its flawed analyses and recirculate it for public comment under the procedures for a programmatic level EIR. B9-44

Sincerely,

Roger Lin
Yana Garcia
Heather Lewis
on behalf of Communities for a Better Environment

Shaye Wolf
Hollin Kretzmann
on behalf of the
Center for Biological Diversity

Ethan Buckner
on behalf of ForestEthics

Greg Wannier
on behalf of the Sierra Club

Comment also supported by:

The City of Berkeley
Pittsburg Defense Council
Crockett Rodeo United to Defend the Environment (C.R.U.D.E.)
The SunFlower Alliance
350 Bay Area
GreenAction for Health and Environmental Justice
Martinez Environmental Group
Benicians for a Safe and Healthy Community
Global Community Monitor
Asian Pacific Environmental Network

1904 Franklin Street Ste 600 Oakland CA 94612 ph: (510) 302-0430 Legal fax (510) 302-0438
In Southern California: 6535 Pacific Blvd. Suite 200 Huntington Park CA 90255 ph: (323) 826-9771

Attachment A

CBE et al. Comments on the Recirculated Draft Environmental Impact Report for the Phillips 66 Propane Recovery Project.

ATTACHMENT A:

Expert Report of Greg Karras on the Recirculated Draft Environmental Impact Report for the Phillips 66 Propane Recovery Project, 12/5/14

1904 Franklin Street, Suite 600 • Oakland, CA 94612 • T (510) 302-0430 • F (510) 302-0437

Southern California: 6325 Pacific Blvd., Suite 300 • Huntington Park, CA 90255 • T (323) 826-9771 • F (323) 588-7079

Expert Report of Greg Karras
Communities for a Better Environment (CBE)
5 December 2014

Regarding the

Phillips 66 Company Propane Recovery Project
Recirculated Draft Environmental Impact Report (RDEIR)
Released in October 2014 by the Contra Costa County
Department of Conservation and Development
State Clearinghouse #2012072046
County File #LP12-2073

Contents

I, Greg Karras, declare and say:

1. I reside in unincorporated Marin County and am employed as a Senior Scientist for Communities for a Better Environment (CBE). My duties for CBE include technical research, analysis, and review of information regarding industrial health and safety investigation, pollution prevention engineering, pollutant releases into the environment, and potential effects of environmental pollutant accumulation and exposure.

Qualifications

2. My qualifications for this opinion include extensive experience, knowledge, and expertise gained from nearly 30 years of industrial and environmental health and safety investigation in the energy manufacturing sector, including petroleum refining, and in particular, refineries in the San Francisco Bay Area.

B9-45

3. Among other assignments, I served as an expert for CBE and other non-profit groups in efforts to prevent pollution from refineries, to assess environmental health and safety impacts at refineries, to investigate alternatives to fossil fuel energy, and to improve environmental monitoring of dioxins and mercury. I served as an expert for

CBE in collaboration with the City and County of San Francisco and local groups in efforts to replace electric power plant technology with reliable, least-impact alternatives. I served as an expert for CBE and other groups participating in environmental impact reviews of related refinery projects, including, among others, the Chevron Richmond refinery "Modernization Project" now subject to review pursuant to a California Court of Appeals Order,[1] and the Phillips 66 "Rail Spur Extension and Crude Unloading Project" now before San Luis Obispo County.[2] I serve as an expert for CBE in collaboration with community, labor, and other groups in a project involving investigation of environmental health and safety impacts of, and alternatives to, refining lower quality crude oils.

4. I authored a technical paper on the first publicly verified pollution prevention audit of a California petroleum refinery in 1989 and the first comprehensive analysis of refinery selenium discharge trends in 1994. I authored an alternative energy blueprint, published in 2001, that served as a basis for the Electricity Resource Plan adopted by the City and County of San Francisco in 2002. From 1992–1994 I authored a series of technical analyses and reports that supported the successful achievement of cost-effective pollution prevention measures at 110 industrial facilities in Santa Clara County. I authored the first comprehensive, peer-reviewed dioxin pollution prevention inventory for the San Francisco Bay, which was published by the American Chemical Society and Oxford University Press in 2001. In 2005 and 2007 I co-authored two technical reports that documented air quality impacts from flaring by San Francisco Bay Area refineries, and identified feasible measures to prevent these impacts.

B9-45

5. My recent publications include the first peer reviewed estimate of combustion emissions from refining denser, more contaminated 'lower quality' oil based on data from U.S. refineries in actual operation, which was published by the American Chemical Society in the journal *Environmental Science & Technology* in 2010, and a follow up study that extended this work with a focus on California and Bay Area refineries, which was peer reviewed and published by the Union of Concerned Scientists in 2011. I also presented invited testimony on *inherently safer systems* requirements for existing refineries that change crude feedstock at the U.S. Chemical Safety Board's public hearing on the Chevron Richmond refinery fire that was held on 19 April 2013. My CV and list of publications were submitted with my September 2013 report in this matter.

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[1] *See CBE v. City of Richmond* 184 Cal_App.4th.

[2] *See* also Contra Costa Pipeline Project file, County File #LP072009, SCH #2007062007.

Scope of Review

6. In my role at CBE I have reviewed the Phillips 66 Company 'Propane Recovery Project' Recirculated Draft Environmental Impact Report (RDEIR), 'Rail Spur Extension and Crude Unloading Project' Revised Draft Environmental Impact Report (Rail Spur RDEIR),[3] 'Throughput Increase Project' Final EIR (Throughput Increase FEIR),[4] and the projects or project components discussed in those documents. I commented previously in this matter and reassert my previous comments[5] as they remain valid and have not been addressed in the RDEIR. My review of the project and RDEIR reported herein is focused on the adequacy of the project description and analysis in the RDEIR for evaluating potential environmental impacts of the project. My opinions on these matters and the basis for these opinions are stated in this report. B9-46

Changes to the Project

7. The RDEIR describes the project differently from the DEIR in several ways that are identifiable from detailed review but are not discussed in the RDEIR as changes in the project description or changes in the project. These changes involve the *amounts* of propane and butane (LPG) to be recovered, the *sources* of that LPG, the *streams* to be hydrotreated, and the *scope* of cooling system changes. Each is discussed in turn below. B9-47 B9-48

8. Amounts of propane and butane that the project could recover were described as 4,200 barrels per day (b/d) of propane and an additional 3,800 b/d of butane in the DEIR. In contrast, the RDEIR asserts *both* a draft air permit limit on the lump sum of propane and butane to be recovered (14,500 b/d LPG; RDEIR at 3-31, 3-33) *and* a project design basis of 5,580 b/d propane and 4,996 b/d additional butane (15,474 b/d LPG including the butane that is already recovered; RDEIR at 3-33, 3-34). No irrevocable commitment to retain the proposed 14,500 b/d permit limit throughout the 30–50 year expected operation of the project is asserted or documented. The RDEIR does not note that the design basis is thus relevant to potential impacts, or explain this change to the project in its text. B9-49

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[3] 'Rail Spur' proposal; SCH #2013071028; now pending before San Luis Obispo County.
[4] 'Throughput Increase' proposal; SCH #20081010111; now pending final project approval.
[5] My 4 Sep 2013 report regarding this matter (Karras Rodeo Report-1), 7 Jan 2014 Supplemental Evidence–B, 14 Jan 2014 Supp. Evidence–C, 20 Jan 2014 Supp. Evidence–D (co-authored with Roger Lin), and 24 Nov 2014 report regarding the 'Rail Spur Extension and Crude Unloading Project' (Karras Rail Spur Report) are appended hereto as attachments 1, 2, 3, 4, and 5, respectively. Exhibit 1 of my Rail Spur report is appended hereto as Karras Exhibit 1.

9. Sources of the LPG to be recovered, as described in the DEIR, did *not* include several streams feeding 'RFG-A.' (DEIR Figure 3-6.) These 'RFG-A' streams are now included among those from which LPG could be recovered. (RDEIR Figure 3-6.) This change in the project description reveals undisclosed changes in hydrogen plant feed and further implicates feedstock from the Santa Maria facility (see figs. 3-4, 3-6), but the RDEIR includes no discussion of any potential effects from this change in the project. B9-50 B9-51

10. Additional hydrocarbon streams would be treated by the proposed new hydrotreater, but this change and its implications are not discussed in the RDEIR. Naphtha streams from the heavy gas oil hydrocracker (Unit 246) and the ULSD diesel hydrotreater (U250) are fed to reforming units U231 and U244 now, but the revised project description would instead route them through the new hydrotreater. (Compare DEIR and RDEIR figures 3-4, 3-5, and 3-6.) B9-52

11. The project would modify the Rodeo facility's antiquated once-through cooling (OTC) system and those modifications would include, among other things, new heat exchangers. However, cooling system changes described in the DEIR were limited to cooling the proposed new propane *recovery* (DEIR at 3-27) while the RDEIR appears to expand this description to cover all cooling "demands for the proposed Project." (RDEIR at 3-37.) The RDEIR's text does not mention or explain this change in the project description. This omission further compounds its lack of disclosure regarding the process sources and amount of the additional heat to be transferred to the San Francisco Bay. B9-53 B9-54

Feedstock Change

12. Changes in the type, quantity, and quality (e.g., density, distillation properties, LPG content, hydrogen content, sulfur content, metals content, organic acids content) of crude oil processed are not disclosed in the RDEIR. Crude oil is the basic feedstock of oil refining. This nondisclosure is a fundamental flaw in the RDEIR. B9-55

13. The RDEIR asserts that the project would not have "any effect on the types and/or quantities of crude oil feedstocks that can be processed," does not "propose to add, change, or modify the operation of other process units, such as the coker" (RDEIR at 3-28), and "has no connection to the transportation of crude oil by rail" (RDEIR at 3-7). These assertions are unsupported, misleading, and incorrect. Crude is the feedstock for B9-56 B9-57

this LPG production. Feedstock and products are key process variables that are fundamentally interrelated. Phillips 66 and other California refiners are switching to different crude feedstock sources at present. Crude from different sources can yield different amounts of propane and butane in refinery distillation processes, and in refinery cracking processes such as coking and hydrocracking. These connections between refinery crude feeds, processing, and LPG production are beyond reasonable dispute. Moreover, Phillips 66 does, in fact, propose to change (increase) coking and other processing of new types of crude brought in by rail.

B9-57

B9-58

14. Phillips 66 proposes to increase coking and other processing rates via its 'Throughput Increase Project, which would increase its Santa Maria Facility (SMF) crude processing rate.[6] Because the SMF cannot make gasoline, diesel or jet fuel and sends all the semi-refined crude liquids it produces to Rodeo for further processing, that would necessarily increase the volume of oil from the SMF that would be processed at Rodeo.[7] Some of this increasing oil volume from the SMF would be processed by the Rodeo coking unit U200, its hydrocracking units U240 and U246, and its diesel hydrotreater U250 (after U240 'Prefrac' distillation; see 'SMGO,' RDEIR Figure 3-4). The RDEIR fails to disclose this proposed change in the operation of the coker and other refinery process units to process larger amounts of crude delivered through the SMF.

B9-59

15. As stated, crude feedstock yields LPG from distillation (e.g., 'prefractionation') and also from cracking (e.g., coking and hydrocracking). Thus, SMF crude inputs are connected to the Rodeo LPG recovery proposal through distillation and cracking of the semi-refined oils sent from the SMF to Rodeo to finish the processing needed to make gasoline, diesel and jet fuel from crude. Phillips 66 currently proposes to receive this crude feedstock at the SMF by rail.[8] Therefore, its assertion that the project "has no connection to the transportation of crude oil by rail" is a clear error in the RDEIR.

B9-60

16. The publicly verifiable data in the record indicate that insufficient propane and butane is recoverable in the project baseline to implement the project without additional cracking process feedstock, additional LPG-rich feedstock, or both. My past comments and those of others raised and documented this finding.[9] Estimates based on publicly

B9-61

[6] See Throughput Increase FEIR; see also Rail Spur RDEIR at 2-35 (pending final approval).
[7] See Karras Rail Spur Report at paragraphs 15–28.
[8] See Rail Spur RDEIR; currently in CEQA review before San Luis Obispo County.
[9] See attachments 1, 3, 4; reports and comments of P. Fox on the LPG and Rail Spur projects.

verifiable, plant-specific data for LPG recoverable with available technology indicate that roughly half Phillips' proposed LPG recovery capacity would be idled in these 'baseline' conditions.[10] Unfortunately, instead of reporting and analyzing publicly verifiable data on current and potential sources of recoverable LPG, the RDEIR dismisses this evidence with unsupported and contradictory assertions. The RDEIR's revised estimate now tacitly admits a small baseline LPG shortfall below project design capacity, ranging from 10–31% of this capacity being idled, depending upon the averaging period chosen.[11] However, the RDEIR estimate is not supported by publicly verifiable data, overestimates the baseline by applying maximum conditions as average ones for at least some streams, and further inflates the baseline by including LPG streams that are not feasible to recover in its 'recoverable' estimate.[12] Compounding its errors, the RDEIR omits industry-wide data revealing that its estimate appears improbably high.[13] Thus, rather than any 'battle of experts' problem, the RDEIR simply ignores all the data refuting its conclusion on this key point while including no supporting data, but its analysis appears misleading in another way as well. Instead of a typical 'baseline' period before the project notice, it asserts an LPG estimate for 2013 (RDEIR at 3-35), a year when the refinery had already begun to boost crude feedstock volume, and did so at least in part on new tar sands oil feedstock[14]—the very same change it insists has nothing to do with the project.

B9-61

17. The RDEIR's new assertion that "no new butane or propane can be added to the semi-refined products sent from the" SMF because of "vapor pressure limits" on storage tanks along the company's proprietary pipeline from the SMF to Rodeo[15] is unsupported, erroneous, and misleading. This assertion is not supported by even a shred of data in the RDEIR—and it is improbable, as the naphtha (pressure distillate) and gas oils produced and sent by the SMF would be expected to have vapor pressures well below the limits cited. Data the RDEIR *should* have included but did not show this assertion is wrong.

B9-62

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[10] *See* attachments 1, 3, 4; reports and comments of P. Fox on the LPG and Rail Spur projects.
[11] RDEIR at 3-33 through 3-35, reporting unsupported total LPG averages of ≈10,600 b/d (month of Dec 2013) and 13,970 b/d (2013-annual) vs. a project design basis of 15,474 b/d.
[12] *See* attachments 1, 3, 4; and the reports and comments of P. Fox, *esp.* on Refinery Manager Evans' 6 Jan 2014 *Response to Appeals*. Note also that 'RFG-A' streams the RDEIR estimate includes were *not* fed to LPG recovery before the project description changed (*see* paragraph 9).
[13] *See* Att. 3 at 1 (*maximum monthly* West Coast yield less than half claimed Rodeo *annual* yield).
[14] *See* Rail Spur RDEIR at 2-35 (compare 2010–2012 vs. 2013 SMF crude throughputs) and 2-31 (SMF crude feed has been up to 7% bitumen-derived 'dilbit' crude "for about one year").
[15] RDEIR at 3-25, 3-26; *see* also Phillips SFR Manager's 1/6/14 'Response to Appeals.'

(See Fox SMF Rpt–2.)[16] The tanks are controlled and thus exempt from the claimed vapor limits, their measured vapor pressures are far below the claimed limits, or both. (Id.) This assertion also ignores—and distracts attention away from—the LPG feedstock sent to Rodeo not as LPG, but as gas oils and pressure distillate/naphtha that yield significant amounts of LPG during processing at Rodeo.

B9-62

B9-63

18. Ultimately, the RDEIR's assertion that the project "would not require the Refinery to change the basic feedstocks that are currently received and processed" because it "does not propose to increase the production of propane or butane"[17] is unsupported and inaccurate because it ignores ongoing changes in crude feedstock. This existing condition is a known impetus for projects at the refinery that has been acknowledged by San Luis Obispo County[18] and by Phillips 66 itself.[19] As shown below, the refinery will need to replace its current crude feedstock in order to produce sufficient propane and butane to implement the project over its expected operational duration.

B9-64

19. Currently changing crude feedstock, driven by declining San Joaquin Valley Pipeline (SJVP) crude inputs to the Rodeo Facility, has been established—and accepted by Phillips 66 and public agencies alike—as a driving factor in Phillips' Marine Terminal Offload Revision Project. (BAAQMD, 2012; CSLC, 1995.)[20] That increase in crude and gas oil throughput over the refinery's wharf is replacing declining SJVP crude deliveries, but it is limited to only 51,182 b/d. (Id.) Semi-refined oils delivered via upgrading of crude by the SMF, the only other way Rodeo gets oil feedstock, averaged ≈38,000 b/d as SMF crude throughput from 2010–2012 and could increase to 48,950 b/d, roughly the same throughput as the new wharf limit, with the proposed Throughput Increase.[21]

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[16] Expert report of Phyllis Fox (Fox Rail Spur Rpt–2), attached to CBE 5 Dec 2014 comments.
[17] RDEIR at 3-28.
[18] *See* Rail Spur RDEIR at 2-36 (need for project driven by declines in local crude sources).
[19] *See* BAAQMD, 2012. *Marine Terminal Offload Limit Revision Project CEQA Initial Study* at i, 1–3, 17 (crude and gas oil offloading limit increase of 20,500 b/d to 51,182 b/d to replace equal volume of California crude via pipeline, based on CSLC 1995 EIR); and CLSC 1995 FEIR (SCH #91053082) at § 4 page S-4 ("it is assumed that sources of San Joaquin" and "Alaskan crude, will decline" and "[m]ore reliance will be placed on crude imports from foreign sources"). *See* also Phillips 66 Chairman and CEO Greg Garland, quoted in Thompson Reuters, *DECEMBER 13, 2012 / 01:30PM, PSX – Phillips 66 First Annual Analyst Meeting;* www.streetevents.com ("opportunity to improve performance in California is really around getting advantage crudes to the front end of the California refineries").
[20] BAAQMD, 2012 and CSLC, 1995 as cited above.
[21] *See* Rail Spur RDEIR at 2-35.

20. Abundant evidence that the RDEIR does not include or analyze demonstrates that declining local and regional crude production could greatly affect SMF operation.[22] Total California crude production supplied to refineries statewide has declined by 43% from its peak of 1.10 million barrels per day in 1986 to 631 thousand barrels/day (Mb/d) in 2013, and California crude now supplies only 40% of statewide refinery crude input.[23] Statewide, coastal onshore production was 137 Mb/d in 1977 but only 60.3 Mb/d in 2012, indicating a gross decline of –56% and a year-on-year decline averaging –2.0%/year in this period.[24] State offshore production peaked in 1978 at 107 Mb/d and was 35.6 Mb/d in 2012, indicating a gross decline of –67% and a year-on-year decline averaging –3.6% per year.[25] In California's San Joaquin Basin, crude production peaked in 1986 at 745 Mb/d and was 405 Mb/d in 2012, a gross decline of –46% and annual decline averaging –2.3%/y.[26] California federal Outer Continental Shelf (OCS) production peaked in 1995 at 197 Mb/d and was 41.1 Mb/d in 2012, a gross decline of –79% and an average year-on-year decline during this period of –8.3%/y.[27] Some 13 Central Coast OCS, state offshore and onshore fields are identified as the sources of crude for the SMF.[28] Total production from these 'local supply' sources was 191 Mb/d in 1995 but only 67.1 Mb/d in 2012, a gross decline of –65% and a year-on-year decline ranging from –2.8%/y since 2003 to –5.8%/y since 1995.[29] See Figure 1. This 2.8–5.8%/year decline is within the range found elsewhere in the state that is discussed above (2.0–8.3%/y). As Figure 1 illustrates, this 2.8–5.8%/year rate of decline could result in total production from these 'local supply' sources falling below the maximum capacity of the SMF to process crude within a few years, and then falling further, to a small fraction of SMF design capacity, within the expected operating life of the proposed rail spur. When its crude rate falls too far below the design specifications of its existing equipment, such as its pipelines and vacuum unit, the existing SMF cannot operate efficiently or profitably.

B9-64

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[22] This finding also applies to the Rodeo Facility of the Phillips 66 San Francisco Refinery.
[23] Cal. Energy Comm. (http://energyalmanac.ca.gov/petroleum/statistics/crude_oil_receipts).
[24] U.S. Energy Information Admin. (http://www.eia.gov/dnav/pet/pet_crd_pres_dcu_rcac_a.htm).
[25] U.S. EIA (http://www.eia.gov/dnav/pet/pet_crd_pres_dcu_rcasf_a.htm).
[26] U.S. EIA (http://www.eia.gov/dnav/pet/pet_crd_pres_dcu_rcaj_a.htm).
[27] U.S. EIA (http://tonto.eia.gov/dnav/pet/hist/LeafHandler.ashx?PET&s=RCRR10R5F+1&f=A).
[28] The Pt. Pedernales, Pt. Arguello, Santa Ynez, Elwood S. Offshore, Arroyo Grande, San Ardo, Cat Canyon, Orcutt, Santa Maria Valley, Lompoc, Casmalia, McCool Ranch, and Zaca fields. Further, a pipeline system connected only to local oil fields "is currently the only way that the Phillips 66 [SMF] can receive crude oil." *See* Rail Spur RDEIR at 2-35.
[29] Data from State Division of Oil, Gas, & Geothermal Resources (DOGGR) and US DOI Bureau of Safety and Environmental Enforcement (BSEE). See Exhibit 1 Appended hereto.

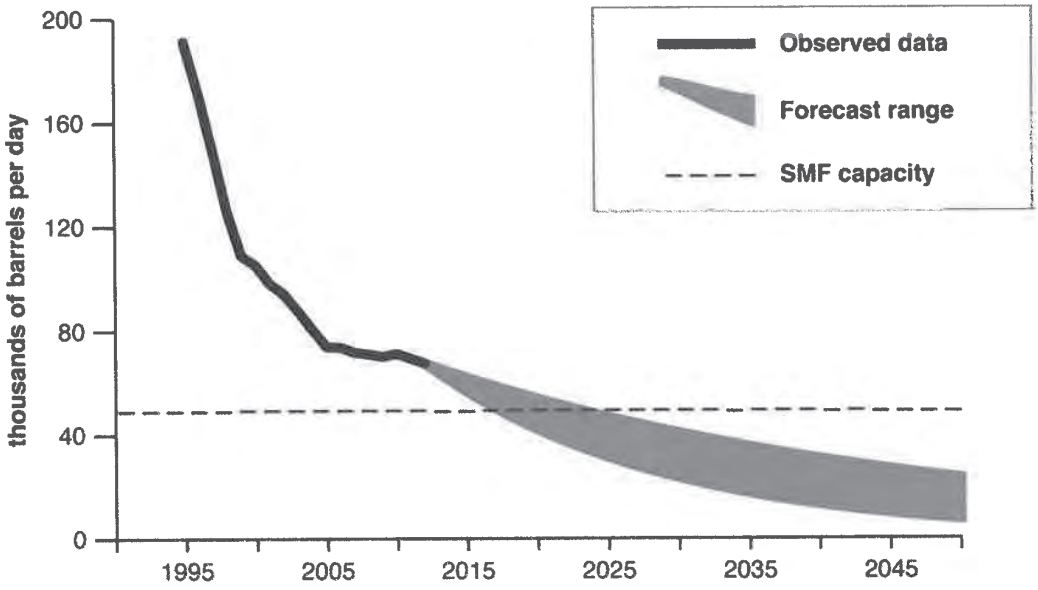

Figure 1. Total Central Coast OCS, offshore, and onshore oil production of fields supplying crude oil to the Phillips 66 SMF from 1995–2012, and forecast to 2050.

B9-64

Observed production by year, in thousands of barrels per day (Mb/d)

1995	191 Mb/d	2001	97.7 Mb/d	2007	71.3 Mb/d
1996	171 Mb/d	2002	93.8 Mb/d	2008	70.7 Mb/d
1997	149 Mb/d	2003	87.3 Mb/d	2009	69.7 Mb/d
1998	126 Mb/d	2004	80.2 Mb/d	2010	70.9 Mb/d
1999	108 Mb/d	2005	73.6 Mb/d	2011	69.0 Mb/d
2000	105 Mb/d	2006	73.3 Mb/d	2012	67.1 Mb/d

Data from Cal. Dept. of Conservation (DOGGR) and U.S. Dept. of Interior (BSEE); *see* Exhibit 1 for details. Oil fields included are Pt. Pedernales, Pt. Arguello, Santa Ynez, Elwood S. Offshore, Arroyo Grande, San Ardo, Cat Canyon, Orcutt, Santa Maria Valley, Lompoc, Casmalia, McCool Ranch, and Zaca.
Forecast range based on range of average year-on-year decline rates (2.8–5.8%/yr) from a more recent (2003–2012) and longer (1995–2012) period, after CEC method (*see* CEC-600-2010-002-SF at 138).
SMF capacity is Santa Maria Facility throughput proposed (48.95 Mb/d) from Rail Spur RDEIR at 2-35.

21. If built as proposed the project would be expected to have a useful operational duration of 30–50 years (until 2045–2065).[30] As shown in paragraph 20 and Figure 1, current crude sources supplying project feedstock would dwindle during this period.

[30] *See* Karras Rodeo Report-1 at paragraph 11. This estimate is consistent with those for similar refining equipment made in other CEQA reviews (Id.) and with San Luis Obispo County's estimate (Rail Spur RDEIR at 2-36). The RDEIR omits this crucial information about the project, but "amortizes construction emissions over a 30-year project lifetime" (RDEIR at 4.5-9).

22. As stated, available evidence indicates insufficient currently recoverable LPG, and even the RDEIR's unsupported overestimate of currently recoverable LPG is smaller than the project's design capacity. Processing the same oil feedstocks in smaller amounts will yield even less LPG. Thus, even if the RDEIR's unsupported overestimate is assumed—and even if the SMF does not shut down when its crude supply dwindles to a small fraction of its capacity—in the absence of a new crude source to replace dwindling current supplies from the SMF and SJVP during its operating life, the project could not be implemented as proposed.

B9-65

B9-66

23. Phillips' crude by rail proposal at the SMF would deliver ≈52,000 barrels per unit train and unload each train in ≈11.5 hours, so it could amply supply the new imported crude oil for the proposed throughput increase to 48.95 Mb/d.[31] Further, this proposal's asserted exclusion of Bakken crude, heated unloading equipment, weight limits on rail tanker car crude volume, and asserted crude sources,[32] together with the predominance of the tar sands among available crude sources of this type indicate that tar sands oil would most likely dominate the new crude feedstock enabled by the project. This would be a dramatic change in refinery feedstock: Tar sands bitumen is *fundamentally* different from heavy oil or conventional crude.[33]

B9-67

24. In sum, Phillips' proposal to recover additional LPG from its crude feedstock is inextricably related to its proposal to replace currently dwindling crude feedstock with new feedstock that most likely will be dominated by fundamentally different bitumen-derived 'tar sands' oils. My previous comments found the reasonable potential that this project-related feedstock switch could result in significant potential catastrophic hazard, air quality, public health, and climate impacts.[34] Instead of addressing these potential impacts the RDEIR asserts the unsupported and erroneous conclusion that the project "has no connection to" the crude switch.[35] Therefore, its failure to disclose, describe, analyze and address this project-related change in oil feedstock and its environmental implications represents a fundamental flaw in the RDEIR.

B9-68

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[31] *See* Rail Spur RDEIR at 2-22, 2-29 and 2-35.
[32] Rail Spur RDEIR at 2-1, 2-14, 2-15, 2-22 and 2-33.
[33] *See* Meyer et al., USGS Open-File Report 2007-1084 (http://pubs/usgs/gov/of/2007/) at 2.
[34] Karras Rodeo Report-1 at paragraphs 56–83.
[35] *See* paragraphs 13–23; *see* also FEIR at 3.2-130, response to comment that undisclosed changes in crude oils processed could create undisclosed environmental impacts: ("The DEIR did not address changes in crude oil use because … the objectives of this Project would be achieved irrespective of crude oil feedstock selection."). (Emphasis added.)

Project Scope

25. Phillips' Santa Maria and Rodeo facilities (SMF and RF, respectively) are interdependent parts of its San Francisco Refinery (SFR), and its SMF rail spur, SMF throughput increase, and RF LPG[36] proposals are interdependent parts of a larger project that has been piecemealed,[37] as shown below.

26. SFR is identified and reported as a single oil refinery comprised of the SMF and RF by government and industry authorities,[38] by San Luis Obispo County,[39] and by Phillips itself (see Phillips 66 website).[40] SFR's primary, and from Phillips' perspective essential, products are gasoline, diesel and jet fuel. (Id.) But the SMF does not make *any* finished gasoline, diesel, or jet fuel by itself, and lacks the hydroprocessing and naphtha reforming capacity necessary to do so—all of the SFR hydrocracking, hydrotreating, hydrogen production, and naphtha reforming capacity is at the RF.[41] Instead, Phillips 66 sends all of the partially upgraded feedstock that the SMF produces (gas oil and naphtha-pressure distillate) through a proprietary pipeline to the RF, where all of the SFR's finished gasoline, diesel and jet fuel is made and then shipped from the RF product pipelines and wharf for sales.[42] The SMF thus depends upon the RF for transport fuel production and financially sustainable operation.

B9-69

27. The RF, in turn, relies on the SMF for sufficient feedstock delivery and deep conversion (coking) capacity. San Joaquin Valley Pipeline (SJVP) crude delivery to the RF is declining with declining San Joaquin Basin production (see paragraphs 19–20), and this decline has already driven a throughput increase at the RF wharf (BAAQMD,

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[36] 'Propane Recovery' proposal; SCH #2012072046; this RDEIR.
[37] These points are made in my expert report submitted to San Luis Obispo County as well.
[38] *Compare* refinery capacity reports by EIA (http://www.eia.gov/petroleum/refinerycapacity/) and *Oil & Gas Journal* (http://www.ogj.com/ogj-survey-downloads.html#worldref) to facility configuration and throughput reports by State Regional Water Quality Control board permits (Order R3-2013-0028 at Table F-9 and Order R2-2010-0027 at Table F-1C); *see* also Rail Spur RDEIR at 2-32; Throughput Increase FEIR at 2-12; and RDEIR at 3-10 through 3-19.
[39] *See* Rail Spur RDEIR at 2-4; Throughput Increase FEIR at 2-1. Notably, the RDEIR's only references to the SFR are in its reference titles and a footnote on page 1-3 regarding changes of ownership: it fails to disclose that the RF is a component of a single, larger refinery, the SFR.
[40] www.phillips66.com/EN/about/our-businesses/refining-marketing/refining/Pages/index.aspx
[41] *Compare* refinery capacity reports and facility-level orders and EIRs cited in the note above.
[42] *See* Rail Spur RDEIR at 2-4 and the Throughput Increase FEIR at 2-1; see also the product export facilities discussion in the RDEIR at 3-18. The SMF was sited on the Central Coast to tap local crude sources there. This, together with San Francisco Bay/Delta tanker port capacity afforded to the RF, helps explain the SFR's geographically unusual design.

2012).[43] Even with this new wharf capacity, however, oil delivery across the wharf is limited to only 51.2 Mb/d. (Id.) Crude delivery and upgrading via the SMF—the only other way the SFR receives crude—is a substantial portion (≈38.0 Mb/d[44]) of its total crude supply. All SFR crude input is necessarily finished at the RF to make a financially sustainable product slate (see paragraph 26), so the SFR, and thus the RF, needs this SMF-derived crude. Moreover, roughly half of the coking capacity utilized by the SFR currently is at the SMF.[45] The RF needs this additional deep conversion capacity at SMF to feed its hydrocrackers sufficient heavy gas oil for the SFR to convert its crude slate into gasoline, diesel, and jet fuel efficiently and, from Phillips' standpoint, economically. Indeed, the new heavy gas oil hydrocracker at the RF that is fed this SMF gas oil[46] was built for exactly that purpose,[47] and could become a stranded asset without that feed.

B9-69

28. Similarly, the SMF relies on existing infrastructure for feedstock. The SMF relies on a pipeline system fed by declining local crude supplies that cannot maintain its current crude rate for long, much less sustain a crude rate increase of ≈29% to 48.95 Mb/d, the proposed throughput increase—but the rail proposal could do so. (Paragraphs 20–23.)[48] In the absence of a new port, interstate pipeline, long-distance trucking plan, or any other credible proposal for sustained delivery of sufficient imported crude to implement this project component, the proposed throughput increase is dependent upon the rail spur.

B9-70

29. A third component of the piecemealed project involves propane and butane, which are liquefied petroleum gases (LPG).[49] LPG is in refiners' hydrocarbon streams because it distills out from oil feeds, and because it is created in coking, hydrocracking, and other refining processes that 'crack' (break apart) larger, denser, or higher boiling-point hydrocarbons in the oil feeds. LPG is burned as refinery fuel, recovered, or both. Not all LPG present in all refinery hydrocarbon streams is recoverable with currently

B9-71

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[43] See BAAQMD, 2012. *Marine Terminal Offload Limit Revision Project CEQA Initial Study* at i, 1–3, 17 (*crude and gas* oil offloading limit increase of 20,500 b/d to 51,182 b/d to replace equal volume California *crude* via pipeline, based on CSLC 1995 EIR); and CLSC 1995 FEIR (SCH #91053082) at Section 4 page S-4 ("it is assumed that sources of San Joaquin" and "Alaskan crude, will decline" and "[m]ore reliance will be placed on crude imports from foreign sources").
[44] From 37,785 b/d (2010), 38,701 b/d (2011), and 37,602 b/d (2012); Rail Spur RDEIR at 2-35.
[45] From 23,200 b/d (Order R3-2013-0028 Table F-9) v. 47,000–48,000 b/cd (*Oil & Gas J.*; EIA).
[46] See RDEIR at 3-10 through 3-12.
[47] See 'Clean Fuels Expansion' Nov. 2006 Prelim. EIR SCH #2005092028 at 3-1, 3-18, 3-22/23.
[48] See also Rail Spur RDEIR at 2-35 (pipeline system from local oil fields "is currently the only way that the Phillips 66 [SMF] can receive crude oil").
[49] Herein, 'LPG' means propane and butane, the only gases Phillips proposes to recover.

available technology. Propane and butane that is recovered can be sold as fuel or as petrochemical feedstock, and butane can be blended into winter gasoline. As stated, Phillips 66 proposes to recover propane and additional butane at its RF. It proposes to install a hydrotreater, recovery columns, pressure storage bullets, and a rail loading spur and rack, and—decades after other refiners stopped exploiting the San Francisco Bay/Delta in this way—would expand Phillips' once-through cooling system. The three components of the project are in review or await final approval before Contra Costa County or San Luis Obispo County and none of them has been implemented. B9-71

30. The publicly verifiable data in the record indicate that insufficient propane and butane is recoverable in the project baseline to implement Phillips' LPG proposal without the additional cracking process feedstock, additional LPG-rich naphtha/pressure distillate, or both, that its SMF throughput increase and rail spur could supply. My past comments, and those of others, raised and documented this finding. Unfortunately, instead of reporting and analyzing publicly verifiable data on current and potential sources of recoverable LPG, the counties' environmental reviews, thus far, have dismissed those comments with unsupported and contradictory assertions. (See paragraph 16.) B9-72

31. The new argument that vapor pressure limits do not allow any more LPG to be sent from the SMF to Rodeo[50] is totally unsupported by any data in the RDEIR, improbable, and shown by data the RDEIR omits to be erroneous. (See paragraph 17.) This 'vapor pressure' argument also ignores, and thereby distracts from a crucial point: LPG feedstock sent to Rodeo not as LPG, but as gas oils and pressure distillate (naphtha), yields substantial amounts of recoverable LPG from processing at Rodeo. Ignoring this link between the facilities' project components would be a fatal error. B9-73

32. Some of the volumetric implications for RF hydrocracking and reforming of gas oil and naphtha in a 'SMF projects' scenario, in which the rail and throughput proposals are implemented, and in a 'No SMF projects' scenario, in which those proposals are not implemented, are summarized in Table 1. Gas oil and naphtha/pressure distillate are the major SMF exports to the RF. Gas oils are hydrocracked at the RF to make gasoline, diesel, and jet fuel sized hydrocarbon molecules with high enough hydrogen:carbon ratios B9-74

[50] RDEIR at 3-25, 2-36. *See also Response to Appeals by the Rodeo Citizens Association and Communities for a Better Environment;* letter from Mark E. Evans, Phillips 66 San Francisco Refinery Manager, to Chair Karen Mitchoff and Members of the Contra Costa County Board of Supervisors. 6 January 2014; and Rail Spur RDEIR at 2-31.

Table 1. Estimated oil feedstock effects at the refinery's Rodeo Facility in 'project' and no project' scenarios for the Santa Maria crude by rail and throughput increase.
Figures EXCLUDE additional LPG-boosting effects of tar sands 'dilbit' processing

Data in thousands of barrels/day (Mb/d), and percent

	Current conditions	Santa Maria Project Component Scenarios	
		SMF projects	No SMF projects
Santa Maria Facility			
crude throughput (Mb/d)	38.00	48.95	17.82
Δ vs. current (%)	——	29%	-53%
naphtha to Rodeo (Mb/d)	11.63	15.00	5.45
% Δ vs. current	——	29%	-53%
gas oil to Rodeo (Mb/d)	20.71	26.68	9.71
% Δ vs. current	——	29%	-53%
Rodeo Facility			
hydrocracking			
capacity (Mb/d)	58.00	58.00	58.00
feed rate (Mb/d)	51.75	57.72	40.75
utilization rate (%)	89%	99%	70%
Δ in feed rate (%)	——	11%	-21%
naphtha reforming			
capacity (Mb/d)	31.00	31.00	31.00
feed rate (Mb/d)	29.40	32.77	23.22
utilization rate (%)	95%	106%	75%
Δ in feed rate (%)	——	11%	-21%

Current crude rate is the 2010–2012 avg. of data from Rail Spur RDEIR at 2-35; SMF projects crude rate is the proposed Throughput Increase. (Id.) 'No SMF projects' crude rate is from the median year-2045 forecast illustrated in Figure 1 and the conservative assumption that all crude produced by Central Coast OCS, state offshore and onshore oil fields now identified as SMF suppliers will be supplied to the SMF (other plants received 45% of total production from these oil fields during 2010–2012). SMF naptha and gas oil supplied to Rodeo are throughputs reported by the SLOAPCD emission inventory, for all SMF plant naphtha and gas oil product tanks. This SLOAPCD data appear reasonable based on design performance and measurements of similar processes and crude slates as those at the SMF. Rodeo 2014 capacities in b/cd from USEIA (http://www.eia.gov/petroleum/data.cfm); Rodeo feed rates are multi-year averages from SFRWQB NPDES Order R2-2011-0027. Scenario feed rates are based on changes in gas oil (HCU) or naphtha (CRU) feed rate.

** Effects of LPG-rich diluents and harder-to-crack bitumen in tar sands dilbits (not shown in the table) would greatly boost LPG-per-barrel processed in the 'SMF projects' scenario.

B9-74

for these high-value products—and yield significant amounts of propane and butane in this process. The gasoline stream (naphtha) must also be 'reformed' to boost octane rating, and thus is processed via catalytic naphtha reforming at the RF. The table shows changes from current (2010–2012) conditions in both scenarios identified above.

33. As stated, available evidence indicates insufficient currently recoverable LPG, and estimates based on publicly verifiable data for LPG known to be recoverable with available technology indicate that roughly half of Phillip's proposed LPG recovery capacity would be idle in these 'baseline' conditions. (See Paragraph 16.) Implementing the SMF throughput increase and rail components, however, would boost its naphtha and gas oil deliveries to Rodeo by ≈29% and boost *total* RF gas oil hydrocracking by ≈11%. See Table 1. Because hydrocracking is a significant LPG producer, LPG available for recovery at the RF would increase proportionately more than this 11%. Recoverable LPG would increase still more from the additional coking (not shown) of 29% more crude feed and, given that tar sands dilbits are the most likely new crude feed, from the LPG-rich diluents in these dilbits. (See Fox comments.) The sum of these increments could boost recoverable LPG at Rodeo from roughly 50% to more than 70% of the proposed project's design capacity.

B9-75

B9-76

34. In the 'No SMF projects' scenario, SMF crude throughput would rely on terminally declining local/regional crude supplies and would decline as illustrated in Figure 1. A conservative (less steep) estimate of this decline and its effects on processing is described in Table 1 (see caption), for the time frame roughly around 2045, which is within the project duration (see paragraph 21). SMF-to-RF naphtha and gas oil volumes drop by about half and *total* RF gas oil hydrocracking drops by ≈21%. This is a conservative estimate; if it does not replace its already-declining crude feedstock supply by then, the SMF might more likely be shut down by 2045. (See Figure 1.)

B9-77

35. The RDEIR's revised estimate of currently recoverable LPG suggests a small shortfall below the project design basis, ranging from 10–31% of project capacity being idled, depending upon the averaging period chosen. (See Paragraph 16.) This estimate is not supported by publicly verifiable data and overestimates recoverable LPG by applying maximum conditions as average ones and including LPG streams that are not feasible to recover in its 'recoverable' estimate. (Id.) Even if the RDEIR's overestimate is assumed, however, the 21% reduction in gas oil hydrocracking in the 'No SMF projects' scenario and the further LPG supply losses from idled coking and distillation capacity at the SMF could reduce LPG at the RF enough to idle roughly 40–50% of the proposed project capacity. Thus, the project cannot be implemented as proposed in the 'No SMF projects' scenario. Therefore, the Rodeo LPG component of the project depends upon the SMF throughput increase and crude by rail components for feedstock.

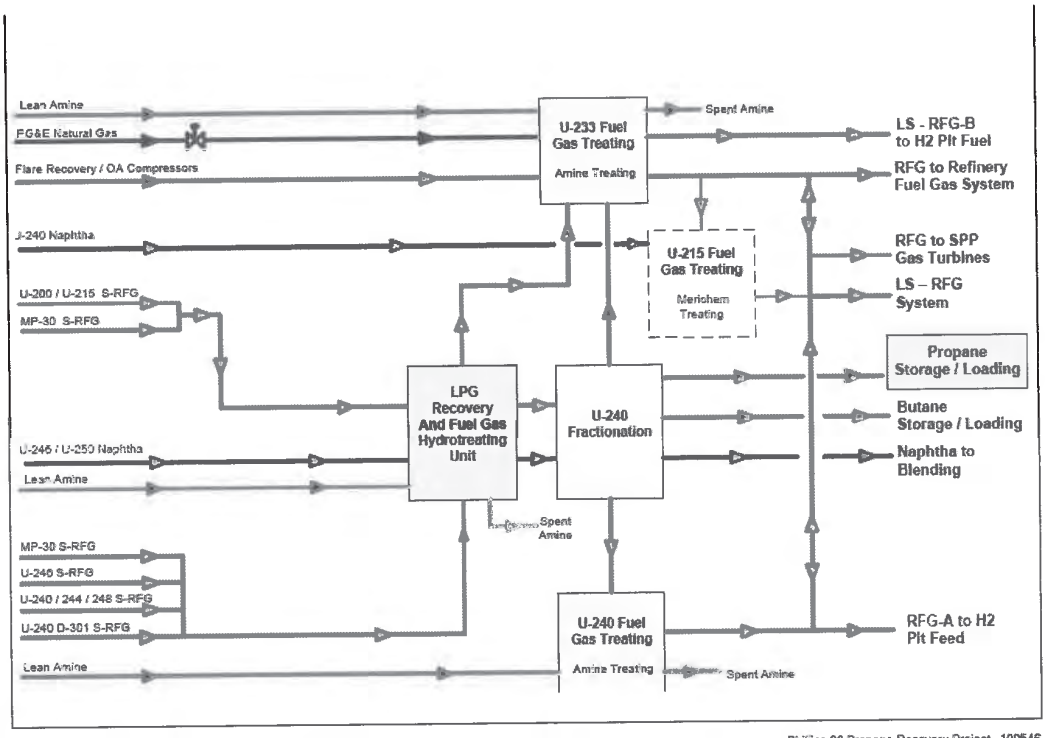
B9-78

36. Importantly, an otherwise unexplained change in the project description is informed by the 'current conditions' and 'SMF project' results for naphtha in Table 1. Naphtha from the Rodeo heavy gas oil hydrocracker (Unit 246) and the ULSD diesel hydrotreater (U250) is routed through the proposed new 'fuel gas' hydrotreater in Revised Figure 3-6 of the RDEIR. These streams were routed through the proposed LPG recovery but *not* the proposed new hydrotreater in Figure 3-6 of the June 2013 DEIR. Further, these U246 and U250 streams are 'wild naphtha' derived at least in part from processing the SMF gas oil ('SMGO;' see Figure 3-4.[51]) Finally, these wild naphtha streams are now fed through other processes to reforming units U231 and U244 (see Figure 3-4), but revised Figure 3-6 shows the project re-routing them to naphtha blending instead. In sum, these naphtha streams are fed to the Rodeo reformers now but the revised LPG recovery proposal would instead route them through the new hydrotreater. For convenient review, RDEIR Revised Figure 3-6, RDEIR Figure 3-4, and original Figure 3-6 from the June 2013 DEIR are excerpted below.

B9-79

37. The 'current conditions' and 'SMR projects' results for naphtha reforming in Table 1 are relevant to this project revision because they show that the Rodeo reformers are currently near maximum capacity (95% of 31.0 Mb/d) and would violate this maximum capacity limit if the SMF project components are fully implemented (106% of capacity). Further, the estimate in Table 1 probably underestimates this problem by conservatively assuming none of the expected further increase in naphtha inputs from the diluent in tar sands dilbits, though the throughput increase cannot be implemented without the rail spur, which would most likely tap these price-discounted and LPG-rich oil feeds. In any case, the units probably could not run properly, efficiently *and* safely if run beyond maximum capacity on a sustained basis, and either selling low-value unfinished naphtha into the new shale oil-dominated crude market at a deep discount, or cutting crude rate because of this limitation, could be costly. It also would mean that the throughput increase project could not be fully implemented. Routing some of the naphtha from the SMF to the new hydrotreater instead would relieve the bottleneck while allowing those streams to be part of the finished product slate—and that is what the LPG project revision described in paragraph 36 would do. Thus, the LPG component of the project enables full implementation of the SMF components.

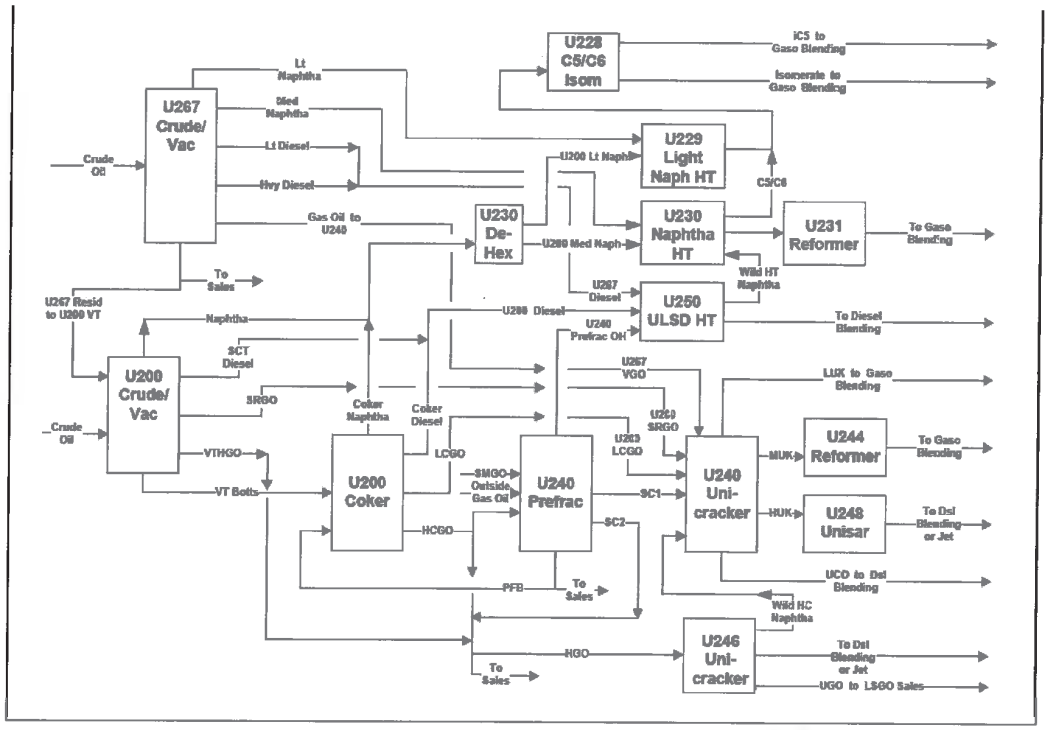
[51] *See* also the comments of Phyllis Fox regarding the 'Propane Recovery' DEIR.



SOURCE: Phillips 66 Company

Phillips 66 Propane Recovery Project . 120546

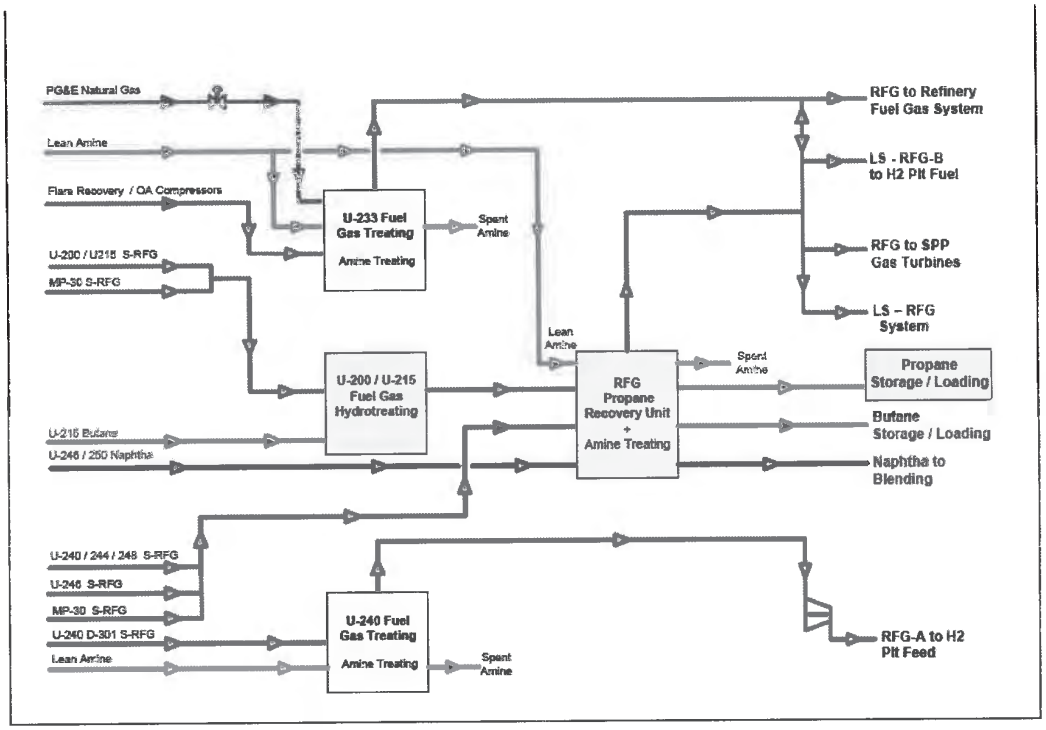
Figure 3-6 Revised
Proposed Refinery Fuel Gas System Block Flow Diagram



SOURCE: Phillips 66 Company

Phillips 66 Propane Recovery Project . 120546

Figure 3-4
Overall Block Flow Diagram of Refinery



SOURCE: Phillips 66 Company

Phillips 66 Propane Recovery Project . 120546

Figure 3-6
Proposed Refinery Fuel Gas System Block Flow Diagram

38. As discussed in paragraphs 25–37, the San Francisco Refinery's proposed 'projects' in Santa Maria and Rodeo are inextricably interrelated. The Santa Maria throughput increase is dependent upon the crude by rail proposal, the Rodeo LPG recovery/hydrotreater proposal is dependent upon those Santa Maria components, and those throughput increase and crude by rail components are dependent upon the new Rodeo hydrotreater for full project implementation. Therefore, the crude throughput rate increase, crude by rail, and LPG recovery proposals are interdependent parts of a single project of larger scope that has been piecemealed. B9-80

39. The failure to evaluate this project as a whole results in underestimating the scope and severity of identified impacts. The greater climate-disrupting emissions, toxic air contaminant emissions, smog-forming emissions, and safety hazards of project crude oil trains to the SMF *and* LPG trains from Rodeo, in combination and on many of the same routes, are examples of this underestimation. It further results in failure to identify some impacts at all, such as the toxic, smog-forming, and climate-disrupting emissions from refining larger volumes of crude feedstock, and those from switching to processing of bitumen oils. These 'tar sands' oils are extremely dense, refractory and contaminated and require substantially more energy, and fuel combustion for that energy, per barrel refined, thereby greatly boosting refinery emissions intensity and process safety hazard.[52] B9-81

Equally important, evaluating the project only one piece at a time results in failure to identify feasible means to lessen or avoid impacts. For example, the switch to tar sands oil that is clear when the project is viewed as a whole would result in significant potential impacts from *refining* (in addition to the project's significant potential impacts along the mainline rails). Thus, the County clearly *can*—and indeed, *should*—consider choosing to demand that Phillips 66 refrain from the most dangerous and polluting type of oil known. But the RDEIR mentions no such mitigation. In short, the piecemealing of this project is a fundamental flaw in the RDEIR. B9-82

[52] My previous comments found the reasonable potential that this project-related feedstock switch could result in significant potential catastrophic hazard, air quality, public health, and climate impacts. (Karras Rodeo Report-1 at paragraphs 56–83.)

Project Impacts

40. All of the potential impacts associated with the changes in oil feedstock at the SFR's SMF and RF and the changes in the oil and LPG rail transport to and from these facilities that are identified in my comments[53] and those of Dr. Fox are also cumulative impacts of Phillips' throughput increase, crude by rail, and LPG recovery proposals. The RDEIR's failure to disclose, evaluate, or mitigate these potential impacts is unsupported and inappropriate, as discussed in paragraphs 12–39. B9-83

41. CBE learned of Kinder Morgan's new crude by rail terminal in Richmond following my previous comments in this matter. This terminal is adjacent to the Port of Richmond and aligned with rail routes that the project would be expected to use for LPG transport from the RF and crude transport to the SMF.[54] A map of the mainline routes from Roseville through Rodeo, Richmond and other Bay Area communities on the way toward the SMF is excerpted from the Rail Spur RDEIR below. The RDEIR does not include this terminal in its cumulative impact analysis,[55] does not say whether crude delivered by rail to the SMF might be loaded at this terminal, Richmond's port, or both, and does not appear to mention the Kinder Morgan crude by rail terminal at all.[56] B9-84

42. Phillips' proposal and route for diluted bitumen by rail to the project are now revealed more clearly. (See paragraphs 19–23; Rail Spur RDEIR at 4.13-9.) Bitumen poses a different and more severe spill hazard for water quality and aquatic life than conventional crude. It is denser than water and sinks to the bottom when spilled into water. Aquatic remediation by surface skimming does not work on these tar sands oil spills; they are effectively impossible to 'clean up,' worsening aquatic spill impacts. Compounding the hazard, the project would bring crude oil trains through the unique aquatic habitats of the San Francisco Bay/Delta. (See map, next page.) There is a reasonable potential that this could result in significant impacts to Bay/Delta ecosystems from tar sands oil spills in derailments of project-bound crude oil trains. The RDEIR does not disclose or address these potential impacts of the project on the Bay/Delta. B9-85

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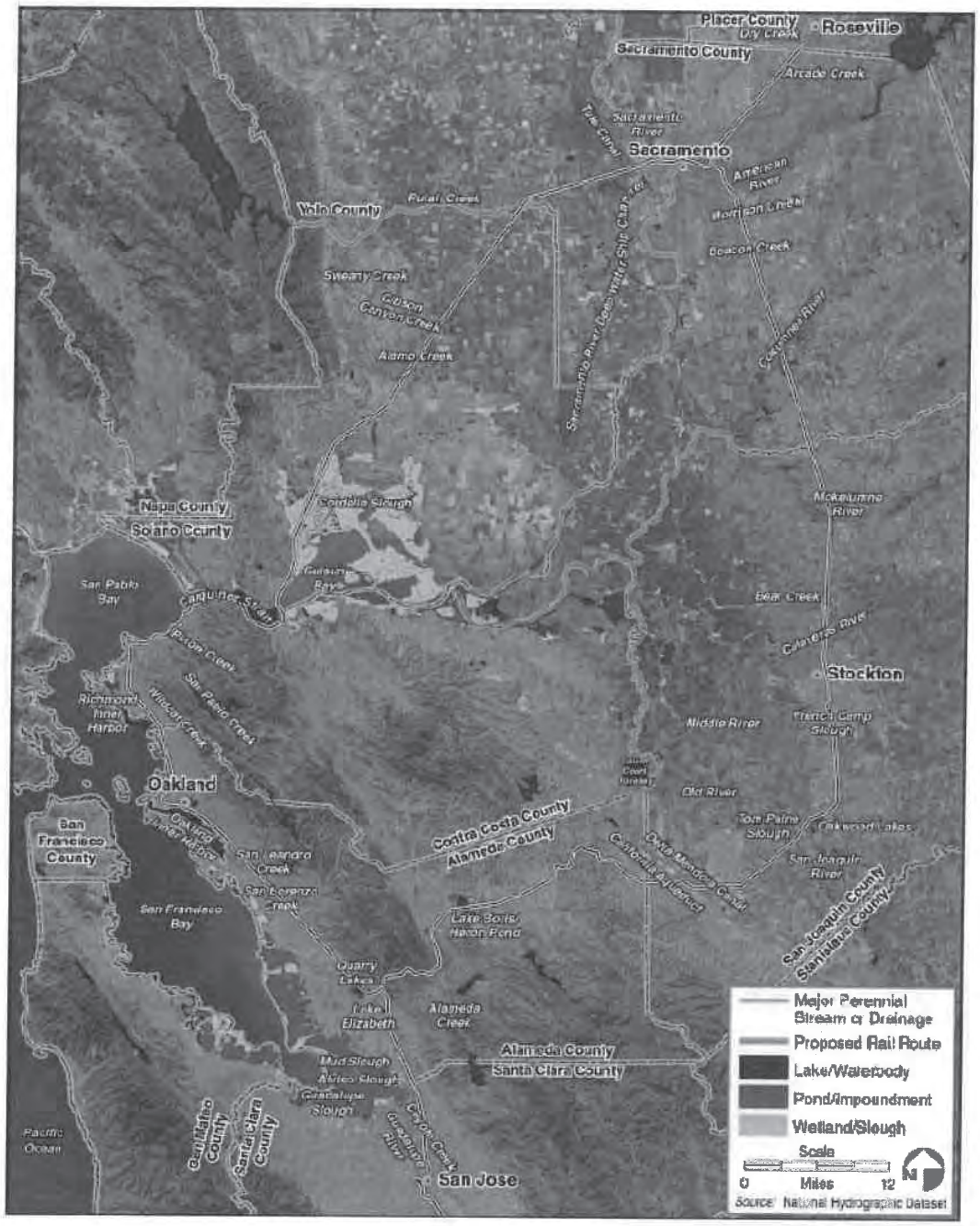
[53] My previous comments found the reasonable potential that these project-related changes in oil feedstock could result in significant potential catastrophic hazard, air quality, public health, and climate impacts. (Karras Rodeo Report-1 at paragraphs 56–83.)
[54] *See* RDEIR at 4.3-9 and 4.3-10; Rail Spur RDEIR at 4.13-9.
[55] *See* RDEIR Table 5-1.
[56] A search of the RDEIR on "Kinder Morgan" returned a "no matches were found" result.

Figure 4.13-5 Mainline Route Water Bodies, Roseville to San Jose



B9-85

43. Garbage in–garbage out errors continue to plague the Health Risk Assessment (HRA) in the RDEIR. In one example that is a fatal flaw in the HRA by itself, the emissions estimates used in the HRA drastically underestimate potential emissions associated with the project. Failing to disclose and analyze emissions associated with the project-related change in crude feedstock discussed in paragraphs 12–40, the RDEIR excludes those emissions from its estimate, drastically underestimating the project's emission potential for multiple pollutants. Using those erroneously lower emissions estimates as inputs to the HRA forces the health impact results calculated for those emissions by the HRA to be erroneously less severe that the true project potential.

B9-86

B9-87

44. Interpretative problems still plague the HRA in the RDEIR as well. For example, despite the drastic underestimation discussed in paragraph 43, the RDEIR reports a per-million people cumulative cancer risk from exposures to toxic air contaminants for the project of ≈61/MM. (RDEIR at 4.1-34.) Impact screening thresholds for such general population involuntary exposures have generally ranged widely, from 1/MM to 100/MM, with most air districts in California using 10/MM to 20/MM. Also, the Air District using 100/MM has publicly disavowed this outlier threshold as potentially under-protective.[57] The RDEIR, however, picks the 100/MM threshold without mentioning all of the more health-protective ones or that its choice has been disavowed, and concludes on that basis that the impact is 'less than significant.' (RDEIR at 4.1-14, 4.1-31, 4.1-34.) A more reasonable interpretation would reject the disavowed outlier in favor of a less extreme threshold, and note that the 61/MM HRA result exceeds it, indicating that the project has the reasonable potential to contribute to a significant cumulative air toxics impact.

B9-88

45. The RDEIR's revised analysis of greenhouse gas (GHG) emissions fails to explain how—if offsite emissions from the project's LPG sales are too speculative to estimate as it claims—it can estimate them at a level of zero, particularly when this transforms a significant impact finding into a less-than-significant finding. (RDEIR at 4.5-13/14/15.)[58] This issue was addressed in my previous comments. An emission range

B9-89

[57] *See* Staff presentations to the BAAQMD Board regarding the Petroleum Refinery Emissions Tracking Rule and Office of Health Hazard Assessment Update, Oct–Nov 2014.

[58] The RDEIR's estimate of zero metric tons per year emitted from the propane and butane sold and portion of that burned offsite is mathematically incontrovertible. *See* table on page 4.5-15: Subtracting the emissions caused by burning all of this LPG onsite (708,858 Mt/y) from those caused by burning the natural gas replacing that LPG onsite (592,792 Mt/y) yields a difference of –116,066 Mt/y, which is equal to the table's "net fuel source transfer combustion emissions." This equivalence (zero difference) proves the RDEIR estimates 0 Mt/y offsite LPG emissions.

could be estimated, and any credible estimate of offsite emissions from project sales of these LPG fuels must admit at least 10% of them could potentially be burned, which would reveal a significant impact. (See RDEIR Table 4.5-3.)

B9-89

46. A project revision that appears to broaden the uses of the proposed expansion of once-through cooling (OTC)[59] emphasizes the point that this OTC expansion would be oversized for the project heat sources disclosed, and the question of whether that excess capacity is needed for heat from processing the project's changing oil feedstock. My previous comments raised this point and question.[60] The RDEIR's admission that the OTC expansion would be operated to boost heat discharge in proportion to Bay cooling water flow (RDEIR at 4.7-23), and its additional project revision to route naphtha produced in part from SMF oil feeds to Rodeo (paragraphs 10, 36–38), further emphasize this point and question. But the RDEIR continues the DEIR's failure to disclose the sources of this excess heat and their contributions to the excess, even as it changes the project description to broaden and further obscure this part of the project description.

47. My previous comments found that the DEIR underestimated project OTC impacts substantially by overestimating current average flow based on the erroneous assumption that a single recent year accurately represents current conditions, and provided detailed data supporting those findings. (Attachments 1 and 2.) I also noted that past monitoring of environmental conditions at lower OTC flow does not by itself predict impacts of the much greater proposed cooling water and heat flows. (Id.) Unfortunately, the RDEIR's revised discussion reasserts the same inflated OTC baseline and erroneous claim that a single recent year accurately represents current average conditions, fails to include any actual data supporting those assertions, and still relies on monitoring of past Bay conditions at lower OTC flows to predict project impacts.[61] The publicly verifiable data in the record (which the RDEIR thus ignores) indicate that instead of the 25% increase suggested by its inflated baseline, the project could increase OTC flow by 40–65%. (See Attachment 2.)

B9-90

[59] RDEIR at 3-37 vs. DEIR at 3-27; *see* also Paragraph 11.
[60] Attachment 1 at paragraphs 27–30.
[61] RDEIR at 4.2-27 through 4.2-29, 4.7-22 and 4.7-23. *See* esp. 4.7-22 (baseline assertions) and 4.2-29 and 4.7-23 (reliance on past monitoring). *See* also 4.2-29 (the size and dispersal of the impact plume is "primarily driven by tides *and output temperature and volume* [*emphasis added*]) and 4.2-27 (RDEIR analysis excludes impacts associated with effects on eggs and larvae of aquatic species that are not already listed as threatened or endangered).

48. The RDEIR's revised OTC discussion also asserts: "In 2005, the Refinery became the first company in California to successfully operate a wedgewire screened intake in a saltwater environment." (RDEIR at 4.2-28.) Strangely, the RDEIR omits mention of a more salient singularity: Phillips 66 is the only refiner that still exploits the San Francisco Bay/Delta by using once-through cooling.[62] The omission truncates the RDEIR's evaluation, obscuring facts about the environmental setting that would reveal additional impacts from the proposal to extend the operating duration of this antiquated technology and the feasibility of avoiding OTC impacts entirely as other refiners have done already. Moreover, the revelation that by extending OTC operation the project would cause impacts from the entire OTC flow exposes the fallacy of the argument that replacing OTC has no nexus to the project,[63] and further shows that the RDEIR's failure to analyze this alternative is unreasonable.

B9-90

49. CBE has learned that, following my previous comments in this matter and the County's request for "Inherently Safer System study for the new process including storage and loading operations that includes the evaluation of alternatives listed in the Draft EIR"[64] Phillips 66 did perform that Inherently Safer System (ISS) analysis.[65] Crucially, the County's request for ISS analysis including "alternatives listed in the Draft EIR" referred to cooled storage—which may be inherently safer than the pressurized storage of LPG proposed, with respect to the specific hazard of catastrophic explosion (BLEVE). Proper ISS analysis would be based on Process Hazards Analysis (PHA), the rigorous analysis of process systems upon which current industrial safety practice relies, and ISS is an indispensable layer of protection that is higher in the hierarchy of safety controls, reflecting its importance. (See Chemical Safety Board, 2013.)[66] Thus, project-

B9-91

B9-92

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[62] *See* Attachment 1 at paragraphs 31 and 32. The two points are related: the intake screens were installed at the refinery *instead of* replacing OTC and even after this half measure was installed water quality officials required Phillips to investigate replacing OTC at Rodeo. (Id.)

[63] *See* RDEIR at 6-6 (closed loop cooling alternative to OTC not analyzed in RDEIR; analysis of alternative to OTC "for the Project's *additional cooling needs only*" [*emphasis added*]; this alternative "was not considered practical" and "was not considered further").

[64] 11 July 2013 letter from Michael Dossey, Accidental Release Prevention Engineer, Contra Costa Health Services, Hazardous Materials Programs, to Jim Ferris, Health and Safety Superintendent, Phillips 66 San Francisco Refinery, re; *Phillips 66 Propane Recovery Project (County File #LP12-2073).*

[65] Per. Comm. with Michael Kent, Hazardous Materials Ombudsman, Contra Costa County Health Services. 4 Dec 2014.

[66] U.S. Chemical Safety Board (CSB), 2013. *Interim Investigation Report: Chevron Richmond Refinery Fire; Chevron Richmond Refinery, Richmond, California, August 6, 2012.*

specific ISS analysis is essential to adequate evaluation of project hazards and the specific question of whether cooled instead of pressurized LPG storage is a safer alternative. My previous comments addressed this issue, noting the need for ISS analysis to be included in this CEQA review, and that the DEIR's concerns over costs of electricity and a new flare were misplaced, as there is no such cost exemption for otherwise feasible ISS.[67] Despite the reported availability of the ISS analysis to the County, the RDEIR still dismisses this alternative from further consideration based on exactly the same cost concerns expressed in the same words (RDEIR at 6-5 and 6-6), and it still does not include, disclose or even discuss this ISS analysis. (As CSB investigation reports demonstrate, this level of process safety detail can be released publicly without abridging confidentiality concerns.) This failure to disclose available information that is needed for an informed project decision about safety in the RDEIR appears improper.

B9-92

B9-93

50. Potential impacts of the change in hydrogen plant feedstock that is indicated by the RDEIR's revised project description (see Paragraph 9) are not analyzed or even discussed in the RDEIR's text. Hydrogen production is a major GHG emitter, and RF hydrogen plant process upsets, shutdowns for required maintenance, and shutdown/ startup design requirements are reported in BAAQMD Rule 12-12 causal analysis reports as recurrent causal factors in environmentally significant flaring at Rodeo.

B9-94

51. An old issue merits critical attention. Potential benefits from reducing sulfur dioxide emissions by half, while that is achievable and important to achieve, could be unrealized if Phillips' and BAAQMD's stated plan[68] to proceed with emission reduction credits (ERCs) for this emission cut is not addressed. ERCs are a type of 'pollution trading' that could allow Phillips to increase those emissions again. I commented previously on this problem and suggested that the "County could consider developing a land use permit condition that ensures the 50% reduction in refinery wide SO_2 emissions identified in the DEIR will be real, measurable and permanent."[69] The RDEIR proposes no such measure. The RDEIR's assertion that this ephemeral emission reduction is a benefit of the project without addressing the foreseeable plan to potentially cancel out that claimed benefit through pollution trading is inaccurate and misleading.

B9-95

[67] Attachment 1 at paragraphs 39–44, 49, and 50.
[68] Air Permit Application at 17, Section 3.4 (Permit App Sections 1–3); and Per. Comm. with Jim Karas, BAAQMD at 4 Dec. 2013 Board Meeting (BAAQMD advised Phillips 66 to defer its ERC application and proceed with this step after project approval).
[69] Karras Rodeo Report-1 at paragraphs 26, 54.

Conclusions

52. Based on my knowledge, experience and expertise and the data, information and analysis discussed in this report, in my opinion:

- Project-related changes in San Francisco Refinery (SFR) oil feedstock sources, quantity, and quality are not disclosed in the RDEIR.
- The project would enable substantial changes in SFR oil feedstock sources, quantity, and quality and would most likely shift the SFR to refining fundamentally different 'tar sands' oils. B9-96
- The description of the project scope in the RDEIR is truncated, inaccurate, and misleading. B9-97
- Proposed LPG recovery and hydrotreating at the Rodeo Facility, crude throughput increase at the Santa Maria Facility, and crude by rail unloading at the Santa Maria Facility are inextricably related, interdependent components of a single project of larger scope that has been piecemealed. B9-98
- The project as revised in the RDEIR still has the reasonable potential to cause the significant adverse hazard, air pollution, public health, aquatic habitat destruction, and climate impacts identified in my prior comments in this matter, and the RDEIR does not identify, mitigate, or otherwise address adequately these significant potential impacts. B9-99
- The project has the reasonable potential to result in significant impacts that the RDEIR does not identify, mitigate, or otherwise address from oil spills in derailments resulting from project crude oil transport by rail across the San Francisco Bay/Delta. B9-100
- The project has the reasonable potential to contribute substantially to cumulative impacts that the RDEIR does not identify, mitigate, or otherwise address adequately. B9-101
- The RDEIR does not include adequate information about the project to identify other potential impacts, such as those associated with changes in hydrogen plant feedstock, although these impacts may be significant. B9-102
- The RDEIR does not include the information necessary to understand and evaluate the environmental implications of the project. It did not describe the duration, setting, geographic or processing scope, feedstock, operation, or potential environmental effects of the project accurately or, in many cases, did not describe them at all. These informational deficiencies are so profound, and the revisions needed to cure them so extensive, that full independent review of a comprehensively revised draft would be necessary before public decisions could be based with confidence on this project's environmental review. B9-103

53. I have given my opinions on these matters based on my knowledge, experience and expertise and the data, information and analysis discussed in this report.

B9-104

I declare under penalty of perjury that the foregoing is true of my own knowledge, except as to those matters stated on information and belief, and as to those matters, I believe them to be true.

Executed this _**5th**_ day of December 2014 at Oakland, California

Greg Karras

3.2.9 Letter B9 – Responses to Comments from Communities for a Better Environment

B9-1 The commenter expresses a general opinion that the RDEIR does not comply with CEQA, is inadequate and does not properly analyze environmental impacts. This is noted. See also Master Response 2.4, which discusses crude feedstocks and the proposed Project.

B9-2 See Master Response 2.4.

B9-3 The commenter expresses a general opinion that the RDEIR does not comply with CEQA, is inadequate and does not properly analyze environmental impacts. This is noted.

B9-4 See Response B9-3.

B9-5 According to the Better Government Ordinance, Section 26-2.1402 of the County Code, the Board of Supervisors is the final appellate body on all matters subject to County authority; and as such, the Board provided direction to staff to recirculate portions of the EIR for the Propane Recovery Project and then to be brought back before the Board on February 3, 2015. Neither the Better Government Ordinance or CEQA requires that an EIR that is recirculated at the direction of the Board be remanded back to the Planning Commission. Therefore, in accordance with CEQA, all interested parties have been given the appropriate amount of time to review the contents of the Recirculated EIR and provide comments, and on February 3, all interested parties will be afforded the opportunity to appear before the Board of Supervisors to speak and/or submit any additional materials related to their position on the matter.

B9-6 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but makes general recommendations that the proposed Project should have been evaluated within a programmatic EIR. This comment is noted. See Master Response 2.2, which discusses the concept of 'piecemealing' and Master Response 2.4.

B9-7 See Master Responses 2.2 and 2.4.

B9-8 See Master Responses 2.2 and 2.4.

B9-9 See Master Responses 2.2, 2.4, and 2.6, which discusses cumulative impacts.

B9-10 See Master Response 2.2.

B9-11 As stated in the RDEIR, the proposed Project would use NO_x emission reductions from decommissioning of the B-401 process heater to offset NO_x emission increases associated with the proposed Project. The proposed Project includes an applicant proposed measure

(APM-1, RDEIR page 3-43) that describes how the remaining unused NO_x credits would be used for the proposed Project.

B9-12 See Master Responses 2.2 and 2.4.

B9-13 See Master Responses 2.2, 2.4 and Master Response 2.6 in the 2013 FEIR for information on rail operations.

B9-14 See Master Responses 2.2 and 2.4.

B9-15 See Master Responses 2.2, 2.4 and Master Response 2.6 in the 2013 FEIR for information on rail operations.

B9-16 See Master Response 2.5.

B9-17 The commenter expresses a general opinion that the air analysis in the RDEIR is incorrect. This comment is noted.

B9-18 See Master Response 2.4.

B9-19 The commenter states that the RDEIR fails to assess the air quality impacts of the Refinery as a whole, and includes neither an analysis of the emissions that will be caused at the Rodeo component as a result of the rail spur extension, nor the increased emissions of refining increased quantities of tar sands at the Santa Maria component. As required by CEQA, the RDEIR analyzes the emission increases resulting from the proposed Project. Tables 4.1-7 and 4.1-8 show the proposed Project's boiler daily and annual emissions, respectively. Tables 4.1-9 and 4.1-10 show the proposed Project's SPP daily and annual emissions, respectively. Cumulative impacts are also analyzed, and are discussed in RDEIR Chapter 5, *Other CEQA Considerations*. The Rail Spur Extension Project and Santa Maria Project are separate projects from the Propane Recovery Project and consequently emissions from these projects are not evaluated as part of the RDEIR.

The commenter asserts that this is a piecemealed project that also includes the Santa Maria Throughput Expansion and the Rail Spur Extension Project. See Master Response 2.2.

The RDEIR does not disclose that tar sands will be brought to the Rodeo facility because this is not proposed as part of the Project. Consequently, the commenter's statement that the use of tar sands will affect the frequency and magnitude of flaring at the Rodeo facility is incorrect. See also Master Response 2.4.

Similarly, the commenter's statement that daily operation and refining of a different quality crude slate will result in increased daily emissions of pollutants is also incorrect. See Master Response 2.4.

Finally, commenter states that BAAQMD has specifically requested that Phillips 66 provide emission data on all emission sources and the Phillips 66 has failed to do so. Phillips 66 has provided emissions data to BAAQMD. As noted in the BAAQMD's December 2, 2014 comment letter, the RDEIR includes a cumulative health risk analysis and additional information on the proposed Project's emission estimates and the air district staff agrees with the conclusions of those additional studies. See also Comment A3-1 and Response A3-1.

B9-20 The commenter asserts that the County has not provided throughput data and documentation relevant to emissions of the Refinery but and asserts that this is data that has been improperly claimed as protected information by the Applicant. The County has not been denied access to any necessary information or documentation by the Applicant. The County has made all of the documents referenced or relied upon in the RDEIR available for public review, as required by CEQA. CEQA does not require that all reference materials be circulated for comment or be posted online for the duration of the public comment period, but that the RDEIR's reference documents merely be accessible to the public, and accordingly they have been available upon request. See also Master Response 2.4.

B9-21 The RDEIR did not acknowledge the Intergovernmental Panel on Climate Change (IPCC) report referenced in the comment (known as the Synthesis Report) because it was not released by IPCC until November 2, 2014, which was subsequent to when the County released the RDEIR. To acknowledge the IPCC's latest report, the following sentence has been added to the first full paragraph on RDEIR page 4.5-2:

> In fact, the United Nations' International Panel on Climate Change (IPCC) recently released a report that indicates that human influence on the climate system is clear and growing and that if left unchecked, climate change would increase the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems (IPCC, 2014).

The following reference has been added to Section 4.5 *Greenhouse Gas Emissions* references in RDEIR Chapter 9, *References*:

> Intergovernmental Panel on Climate Change (IPCC), 2014. Climate Change 2014 Synthesis Report, released November 2, 2014, available online at http://www.ipcc.ch/report/ar5/syr/.

Regarding estimation of GHG emissions that would be associated with the combustion of butane and propane recovered under the proposed Project, the RDEIR discloses the reasoning to support the fact that quantification of the associated net GHG emissions would be speculative, and inclusion of such information in the EIR is precluded by CEQA Guidelines Section15145. Also, refer to Responses B6-10 and B6-11.

Regarding the commenter's contention that the Project would result in a change in crude slate processed at the Refinery, refer to Master Response 2.4.

Fugitive precursor organic compounds (POC) have been estimated for various components of the proposed Project including valves, flanges, connectors, pumps, and compressors (see the Fugitive Emissions Components discussion and Table 4.1-7 on RDEIR pages 4.1-20 and 4.1-21, respectively). It is reasonable to assume that a fraction of the estimated POC emissions could be methane. Therefore, RDEIR Section 4.5, *Greenhouse Gas Emissions*, has been revised to include quantification of fugitive methane emissions. As disclosed in Table 4.1-7, fugitive POC emissions that would be associated with the proposed Project would be approximately 4.6 tons per year. For a conservative GHG analysis, it is assumed that all of the fugitive POC emissions would be in the form of methane. Using a global warming potential factor of 55 for methane, this would equate to approximately 104 metric tons of carbon dioxide equivalent (CO_2e) that would be associated with fugitive methane emissions. The following discussion has been added after the *SPP Emissions* paragraph on RDEIR page 4.5-11:

> **Fugitive Methane Emission Components**
>
> New process equipment associated with the proposed Project may emit fugitive methane emissions (due to leaks and other unintended or irregular releases of gases) from various components including valves, flanges, connectors, pumps, and compressors. The number of new fugitive components for the proposed Project is estimated based on pre-design drawing hand-count, comparison to existing units, Phillips 66 experience in construction of similar units, and standard emission estimation techniques. For a conservative estimate, it is assumed that all leaked gas would be methane.

The third sentence in the *Impact Conclusion* discussion on RDEIR page 4.5-15 has been revised as follows to reflect the new fugitive methane emissions estimate:

> **Impact Conclusion**
>
> Adding 74 metric tons of CO_2e to the net operational emissions of ~~-43,603~~ -43,499 metric tons CO_2e per year (see Table 4.5-3) equals a total net Project annual GHG emissions rate of approximately ~~-43,529~~ -43,425 metric tons CO_2e per year, which would be substantially less than the significance threshold of 10,000 metric tons CO_2e per year and would represent a less than significant impact with regard to generation of GHG emissions generated directly and indirectly by the proposed Project.

The following edits have been made to RDEIR Table 4.5-3 on page 4.5-3 to reflect the new fugitive methane emissions estimate:

TABLE 4.5-3
TOTAL NET ANNUAL PROJECT OPERATIONAL GHG EMISSIONS

Emission Scenario	CO_2e (metric tons per year)
Stationary Source Emissions	
Boiler Emissions	65,091
Net Fuel Source Transfer Combustion Emissions	-116,066
Existing Emissions from Propane/butane Combustion	-708,858
Project Emissions from Natural Gas Combustion	+592,792
Total Stationary Source Combustion Emissions	**-50,975**
Fugitive Emissions	
Fugitive Methane (tanks and piping)	104
Mobile Source Emissions	
Locomotive Emissions	5,366
Commuter Vehicle Emissions	4.3
Indirect Emissions	
Electrical Demand	2,002
Total Fugitive, Mobile, and Indirect Emissions	**~~7,372~~ 7,476**
Project Decrease relative to Baseline	**~~-43,603~~ -43,499**

SOURCES: ERM, 2012, ERM, 2013, and ESA, 2014.

B9-22 The commenter appears to indicate that the RDEIR analysis of GHG emissions ignored indirect and off-site emissions and divided the proposed Project's GHG emissions into direct and indirect emissions in order to conclude that the proposed Project would not have a significant impact. As disclosed in Table 4.5-3 on RDEIR page 4.5-15, estimated locomotive and commuter vehicle emissions and indirect emissions associated with electrical demand are combined with the stationary source emissions to disclose the net proposed Project emissions relative to the EIR baseline. Therefore, the RDEIR clearly did not ignore indirect and off-site GHG emissions that would be associated with the proposed Project, nor did it divide the proposed Project's GHG emissions into direct and indirect emissions in order to conclude that the proposed Project would not have a significant impact.

Regarding the comments that indicate that the proposed Project would include activities at the Phillips 66 Santa Maria Refinery, and that the RDEIR GHG analysis should not have been limited to the operations associated with the Phillips 66 Rodeo Refinery, see Master Response 2.2.

B9-23 Regarding the speculative nature of estimating GHG emissions that would be associated with the combustion of butane and propane recovered by the proposed Project, the EIR discloses the reasoning that supports the County's conclusion that quantification of the associated net GHG emissions would be too speculative and inclusion of such information in the EIR is precluded by CEQA Guidelines Section15145. See also Responses B6-10 and B6-11.

The locomotive GHG emission estimates disclosed in the RDEIR represent those emissions that would be generated not only within the BAAQMD, but also within other

areas of California. As stated on RDEIR page 4.5-12, the GHG emissions were calculated based on mileage associated with the trains traveling from the California and Arizona border to the Richmond Yard with empty tank cars following a Union Pacific route (659 miles), then 12 miles to the Refinery, followed by return mileage of these distances under load.

For the air quality analysis of criteria pollutants, evaluation of emissions outside of the San Francisco Bay Area is outside of the scope of this CEQA review. See Comment B6-20 and Response B6-20.

B9-24 The commenter states that the EIR has underestimated health risks that would occur due to a change in the crude slate processed at the Refinery. The proposed Project would result in no change to the crude slate processed at the Refinery. See Master Response 2.4 which discusses crude feedstocks and the proposed Project.

The commenter appears to be confusing the analysis of cancer risk that would be associated with the proposed Project with the analysis of the cumulative cancer risk that would be associated with the proposed Project combined with the cumulative sources. As disclosed in the RDEIR Impact 4.1-3 discussion, the cancer risk significance threshold used in the analysis to evaluate the exposure of sensitive receptors that would be caused by the proposed Project is 10 per million (see RDEIR pages 4.1-24 through 4.1-30). The cumulative cancer risk, which includes the cancer risk caused by the proposed Project combined with all of the cumulative sources, would be considered significant if the risk would be greater than 100 in a million (see RDEIR pages 4.1-31 through 4.1-36).

B9-25 The commenter indicates that the air quality baseline is not sufficient because it does not take into account a switch in crude feedstock quality. See Master Response 2.4 for discussion that substantiates the fact that the proposed Project would not result in a change to the crude oil quality processed at the Refinery.

As disclosed on RDEIR page 3-33, the actual sampling and measurements of propane and butane in the refinery fuel gas (RFG) at the Refinery that was used as the basis for the design and permit limit of 14,500 barrels per day (BPD) occurred in 2011, not 2013 as the commenter appears to suggest. The sampling data for year 2013 is presented in the RDEIR for informational purposes and does not represent the baseline for the proposed Project with respect to the maximum propane and butane recovery.

B9-26 The commenter expresses a general opinion that the biological resources analysis in the RDEIR is incorrect. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B9-27 The RDEIR incorporated updated National Pollutant Discharge Elimination System (NPDES) monitoring data and a second phase of a thermal plume study presented on pages 4.7-22 and 4.7-23 as well as 4.2-29 as part of the analysis of water quality and biological resources for the once-through, non-contact saltwater process water used for

cooling. The analysis does not rely solely on the compliance with existing NPDES permit discharge limitations but also on the findings of these two thermal plume study reports. As stated under the analysis for Impacts 4.7-1 (RDEIR page 4.7-21 through 4.7-25) and 4.2-3 (RDEIR page 4.2-28 through 4.8-29), the purpose of these studies was to investigate whether thermal discharge and plume temperatures could result in significant adverse effects to aquatic organisms. As stated in the RDEIR on page 4.2-29, the Phase I study ultimately found that any effect of the Refinery plume on fish behavior would be confined to species of the upper water column, and such an effect would be of a minor nature given the large area and extent of the receiving water's fish habitat throughout San Pablo Bay.

The subsequent Phase II study found that there was no significant temperature difference between the discharge location and the control site, so it would be unlikely that the Refinery's thermal discharge negatively affects the potential of the control area as resting habitat for salmonids. The study also found that the shallow cove south of the Refinery contributed significantly to thermal loading when shallow water in the cove was heated by the sun and distributed into the study area by tidal currents; solar heating of the tidal flats to either side of the Refinery thermal plume point of discharge not only produce natural thermal plumes, but on many occasions the temperature of the natural plumes significantly exceeded the Refinery discharge and thermal plume temperatures. The Refinery would continue to comply with NPDES discharge limitations and monitor temperatures at the E-003 discharge to ensure that water quality standards and waste discharge requirements are met. Therefore, based on the findings of the site specific analysis of water temperatures at the discharge location combined with required continued compliance with existing water quality effluent discharge limitations, there was a sufficient justifiable reason to conclude that the proposed change in flows from the once-through, non-contact saltwater cooling system would have a less than significant impact.

The purpose of the analysis for this CEQA document was not to evaluate other alternatives to the OTC system but rather the potential impacts that might occur with the proposed changes to the existing system. The comment's reference to the 2010 Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling is not particularly germane to the proposed Project as that policy is written specifically for power plants with one objective being to ensure that there is no interference to generating power supply. Regardless, that policy states that the State Water Board will reissue or, as appropriate, modify NPDES permits to ensure that the permits conform to the provisions of the Policy. The State Water Board will reopen, then, if necessary, the relevant permits and modify the final compliance schedules, if appropriate, based on modifications to the policy approved by the State Water Board which is consistent with what is stated in the RDEIR on page 4.7-24 ("the RWQCB would have the authority to modify [according to CFR 40 122.62(a)(1)], but not revoke and reissue (unless the Refinery requests or agrees), the existing NPDES permit under certain circumstances specified in the NPDES regulations. The RWQCB still requires

consistency with adopted water quality objectives in consideration of NPDES discharge limits, but could nonetheless make modifications to address water quality concerns").

In addition, in a study of impacts to coastal fish and fisheries from OTC systems for power plants, the study concluded that "information suggest that should use of Once Through Cooling (OTC) be eliminated immediately, no significant benefits to California's coastal fisheries may occur" (http://www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/docs/epri_assessment_impacts.pdf).

The claim that the quantified amount of proposed increase (25 percent) in cooling water needed is based on an inflated baseline appears to disregard the footnote included on page 4.7-22 of the RDEIR which states that "the baseline conditions of discharge flow from outfall E-003 represents relatively current (2012) data that best reflects baseline operations even though once-through, non-contact flow at the Refinery is affected by many factors, including process rates, turnaround cycle, and maintenance activities. Previous years have seen less flow but even more recent data from 2013 indicate that the 31,500 gallons per minute value is statistically similar to the 2012 flows and thus representative of baseline conditions."

In summary, as required by CEQA, the analysis in the RDEIR focused on the potential impacts resulting from the changes that would occur as a result of the proposed Project. The Refinery is committed to adherence to existing regulatory requirements including NPDES discharge limits, which incorporates Section 316(b) of the Clean Water Act requirements regulating the use of Cooling Water Intake Structures by industrial facilities, and any potential future changes that could be instituted by the RWQCB. The existing site specific thermal plume studies conducted for the proposed Project do not indicate a potential for significant impacts to water quality or biological resources from the discharge of this OTC water. And finally, the baseline that was used for the analysis is consistent with recent data from multiple years and representative of existing conditions.

See also Master Response 2.4 regarding claims that the OTC expansion is oversized and that the project would change the oil feedstock.

B9-28 As described in RDEIR Section 4.2, *Biological Resources* (Impact 4.2-1, page 4.2-26 et seq.), bird nesting and foraging birds is expected in portions of the Refinery and in the Refinery Complex Vicinity (including in San Pablo Bay adjacent to the Refinery, coastal salt marsh at the edge of San Pablo Bay in the vicinity of the Refinery, and the undeveloped buffer areas surrounding the Refinery). However, the proposed Project site does not support nesting habitat and is separated from potential bird nesting sites by a sufficient distance to avoid impacts to nesting birds. The site is separated from urban or wetland habitats by at least 300 feet, and usually more than 800 feet, of extensive Refinery operational structures and features. The proposed Project site is surrounded by existing Refinery operations and is greater than 500 feet from the nearest tree. Thus, the proposed site does not provide nesting habitat for common or special-status birds. Table

4.2-1 of the RDEIR (page 4.2-9 et seq.) considered the potential presence of nesting habitat for each of the bird species mentioned by commenter (i.e., short-eared owl, California horned lark, loggerhead shrike, San Pablo song sparrow, saltmarsh common yellowthroat, California clapper rail, and California black rail). As discussed in Impact 4.2-1, potential habitat for these species does not occur on the proposed Project site or in near proximity to the site such that impacts would occur. Similarly, habitat for the salt marsh harvest mouse (emergent pickleweed marshlands) does not occur on or near the proposed Project site. Thus, no impacts would occur to this species. In the absence of potential habitat to support the above-named species, neither focused surveys nor preconstruction surveys are needed to establish their absence. These species are presumed absent based on the absence of suitable habitat.

The commenter states that the impacts of the OTC system were not considered relative to longfin smelt. As discussed in Response B9-27 and stated in the RDEIR on page 4.2-29, the Phase I and II thermal plume studies found that there was no significant temperature difference between the discharge location and the control site. These studies found no significant temperature differences between the discharge location and the control site; thus, it is unlikely that the Refinery's thermal discharge will negatively affect fish habitat. As the RDEIR states (page 4.2-29), by using sufficient cooling water to ensure that effluent temperatures remain in compliance with the NPDES Permit and within thermal limits that are protective of the aquatic environment, no significant impacts would occur to special-status fishes such as longfin smelt.

B9-29 See Master Response 2.6.

B9-30 See Master Responses 2.2 and 2.6.

B9-31 The commenter appears to suggest that the cumulative impact analyses for regional air quality and GHG emissions should be based on the total emission estimates associated with the proposed Project combined with the emissions for the cumulative projects and then compared to the BAAQMD mass emission thresholds. However, when the BAAQMD developed significance thresholds to assess impacts to regional air quality and climate change, it considered the emission levels for which a project's individual emissions would be cumulatively considerable when combined with emissions of past, present, and future development projects. By their very nature, regional air pollution is largely a cumulative impact, climate change is solely a cumulative impact, and no single project is sufficient in size to, by itself, to result in nonattainment of ambient air quality standards or effect climate change. Instead, a project's individual emissions are assessed relative to existing cumulatively significant adverse air quality and GHG emissions-related impacts.

With that said, air quality cumulative impacts related to health risk are evaluated in the RDEIR by estimating the pollutant concentrations and associated health risks of the proposed Project and other cumulative project stationary and mobile sources contribute to existing concentrations and risks, or that will contribute to existing concentrations and

risk in the future. The proposed Project and cumulative projects pollutant concentrations and associated health risks are then combined and compared to the BAAQMD's significance thresholds for the cumulative health risk-related impact determination.

Regarding estimation of GHG emissions that would be associated with the combustion of butane and propane recovered under the proposed Project, refer to Responses B6-10 and B6-11, and regarding the commenter's contention that the proposed Project would result in a change in crude slate processed at the Refinery, refer to Master Response 2.4.

B9-32 See Master Response 2.5.

B9-33 The commenter provides a summary of health and pollution problems existing in the Rodeo community and vicinity and states that the RDEIR fails to consider the cumulative impacts of these problems. It should be noted that one of the goals of the BAAQMD Community Air Risk Evaluation (CARE) Program is to "identify areas within the Bay Area where air pollution is most contributing to health impacts and where populations are most vulnerable to air pollution impacts," (BAAQMD, 2014). The CARE Program did not identify the areas surrounding the Phillips 66 Refinery in Rodeo and Crockett as impacted communities.

The commenter states that the air quality emission estimates are incomplete as they fail to consider a switch to crude slate. See Master Response 2.4 regarding crude slate. See Master Response 2.6 regarding cumulative impacts. It is unclear from the commenter's statement specifically what and why they consider the cumulative health risk discussion starting on page 4.1-25 of the RDEIR to be deficient. The health risk evaluation follows the procedure recommended by the BAAQMD and has been reviewed and approved by the BAAQMD. BAAQMD has set its mass emission thresholds for criteria pollutants at levels that they conclude if exceeded, would result in a project having a significant incremental effect when viewed in conjunction with the effects of past, current, and future projects. Since the proposed Project would not exceed BAAQMD's cumulative mass emission thresholds for any criteria pollutants, it is considered to have a less than significant cumulative effect.

B9-34 The commenter states that the proposed Project would be inconsistent with applicable plans, policies, and regulations. Specific inconsistencies are discussed in subsequent comments, B9-35 through B9-39.

B9-35 As noted in Response B9-27, the Refinery is committed to adherence to all existing state regulatory requirements including state water quality control requirements associated with the discharge of all effluent water from the Refinery's wastewater treatment plant. The 2010 Water Quality Control Policy applies to power plant facilities and not refineries.

B9-36 See Master Response 2.4.

B9-37 Although the proposed Project would not increase the usage of renewable energy in the County, it would not conflict with the goal established in the General Plan to increase use of wind, solar, biomass, or other renewable energy sources.

B9-38 The proposed Project's estimated construction and operation GHG emissions are shown in RDEIR Tables 4.5-2 and 4.5-3, respectively. Of the 39 Recommended Actions contained in the Climate Change Scoping Plan, only five are relevant to the Refinery. As discussed under RDEIR Impact 4.5-2, the proposed Project would not conflict with these goals.

B9-39 As identified on RDEIR page 4.5-9, the proposed Projects' GHG emissions would be considered to result in a significant impact on the environment if the net emissions would be more than 10,000 metric tons CO_2e per year. This significance threshold was developed by the BAAQMD based on estimated GHG emissions from combustion sources for all permit applications submitted to the BAAQMD in 2005, 2006, and 2007. The BAAQMD calculated the threshold based on an average of the combined CO_2 emissions from all stationary source permit applications submitted to the BAAQMD during the 3-year analysis period. This threshold corresponds to a level that would capture approximately 95% of stationary source GHG emissions and it represents the amount of GHG emissions that can be mitigated and/or otherwise reduced through the CEQA process (BAAQMD, 2009).

Full implementation of the Executive Order S-3-05 would reduce statewide GHG emissions to 80% below 1990 levels, which corresponds to 90% below current levels by 2050 (SCAQMD, 2008). Since the 10,000 metric tons CO_2e per year significance threshold represents a 95% emissions capture rate, it can be used as a gauge as to whether or not the proposed Project would be consistent with the reduction goals set forth in Executive Order S-3-05. If the proposed Project's GHG emissions would not exceed the significance threshold, it could be concluded that its emissions would represent approximately 5% of the existing average stationary source project emissions in the San Francisco Bay Area, and therefore, would not represent a potential inconsistency with the emission reduction goals identified in Executive Order S-3-05. As disclosed in the *Impact Conclusion* discussion on RDEIR pages 4.5-14 and 4.5-16, the annual GHG emissions that would be associated with the proposed Project would not exceed 10,000 metric tons; therefore, the proposed Project would not conflict or be inconsistent with the GHG reduction goals set forth in Executive Order S-3-05.

B9-40 The commenter states that the RDEIR did not present a reasonable range of potentially feasible alternatives, and therefore, the RDEIR is legally inadequate. As stated in CEQA Guidelines Section 15126.6(f), "The range of alternatives in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The commenter does not state why the alternatives presented in the EIR would be legally inadequate. This comment is noted.

B9-41 See Response B9-40.

B9-42 See Master Responses 2.2 and 2.4.

B9-43 As disclosed on RDEIR page 6-7, the Reduced-Project Alternative would be similar to that of the proposed Project, and although the Reduced-Project Alternative would have similar impacts compared to the proposed Project, it would be reduced in scale to the point that air emissions or energy use would be reduced relative to the proposed Project while still meeting the needs of the Refinery. Impacts from the Propane Truck Loading Rack Alternative would result in additional emissions from the truck loading rack as well as from operations of the trucks to transport propane and shipping propane by truck would increase local truck traffic compared to the proposed Project and could increase the risk of upset from truck accidents.

With regard to the No Project Alternative, RDEIR Section 6.5.1, *No Project Alternative,* discloses that impacts from the No Project Alternative would be less than those under the proposed Project with the exception of construction related impacts, emissions of sulfur and GHG (which would be higher than with the proposed Project), and potentially, increased numbers of flaring events over that with the proposed Project (see RDEIR page 6-7). It should be noted that pursuant to CEQA Guidelines Section 15126.6(e)(2), even if the No Project Alternative is environmentally superior, the RDEIR is required to identify an environmentally superior alternative among the other alternatives. Therefore, it is appropriate that the RDEIR identifies the Reduced-Project Alternative as the environmentally superior alternative.

The commenter indicates that none of the alternatives considered in the RDEIR would avoid or substantially lessen the significant effects of the proposed Project; however, as discussed in RDEIR Chapters 4 and 5, with implementation of proposed mitigation measures, all significant environmental impacts that would be associated with the proposed Project would be reduced to a less-than-significant level. Therefore, given that the RDEIR identifies no significant impacts with mitigation incorporated, the range of alternatives considered in the RDEIR is sufficient.

B9-44 The commenter expresses a general opinion that the RDEIR is inadequate. It does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B9-45 This comment relates to qualifications and role of the commenter and does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B9-46 See Response B9-45.

B9-47 This comment asserts that the project description of the proposed Project has changed since the 2013 DEIR. This comment is noted.

B9-48 This comment lists the specific project description changes that are discussed in subsequent comments. This comment is noted.

B9-49 The 15,474 BPD noted by the commenter and listed in RDEIR Figure 3-7 is the total propane and butane that was estimated to be recoverable at the Refinery in August 2011. This volume was used as the basis for the design of the Project and subsequent BAAQMD proposed permit limit of 14,500 BPD. The design of the proposed recovery equipment as described in RDEIR Chapter 3, *Project Description*, and the proposed BAAQMD permit limit would ensure that the maximum amount of butane and propane that could be recovered under the proposed Project would be limited to 14,500 BPD. Also, see the *Amount of Propane and Butane to be Extracted* discussion in Master Response 2.4.

B9-50 2013 DEIR Figure 3-6 incorrectly showed that one of the RFG streams currently used to produce "RFG-A," U240 D-301 S-RFG, would not be included among the RFG streams that would be treated for liquefied petroleum gas (LPG) removal under the proposed Project. Under the proposed Project, the U240 D-301 S-RFG stream would be included among the RFG streams that would be treated for LPG removal. This error in the 2013 DEIR was limited to the flow information illustrated in Figure 3-6, and the text description of the proposed Project and the associated environmental analyses are unaffected by this error. There have been no substantive changes to the project description subsequent to the 2013 DEIR; however, RDEIR Figure 3-6 was revised and presented in the RDEIR to include the current flow data.

B9-51 For discussion of the feedstock from the Santa Maria Facility and its relationship to the proposed Project, see the *Relationship of Crude Feedstocks to the Proposed Project* discussion in Master Response 2.4.

B9-52 As discussed in Response B9-50, there have been no substantive changes to the project description subsequent to the 2013 DEIR; however, RDEIR Figure 3-6 has been revised to include the current flow data.

B9-53 The demands of the once-through, non-contact saltwater cooling system have not changed between the 2013 DEIR and the RDEIR. The proposed increase in cooling water continues to be for the proposed project elements as described in Chapter 3, *Project Description* of the RDEIR. Therefore, there is no explanation necessary for the slight change in wording of the project description between the 2013 DEIR and RDEIR.

B9-54 As stated in the RDEIR on page 3-37, the estimated proposed changes to the once-through, non-contact saltwater process water needed for cooling is limited to the requirements of the proposed Project to maintain process streams at 130 degrees Fahrenheit. The temperature of the discharge effluent will remain within NPDES requirements which are protective of water quality requirements and objectives and there is no change to the process sources. See also Master Response 2.4.

B9-55 See Master Response 2.4.

B9-56 See Master Response 2.4.

B9-57 See Master Response 2.4.

B9-58 See Master Response 2.4.

B9-59 See Master Responses 2.2 and 2.4.

B9-60 See Master Response 2.2.

B9-61 See Master Response 2.4 and Response B9-25.

B9-62 See Master Response 2.4. The commenters assert that the tanks are controlled and thus exempt from any limits on vapor pressure. Although some storage tanks at the Santa Maria Refinery operate with vapor control, the RDEIR does not refer to those tanks, but specifically to storage tanks located along the 200-mile pipeline between the two refineries. These storage tanks do have vapor pressure limits (Phillips 66, 2015).

B9-63 See Master Response 2.4.

B9-64 See Master Responses 2.2 and 2.4.

B9-65 See Master Response 2.4.

B9-66 See Master Responses 2.2 and 2.4.

B9-67 See Master Response 2.4.

B9-68 See Master Response 2.4.

B9-69 See Master Responses 2.2 and 2.4.

B9-70 See Master Responses 2.2 and 2.4.

B9-71 See Master Responses 2.2 and 2.4.

B9-72 See Master Responses 2.2 and 2.4.

B9-73 See Response B9-62.

B9-74 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR. This comment is noted.

B9-75 See Master Responses 2.2 and 2.4.

B9-76 See Master Response 2.4.

B9-77 See Master Response 2.4.

B9-78 See Master Responses 2.2 and 2.4.

B9-79 See Master Responses 2.2 and 2.4. The commenter claims that the RDEIR has "re-routed" naphtha streams from U246 and U250 to naphtha blending. However, Figure 3-6 in both the 2013 DEIR and RDEIR both indicate these naphtha streams are routed to naphtha blending. Therefore, there is no change required in the proposed project description.

B9-80 See Master Responses 2.2 and 2.4.

B9-81 See Master Responses 2.2 and 2.4.

B9-82 See Master Responses 2.2 and 2.4.

B9-83 See Master Responses 2.2 and 2.6.

B9-84 See Master Response 2.6.

B9-85 See Master Response 2.4.

B9-86 The commenter states that garbage-in garbage-out errors plague the RDEIR HRA, and states that one example is that the RDEIR drastically underestimates potential emissions associated with the proposed Project due to a project-related change in crude feedstock. However, the commenter is incorrect regarding the change in crude feedstock. No changes in crude feedstock are proposed as part of the proposed Project. See Master Response 2.4. Consequently, the emission estimates included in the RDEIR are not underestimated and the commenter's statement that the health impact results are wrong is incorrect.

B9-87 See Response to B9-86.

B9-88 As described in Response B9-86 and B9-87, the RDEIR does not underestimate emissions or health risks. The commenter states that BAAQMD has publicly disavowed the 100 per million threshold as potentially under-protective, and cites staff presentations made to the BAAQMD Board in October-November 2014. However, a review of those presentations does not find any such disavowal. In addition, a December 2, 2014 letter to Lashun Cross at Contra Costa County from Jean Roggenkamp, Deputy Air Pollution Control Officer with BAAQMD, agrees with the conclusions of the RDEIR's air emission estimates and HRA. Consequently, the proposed Project accurately evaluates the project specific and cumulative health risks of the proposed Project.

B9-89 The commenter disagrees with the assertion in the RDEIR that the quantification of indirect emissions of GHGs from propane and butane recovered by the proposed Project would be too speculative for evaluation. This comment is noted.

B9-90 The proposed Project does not differ between what is described in the 2013 DEIR and the RDEIR as further explained in Master Response 2.4. There is no overestimation of the amount of cooling water that is projected to be necessary for the proposed elements as described in Chapter 3, *Project Description*. The actual amount is expected to vary as the once-through, non-contact flow at the Refinery is affected by many factors, including process rates, turnaround cycle, and maintenance activities. However, the oil feedstock would not change as noted in Master Response 2.4.

The RDEIR makes no claim that the once-through, non-contact saltwater cooling system expansion would "boost heat discharge in proportion to Bay cooling water flow". In fact, page 4.7-23 states that past data "show no consistent correlation of temperature and flow volume" and that the new heat exchangers would ensure that discharge temperatures remain below NPDES limits.

The RDEIR also does not rely on a single year's data as baseline for current average flow. See discussion in Response B9-27.

The use of the once-through, non-contact saltwater process water cooling system is a permitted system that is part of existing conditions and given regulatory oversight from the RGWQCB. The purpose of the RDEIR and the 2013 DEIR, in accordance with CEQA requirements, is to analyze the potential impacts related to the proposed changes. As discussed in Chapter 6, *Analysis of Alternatives* on page 6-6, the analysis found that a closed-loop cooling system would result in increased use of fresh water, increased electrical power demands over the proposed Project, and particulate emissions greater than the existing once-through, non-contact saltwater cooling system. This combined with current drought conditions and findings of less than significant impacts to water quality and fish habitat by the RDEIR analysis and site specific thermal plume studies provided the basis for not including other cooling systems.

B9-91 This comment simply acknowledges that Phillips 66 conducted an Inherently Safer System (ISS) analysis. This comment is noted.

B9-92 The commenter raises a point already addressed in the 2013 FEIR Response B4-28. New information mentioned in Comment B9-91 does not change the 2013 FEIR Response to B4-28.

B9-93 See Responses B9-91 and B9-92.

B9-94 See Master Response 2.4 and Response B9-50.

B9-95 As described in the 2013 DEIR, the proposed Project will result in a significant reduction in Sulfur Dioxide (SO_2) emissions associated with the proposed Project. This reduction occurs in the process of making propane and butane into saleable products. The

commenter is correct that these reductions are not currently proposed as emission reduction credits. However, even if this reduction associated with RFG hydrotreating were to be omitted from the air analysis, the proposed Project would not result in significant SO_2 emissions because the increase in proposed Project SO_2 would be relatively minor and because BAAQMD has not established significance thresholds for SO_2.

B9-96 See Master Response 2.4.

B9-97 The commenter expresses a general opinion that the project description in the RDEIR is inadequate. This comment is noted.

B9-98 See Master Response 2.2.

B9-99 The commenter expresses a general opinion that the RDEIR is inadequate and that the proposed Project could cause significant environmental impacts. This comment is noted.

B9-100 See Master Response 2.4.

B9-101 The commenter expresses a general opinion that the RDEIR is inadequate and that the proposed Project could cause significant cumulative environmental impacts. This comment is noted. See also Master Response 2.6.

B9-102 See Master Response 2.4.

B9-103 The commenter expresses a general opinion that the RDEIR is inadequate and does not describe the proposed Project or impacts accurately, and should be revised. This comment is noted.

B9-104 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR. This comment is noted.

Lashun Cross

From: Roger Lin <roger@cbecal.org>
Sent: Wednesday, December 10, 2014 3:10 PM
To: Lashun Cross
Cc: GREG KARRAS
Subject: Addition to Rodeo RDEIR comments
Attachments: Karras Rodeo Rpt-2 Exhibit 1.pdf; _Certification_.htm

Hi Lashun,

Please see Exhibit 1 attached. It is referenced in footnote 5, Figure 1 and Table 1 of Attachment A to our comment, the updated Karras Rodeo Report 2.

Please let me know if you need me to be clearer/if you need any other info.

In addition, is it possible to confirm that the 12/19 hearing will be another continuance?

B10-1

Thanks again,

-roger

Roger Lin
Staff Attorney
Communities for a Better Environment
1904 Franklin Street, Suite 600
Oakland, CA 94612
(510) 302-0430 ext. 16

Central Coast Production

Exhibit 1. Production data for selected Central Coast OCS, state offshore, and onshore oil fields, 1995–2012.

barrels/day	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995
Arroyo Grande	988	1,068	1,141	1,237	1,301	1,501	1,600	1,599	1,687	1,815	1,976	1,812	1,685	1,632	1,434	1,449	1,611	1,429
Casmalia	535	487	471	509	468	367	390	377	431	467	549	577	587	574	545	677	667	587
Cat Canyon	2,301	1,379	922	784	632	988	970	934	1,058	1,191	1,129	1,500	1,507	1,509	2,324	2,802	2,342	2,418
Elwood Offshore	0	0	0	0	0	0	0	0	0	0	0	42	5	0	0	0	0	0
Elwood So., Offshore	3,210	2,186	2,385	2,525	2,548	3,097	3,044	2,853	3,248	3,270	3,413	3,256	3,656	3,431	3,392	4,808	4,039	3,984
Lompoc Onshore	844	656	571	600	544	451	423	261	282	268	240	259	206	220	159	241	257	488
McCool Ranch	38	18	4	2	11	0	0	0	0	0	0	0	0	0	0	0	0	0
Orcutt Onshore	3,439	3,149	2,958	3,166	2,385	1,831	1,748	1,635	1,589	1,525	1,600	1,671	1,763	1,729	1,901	2,038	1,796	1,794
Pt. Arguello	4,138	4,872	5,397	5,775	6,698	7,347	7,145	7,821	9,930	12,899	15,684	17,847	17,968	19,985	25,571	28,169	40,049	59,388
Pt. Pedernales	4,967	5,073	5,849	6,247	7,343	7,584	8,148	6,963	6,540	6,378	6,149	4,926	7,298	8,616	9,367	8,433	11,424	15,137
Tranquillon Ridge	3	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Ardo	19,925	18,867	16,571	14,448	11,423	9,416	8,632	9,632	10,929	12,322	12,719	12,757	13,064	11,551	12,219	12,737	12,423	11,785
Santa Maria Valley	609	566	509	361	238	333	355	402	539	634	769	930	865	541	677	1,059	966	1,082
Santa Ynez	25,582	30,127	33,606	33,548	36,989	38,161	40,599	40,803	43,587	45,943	48,807	51,462	55,596	58,110	67,531	85,860	95,102	92,035
Sta Ynez--Pescado	5,879	6,583	10,839	12,367	13,283	12,097	13,907	13,699	14,391	17,339	18,421	15,998	19,580	23,991	30,282	40,788	49,324	51,224
Sta Ynez--Hondo	12,061	14,693	13,981	12,986	15,059	15,503	15,416	16,783	21,091	20,999	24,434	27,253	30,023	33,410	37,249	45,072	45,778	40,811
Sta Ynez--Sacate	7,642	8,851	8,786	8,195	8,647	10,561	11,275	10,320	8,105	7,606	5,952	8,211	5,994	709	0	0	0	0
Zaca	546	536	502	549	145	277	281	335	414	603	742	674	692	623	477	754	700	653
Subtti (bbls/day)	67,124	68,986	70,891	69,750	70,725	71,354	73,333	73,614	80,234	87,315	93,778	97,712	104,893	108,521	125,596	149,028	171,376	190,780
%/yr	*-2.7%*	*-2.7%*	*1.6%*	*-1.4%*	*-0.9%*	*-2.7%*	*-0.4%*	*-8.3%*	*-8.1%*	*-6.9%*	*-4.0%*	*-6.8%*	*-3.3%*	*-13.6%*	*-15.7%*	*-13.0%*	*-10.2%*	
Avg. %/yr from 1995	-5.8%																	
Avg. %/yr from 2003	-2.8%																	
Gross % from 1995	-64.8%																	

Data sources:

(1) California Division of Oil, Gas & Geothermal Resources. Annual Reports and Online Production and Injection Query at (http://opi.consrv.ca.gov/opi/opi.dll).

(2) U.S. Dept. of Interior Bureau of Safety and Environmental Enforcement (BSEE);

Pacific Production Information and Data *See:* http://www.data.bsee.gov/homepg/data_center/production/PacificFreeProd.asp

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

December 5, 2014

Lashun Cross
Contra Costa County Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

Subject: Phillips 66 Company (Formerly Conocophillips) Propane Recover Project
SCH#: 2012072046

Dear Lashun Cross:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on December 4, 2014, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report Comment Letter B10
State Clearinghouse Data Base

SCH# 2012072046
Project Title Phillips 66 Company (Formerly Conocophillips) Propane Recover Project
Lead Agency Contra Costa County

Type EIR Draft EIR

Description The proposed project would add and modify processing and ancillary equipment within the refinery. New equipment includes a hydrotreater, fractionation columns to recover propane and butane, and propane storage vessels and treatment facilities, as well as two new rail spurs. To provide the steam required by the proposed project, either a new 140 million Btu/hr steam boiler would be added or more steam would be provided by the existing steam power plant if the new boiler were not built. There would also be minor modifications to existing process units and utility systems for the purpose of tie-ins and to address any changes in operating pressure or temperature at the tie-in points. The proposed project would require hydrotreating a portion of the RFG, a process that would reduce the amount of sulfur in the fuel gas, and because fuel gas is now burned to produce heat for refinery processes, would ultimately reduce the refinery's SO2 emissions to the atmosphere. The project would be built in two phases. The first phase would provide enhanced recovery and increased rail shipments of butane. Phase I would include all project components except propane storage and the additional rail loading rack and spurs. During the second phase, the facilities to store and ship propane would be added along with the piping and other ancillary equipment necessary to get the propane from the Propane/Butane Recovery Unit to the storage vessels and loading racks. Startup would occur after the completion of construction, which is estimated to take 12 to 15 months.

Lead Agency Contact

Name Lashun Cross
Agency Contra Costa County Department of Conservation and Development
Phone (925) 674-7786 **Fax**
email
Address 30 Muir Road
City Martinez **State** CA **Zip** 94553

Project Location

County Contra Costa
City San Pablo
Region
Lat / Long
Cross Streets San Pablo Avenue
Parcel No. 357-010-001 & 357-300-005
Township **Range** **Section** **Base**

Proximity to:

Highways Hwy 80
Airports
Railways SPRR
Waterways San Pablo Bay
Schools John Swett Unified
Land Use PLU: Industrial
Z: Heavy Industrial District
GP: Heavy Industry

Project Issues Air Quality; Biological Resources; Geologic/Seismic; Toxic/Hazardous; Water Quality

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Wildlife, Region 3; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Air Resources Board, Major Industrial Projects; Regional Water Quality Control Board, Region 2; Department of Toxic

Substances Control; Native American Heritage Commission; California Energy Commission; Public Utilities Commission; State Lands Commission

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Date Received 10/20/2014 ***Start of Review*** 10/21/2014 ***End of Review*** 12/04/2014

State of California
Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
1400 Tenth Street
Sacramento, California 95812-3044

CONTRA COSTA COUNTY
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DEPARTMENT OF CONSERVATION
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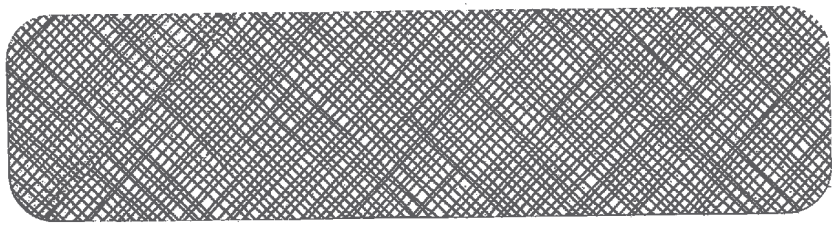

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Comment Letter B10

Department of Conservation and Development

30 Muir Road
Martinez, CA 94553

Phone: 1-855-323-2626

Contra Costa County

John Kopchik
Interim Director

Aruna Bhat
Deputy Director

Jason Crapo
Deputy Director

Robert T. Calkins
Interim Deputy Director

October 21, 2014

REVISED

NOTICE OF COMPLETION AND AVAILABILITY OF A RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

State Clearinghouse #2012072046

Proposed Phillips 66 Company Propane Recovery Project in Contra Costa County

County File #LP12-2073

Notice is hereby given pursuant of the California Environmental Quality Act (CEQA) that a document entitled ***Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report*** (hereafter referenced as "RDEIR") has been prepared for the Phillips 66 Propane Recovery Project, which proposes refinery processing equipment improvements to recover for sale propane and butane from refinery fuel gas (RFG) and other process streams; and to decrease sulfur dioxide (SO_2) emissions from the refinery as a result of removing sulfur compounds from RFG streams at the Phillips 66 Rodeo refinery in Contra Costa County.

The proposed project would add and modify processing and ancillary equipment within the refinery. New equipment includes a hydrotreater, fractionation columns to recover propane and butane, and propane storage vessels and treatment facilities, as well as two new rail spurs. To provide the steam required by the proposed project, either a new 140 million Btu/hr steam boiler would be added or more steam would be provided by the existing steam power plant if the new boiler were not built. There would also be minor modifications to existing process units and utility systems for the purpose of tie-ins and to address any changes in operating pressure or temperature at the tie-in points. The proposed project would require hydrotreating a portion of the RFG, a process that would reduce the amount of sulfur in the fuel gas, and because fuel gas is now burned to produce heat for refinery processes, would ultimately reduce the refinery's SO_2 emissions to the atmosphere. The project would be built in two phases. The first phase (Phase I) would provide enhanced recovery and increased rail shipments of butane. Phase I would include all project components except propane storage and the

additional rail loading rack and spurs. During the second phase, (Phase II), the facilities to store and ship propane would be added along with the piping and other ancillary equipment necessary to get the propane from the Propane/Butane Recovery Unit to the storage vessels and loading racks. Startup would occur after the completion of construction, which is estimated to take 12 to 15 months. The proposed project would be constructed on existing refinery property that is zoned for heavy industrial use, and the proposed project would be a permitted use within the heavy industrial zoning district; however, a Land Use Permit is required under the Hazardous Waste or Hazardous Materials Ordinance §84-63.1002 of the Contra Costa County Code. The project also requires compliance with CEQA. Construction is proposed to begin after all required permits are received.

PROJECT LOCATION: The Phillips 66 Rodeo refinery is located at 1380 San Pablo Avenue in unincorporated Contra Costa County, near the town of Rodeo. [Zoning: Heavy Industrial District (H-I); General Plan: Heavy Industry (HI); Assessor's Parcel Numbers: 357-010-001 & 357-300-005]

THE RECIRCULATED DRAFT EIR FOCUSES ON REVISIONS TO THE FOLLOWING SECTIONS:

- Air Quality (Section 4.1)
- Biological Resources (Section 4.2)
- Energy Conservation (Section 4.3)
- Geology and Soils (Section 4.4)
- Greenhouse Gas Emissions (Section 4.5)
- Hazards and Hazardous Materials (Section 4.6)
- Hydrology and Water Quality (Section 4.7)

PUBLIC REVIEW AND COMMENT PERIOD: There will be a forty-five (45) day review and comment period for the RDEIR, which begins on the date listed at the top of this notice. **Comments on the adequacy of the RDEIR must be submitted by 5:00 p.m. on FRIDAY, December 5, 2014**. Comments must be in writing and submitted to the following address:

Attention: Ms. Lashun Cross, Principal Planner
Contra Costa County Department of Conservation and Development
30 Muir Road, Martinez, CA 94553

For accuracy of record, the County File Number, LP12-2073, should be included on all correspondence.

During the review period, the County Zoning Administrator will hold a public hearing to provide additional opportunity for public comment on the RDEIR. The date and time of the Zoning Administrator hearing is as follows:

Monday, November 17, 2014 at 3:30 p.m.
at 30 Muir Road
Martinez, CA 94553

The County does not intend to extend beyond the 45 days for public review, because the initial Environmental document was released on June 10, 2013 with a comment period of 60 days.

REPORT AVAILABILITY: Copies of the RDEIR are available for review and purchase at the offices of the Contra Costa County Department of Conservation and Development, Community Development Division at the address listed above. The RDEIR is available for purchase in hard-copy format for $25.00 (add $10.00 if mailing is required) or CD format for $5.00 (add $1.25 if mailing is required). The RDEIR is also available for viewing on the following department websites:

- http://ca-contracostacounty2.civicplus.com/4729/Phillips-66-Propane-Recovery-Project
- http://ca-contracostacounty2.civicplus.com/4841/Public-Input

In addition to copies of the RDEIR, supplemental information including maps and other material related to the project and the preparation of the RDEIR are available for public review at the offices of the Department of Conservation and Development, Community Development Division.

The RDEIR is also available for review at the following locations:

- Office of Supervisor Federal D. Glover, District V
  151 Linus Pauling Drive
  Hercules, CA 94547

- Contra Costa County Library, Rodeo
  220 Pacific Avenue
  Rodeo, CA 94572

ADDITIONAL INFORMATION: For additional information on the RDEIR, please contact Ms. Lashun Cross of the Contra Costa County Department of Conservation and Development by e-mail at lashun.cross@dcd.cccounty.us , by telephone at (925) 674-7786, or by fax at (925) 674-7258.

Department of Conservation and Development

30 Muir Road
Martinez, CA 94553

Phone: 1-855-323-2626

Contra Costa County

John Kopchik
Interim Director

Aruna Bhat
Deputy Director

Jason Crapo
Deputy Director

Robert T. Calkins
Interim Deputy Director

October 17, 2014

FILED
OCT 17 2014
J.E. CANCIAMILLA COUNTY CLERK
CONTRA COSTA COUNTY
BY DEPUTY

NOTICE OF COMPLETION AND AVAILABILITY OF A RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

State Clearinghouse #2012072046

Proposed Phillips 66 Company Propane Recovery Project in Contra Costa County

County File #LP12-2073

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PUBLIC REVIEW AND COMMENT PERIOD: There will be a forty-five (45) day review and comment period for the RDEIR, which begins on the date listed at the top of this notice. **Comments on the adequacy of the RDEIR must be submitted by 5:00 p.m. on Tuesday, December 2, 2014**. Comments must be in writing and submitted to the following address:

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Contra Costa County Department of Conservation and Development
30 Muir Road, Martinez, CA 94553

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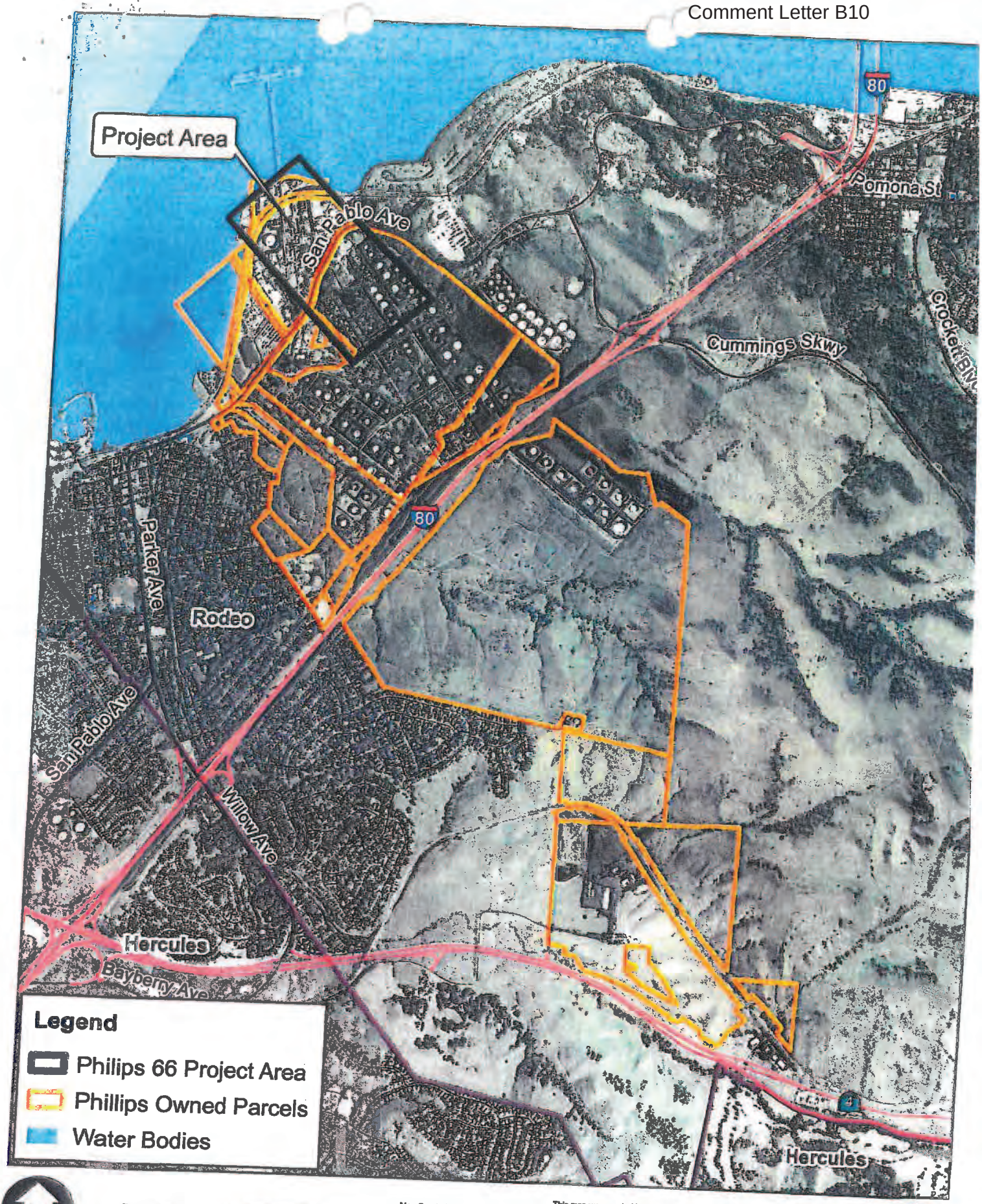
NOTICE ISSUED: October 17, 2014



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by Contra Costa County Department of Conservation and Development, GIS Group
30 Muir Road, Martinez, CA 94553
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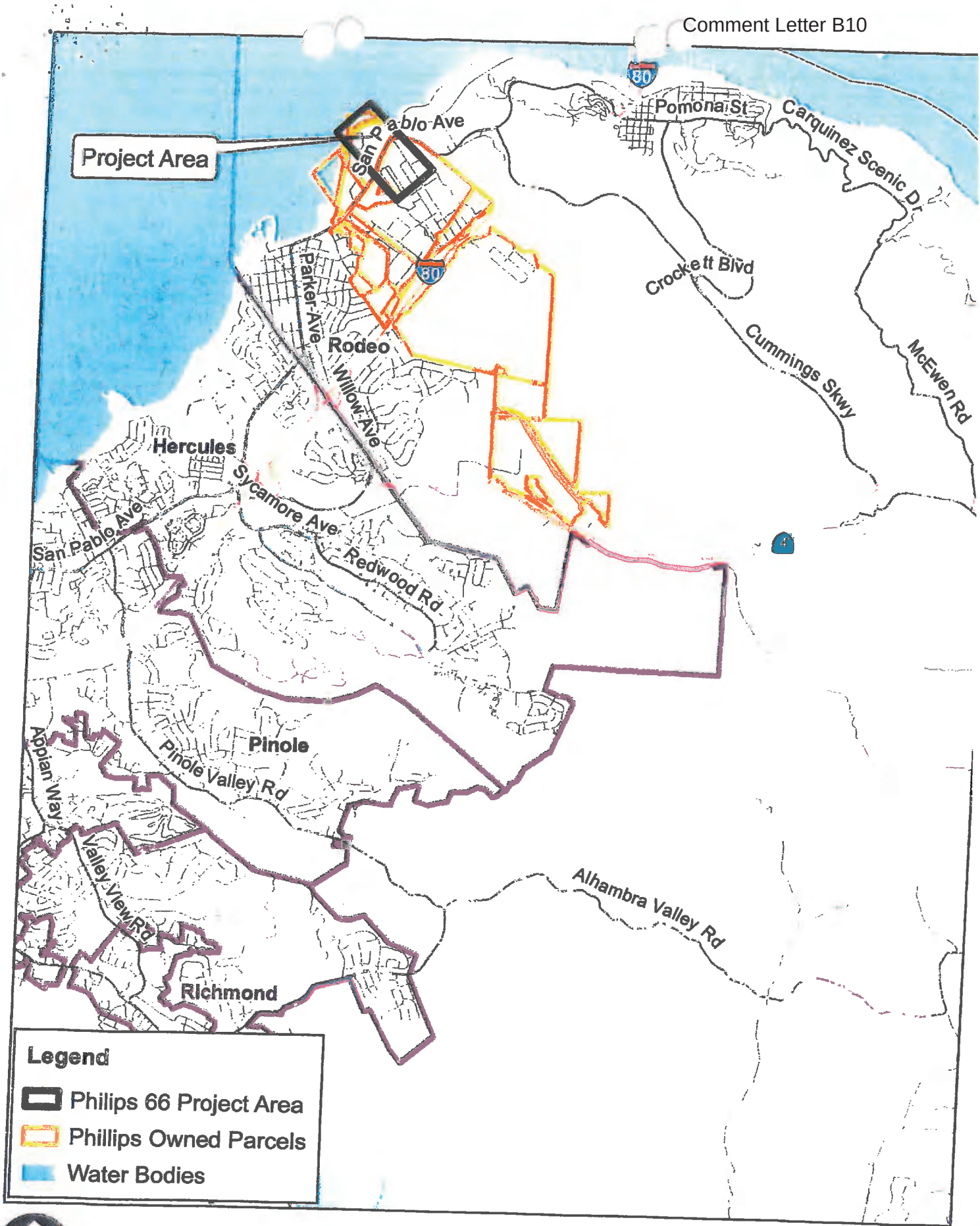
This map was created by the Contra Costa County Department of Conservation and Development with data from the Contra Costa County GIS Program. Some base data, primarily City Limits, is derived from the CA State Board of Equalization's tax rate areas. While obligated to use this data the County assumes no responsibility for its accuracy. This map contains copyrighted information and may not be altered. It may be reproduced in its current state if the source is cited. Users of this map agree to read

Comment Letter B10



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3.2.10 Letter B10 – Responses to Comments from Communities for a Better Environment

B10-1 The commenter provided supporting documentation that was referenced in in a previous comment letter. This comment is noted.

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
601 GATEWAY BOULEVARD, SUITE 1000
SOUTH SAN FRANCISCO, CA 94080-7037

TEL: (650) 589-1660
FAX: (650) 589-5062
rkoss@adamsbroadwell.com

SACRAMENTO OFFICE
520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4721
TEL: (916) 444-6201
FAX: (916) 444-6209

DANIEL L. CARDOZO
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
LAURA E. HORTON
MARC D. JOSEPH
RACHAEL E. KOSS
JAMIE L. MAULDIN
MEGHAN A. QUINN
ADAM J. REGELE
ELLEN L. TRESCOTT

December 5, 2014

By Email and Overnight Mail

Lashun Cross, Principal Planner
Contra Costa County Department of Conservation and Development
30 Muir Road
Martinez, CA 94553
Email: lashun.cross@dcd.cccounty.us

Re: Comments on the Recirculated Draft Environmental Impact Report for the Phillips 66 Propane Recovery Project (SCH No. 2012072046)

Dear Ms. Cross:

We are writing on behalf of Safe Fuel and Energy Resources California ("SAFER California") to comment on the Phillips 66 Propane Recovery Project ("Project") Recirculated Draft Environmental Impact Report ("RDEIR"), prepared by Contra Costa County pursuant to the California Environmental Quality Act ("CEQA").[1] Phillips 66 proposes to recover 14,500 barrels per day of propane and butane from refinery fuel gas at its Rodeo Refinery and to export (by rail) the propane and butane for sale. This would require modifying existing equipment and adding new equipment, including a hydrotreater, fractionation columns, a steam boiler, six propane storage vessels, a loading rack and two rail spurs. B11-1

Based upon our review of the RDEIR, County records, as well as pertinent public records in the possession of other agencies, we conclude that the RDEIR is so inadequate under CEQA that it must be withdrawn. The RDEIR fails to describe and analyze the whole Project because it does not identify the Rodeo Refinery Marine Terminal throughput increase project (both phases), the Santa Maria Rail Spur Project or the Santa Maria Throughput Increase Project as part of this Project. As a result, the RDEIR fails to fully identify and mitigate the Project's potentially significant environmental impacts. In addition, the RDEIR fails to provide a

[1] Pub. Resources Code, §§ 21000 et seq.

sufficiently detailed environmental setting to enable an adequate analysis of significant impacts on air quality, public health and safety and from greenhouse gas emissions. The RDEIR also fails to identify and reduce the Project's potentially significant impacts on air quality, public health and safety, as well the Project's significant climate change impacts. These defects render the RDEIR inadequate as an informational document. The numerous defects in the County's analysis, set forth in greater detail in the following paragraphs, are fatal errors. The County must withdraw the RDEIR and prepare a revised RDEIR which fully complies with CEQA. B11-1

We prepared these comments with the assistance of environmental engineer, Phyllis Fox, Ph.D., PE and air quality expert Petra Pless, D.Env. Dr. Fox's and Dr. Pless' technical comments are attached hereto and submitted in addition to the comments in this letter. Accordingly, the County must address and respond to the comments of Dr. Fox and Dr. Pless separately.

I. INTEREST OF COMMENTORS

SAFER California advocates for safe processes at California refineries to protect the health, safety, standard of life and economic interests of its members. For this reason, SAFER California has a strong interest in enforcing environmental laws, such as CEQA, which require the disclosure of potential environmental impacts of, and ensure safe operations and processes for, California oil refineries. Failure to adequately address the environmental impacts of crude oil and other refinery product transport and refining processes poses a substantial threat to the environment, worker health, surrounding communities and the local economy. B11-2

Refineries are uniquely dangerous and capable of generating significant fires and the emission of hazardous and toxic substances that adversely impact air quality, water quality, biological resources and public health and safety. These risks were recognized by the Legislature and Governor when enacting SB 54 (Hancock). Absent adequate disclosure and mitigation of hazardous materials and processes, refinery workers and surrounding communities may be subject to chronic health problems and the risk of bodily injury and death. Additionally, rail transport of crude oil and other refinery products has been involved in major explosions, causing vast economic damage, significant emissions of air contaminants and carcinogens and, in some cases, severe injuries and fatalities.

Poorly planned refinery projects also adversely impact the economic wellbeing of people who perform construction and maintenance work in the refinery and the surrounding communities. Plant shutdowns in the event of accidental release and infrastructure breakdown have caused prolonged work stoppages. Such nuisance conditions and catastrophic events impact local communities and can jeopardize future jobs by making it more difficult and more expensive for businesses to locate and people to live in the area. The participants in SAFER California are also concerned about projects that carry serious environmental risks and public service infrastructure demands without providing countervailing employment and economic benefits to local workers and communities. B11-2

The members represented by the participants in SAFER California live, work, recreate and raise their families in Contra Costa County, including the town of Rodeo. Accordingly, these people would be directly affected by the Project's adverse environmental impacts. The members of SAFER California's participating unions may also work on the Project itself. They will, therefore, be first in line to be exposed to any hazardous materials, air contaminants, and other health and safety hazards, that exist onsite.

II. LACK OF TIMELY INFORMATION AND POTENTIAL NEED TO SUBMIT FURTHER COMMENTS

The County was required, but failed to make all documents referenced or relied on in the RDEIR available for the duration of the public comment period.[2] Access to these materials was essential to our review and evaluation of the County's findings. Despite our efforts to obtain immediate access to all materials referenced in the RDEIR, the County only granted us access to some of these materials and only two days before the end of the public comment period. B11-3

The County issued its Revised Notice of Completion of the RDEIR on October 21, 2014. On October 28, 2014, we requested that the County provide immediate access to documents referenced or relied on in the RDEIR. The County provided some of the documents referenced in the RDEIR.

On December 1, 2014, we sent a follow-up request for the remaining documents referenced or relied on in the RDEIR. We also requested an extension of the comment deadline in light of the County's failure to make all documents B11-4

[2] *See* Pub. Resources Code, § 21092(b)(1); 14 Cal. Code Regs., § 15087(c)(5) ("CEQA Guidelines").

referenced or relied on in the RDEIR available during the whole comment period, as required by CEQA. After some back and forth with County staff, the County provided a few more reference documents.

On December 3, 2014, we reiterated our request for documents referenced or relied on in the RDEIR and our request for an extension of the public comment period to allow an opportunity to review the materials provided by the County. The County denied access to the remaining documents referenced or relied on in the RDEIR and also denied our request for an extension of the comment deadline. Accordingly, we provide these initial comments on the RDEIR and reserve our right to submit supplemental comments on the RDEIR at a future date. B11-4

III. THE RDEIR FAILS TO DESCRIBE AND ANALYZE THE WHOLE PROJECT

CEQA Guidelines section 15378 defines "project" to mean "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment."[3] "The term 'project' refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term project does not mean each separate governmental approval."[4] Courts have explained that a complete project description must "address not only the immediate environmental consequences of going forward with the project, but also all "*reasonably foreseeable consequence[s]* of the initial project."[5] "If a[n] . . . EIR. . . does not adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project, informed decisionmaking cannot occur under CEQA and the final EIR is inadequate as a matter of law."[6] B11-5

Moreover, a public agency may not segment a large project into two or more smaller projects in order to mask serious environmental consequences. CEQA prohibits such a "piecemeal" approach and requires review of a project's impacts as a

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[3] CEQA Guidelines §15378.
[4] *Id.* § 15378(c).
[5] *Laurel Heights Improvement Association v. Regents of University of California* (1988) 47 Cal.3d 376, emphasis added; *see also Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449-50.
[6] *Riverwatch v. Olivenhain Municipal Water Dist.* (2009) 170 Cal.App.4th 1186, 1201.
3105-015cv

whole.[7] CEQA mandates "that environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences."[8] Before approving a project, a lead agency must assess the environmental impacts of all reasonably foreseeable phases of a project.[9] "The significance of an accurate project description is manifest where," as here, "cumulative environmental impacts may be disguised or minimized by filing numerous, serial applications."[10] B11-5

A. The Amount of Propane and Butane to be Recovered is Not Consistently Described

The amount of propane and butane to be recovered by the Project is not consistently described. The original DEIR for the Project states that 13,500 bbl/day of propane and butane will be recovered.[11] However, the RDEIR states that 14,500 bbl/day of propane and butane will be recovered.[12] Finally, the draft Bay Area Air Quality Management District ("BAAQMD") engineering analysis for the Project proposes a permit limit of 17,400 bbl/day of propane and/or butane. B11-6

The amount of propane and butane that will be recovered from the Project affects air quality, greenhouse gas ("GHG") emissions, and hazards impact analyses.[13] Thus, the inconsistent description of the amount of propane and butane that will be recovered makes it impossible to accurately analyze the Project's potentially significant impacts. The County must prepare a revised RDEIR that accurately describes the amount of propane and butane that will be recovered by the Project.

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[7] CEQA Guidelines § 15378(a); *Burbank- Glendale-Pasadena Airport Authority v. Hensler* (1991) 233 Cal.App.3d 577, 592.
[8] *Bozung v. Local Agency Formation Commission* (1975) 13 Cal.3d 263, 283-84; *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1452.
[9] *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 396-397 (EIR held inadequate for failure to assess impacts of second phase of pharmacy school's occupancy of a new medical research facility).
[10] *Arviv Enterprises v. South Valley Area Planning Commission* (2002) 101 Cal.App.4th 1333, 1346.
[11] DEIR, Table 3-2.
[12] RDEIR, Table 3-2.
[13] *See* **Attachment 1**: Comments on Recirculated Draft Environmental Impact Report for the Phillips 66 Propane Recovery Project, Phyllis Fox, Ph.D., PE and Petra Pless, D.Env., December 5, 2014 ("Fox/Pless Comments").
3105-015cv

B. The RDEIR Improperly Segments the Project from Other Related Actions

The California Supreme Court held that an EIR must treat activities as part of the project where the activities at issue are "a reasonably foreseeable consequence of the initial project and the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects."[14]

The Phillips 66 San Francisco Refinery consists of two facilities linked by a 200-mile pipeline.[15] The Santa Maria Refinery is located in Arroyo Grande in San Luis Obispo County, and the Rodeo Refinery is located in Rodeo in the Contra Costa County. Dr. Fox and Dr. Pless explain in their comments that the Santa Maria Refinery mainly processes heavy, high sulfur crude oil and sends semi-refined liquid products to the Rodeo Refinery for converting into finished products.[16]

There are five projects in various stages of the development process at either end of this pipeline that are related and should be described and evaluated as a single project under CEQA. At the Rodeo Refinery, there is (1) the Propane Recovery Project, (2) the Marine Terminal Phase II Throughput Increase Project and (3) the Marine Terminal Phase III Throughput Increase Project. At the Santa Maria Refinery, there is the (4) Santa Maria Throughput Increase Project and (5) the Santa Maria Rail Spur Project. When analyzed together, as required by CEQA, the entire project would result in significant unmitigated project-level and cumulative air quality, global warming, and public health and safety impacts which are not disclosed or are improperly analyzed and/or mitigated in the RDEIR.

B11-7

The RDEIR fails to disclose the link between the Project and the four other directly related projects. The Project will benefit from and rely on these projects because it will receive increased amounts of butane and propane necessary for Project operation. Evidence shows that the current amount of recoverable butane and propane at the Rodeo Refinery is less than the RDEIR's proposed 14,500 bbl/day for the Project (and substantially less than the proposed BAAQMD permit limit of 17,400 bbl/day for the Project).[17] Moreover, Dr. Fox and Dr. Pless explain

[14] *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376, 396.
[15] See Santa Maria Rail Spur Project RDEIR, Fig. 2-2.
[16] Fox/Pless Comments, p. 2.
[17] *Id.*, pp. 9-12.
3105-015cv

that the current crude supply to the Rodeo and Santa Maria refineries from local California sources is declining and is more expensive than "cost-advantaged" crudes such as tar sands and Bakken crude.[18] Dr. Fox and Dr. Pless further explain that the crudes that will replace these declining and costly California crudes are crudes that are rich in propane and butane, including tar sands crudes at the Santa Maria Refinery and Bakken crudes at the Rodeo Refinery. The Santa Maria Rail Spur Project, the Santa Maria Throughput Increase Project, and the Marine Terminal Phase II and Phase III Throughput Increase Projects will enable the import of these cost-advantaged crudes to the Santa Maria Refinery and the Rodeo Refinery. In turn, the propane and butane from these crudes will be will be recovered by the Project.[19]

To further describe the connection between these projects, Dr. Fox and Dr. Pless explain that the Santa Maria Throughput Increase Project was proposed by Phillips 66 to increase the maximum limit of crude oil throughput at the Santa Maria Refinery by 10 percent.[20] The Santa Maria Throughput Increase Project would increase the volume of crude oil delivered to the Santa Maria Refinery and increase the volume of products leaving the Santa Maria Refinery by pipeline to the Rodeo Refinery (among other changes).[21]

B11-7

Further, the Santa Maria Throughput Increase Project is dependent on the Santa Maria Rail Spur Project because a throughput increase cannot be implemented at the Santa Maria Refinery unless Phillips 66 can import crude to offset declining local crude supplies.[22] Moreover, the Propane Recovery Project cannot be implemented but for the Rail Spur Extension Project and the Santa Maria Throughput Increase Project because the Propane Recovery Project depends on increased amounts of butane and propane to be recovered. Thus, the Santa Maria Throughput Increase Project, the Santa Maria Rail Spur Project and the Propane Recovery Project are all inextricably linked.[23]

Dr. Fox and Dr. Pless also explain that the Marine Terminal Phase II and III Throughput Increase Projects are essential to carry out the Project because they allow the Rodeo Refinery to import up to 77 percent of its crude capacity by marine

[18] Fox/Pless Comments, pp. 2-5.
[19] *Id.*, p. 6.
[20] Phillips Santa Maria Refinery, Throughput Increase Project FEIR, Nov. 2012, at p. ES-1.
[21] *Id.*, at p. ES-4.
[22] Fox/Pless Comments, pp. 5-7.
[23] *Id.*

vessel, facilitating the import of Bakken crude from Phillip 66's west coast rail-to-marine terminal in Clatskanie, Oregon.[24] Bakken crudes contain high concentrations of propane and butane, which would be recovered by the Project.[25]

In short, CEQA requires the County to analyze the whole of the project, including the Propane Recovery Project, the Marine Terminal Phase II and Phase III Throughput Increase Projects, the Santa Maria Throughput Increase Project and the Santa Maria Rail Spur Project, rather than analyzing each individual proposal as unrelated and distinct projects (which they are not). B11-7

IV. THE RDEIR'S DESCRIPTION OF THE ENVIRONMENTAL SETTING IS INADEQUATE

CEQA requires the lead agency to include a description of the physical environmental conditions in the vicinity of a project as they exist at the time environmental review commences.[26] The description of the environmental setting constitutes the baseline physical conditions by which a lead agency may assess the significance of a project's impacts. The EIR must also describe the existing environmental setting in sufficient detail to enable a proper analysis of project impacts.[27]

Describing the environmental setting accurately and completely for each environmental condition in the vicinity of the project is critical to an accurate, meaningful evaluation of environmental impacts. The courts are clear that, "[b]efore the impacts of a Project can be assessed and mitigation measures considered, an [environmental review document] must describe the existing environment."[28] It is: B11-8

> a central concept of CEQA, widely accepted by the courts, that the significance of a Project's impacts cannot be measured unless the DEIR first establishes the actual physical conditions on the property. In

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[24] *Id.*, pp. 7-8.
[25] *Id.*
[26] CEQA Guidelines, § 15125(a); *see* also *Communities for A Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 321.
[27] *Galante Vineyards v. Monterey Peninsula Water Management District* (1997) 60 Cal.App.4th 1109, 1121-22.
[28] *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952.
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other words, baseline determination is the first rather than the last step in the environmental review process.[29]

Additionally, it is axiomatic that the baseline information on which an EIR relies must constitute substantial evidence.[30] The CEQA Guidelines define "substantial evidence" as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion."[31] "Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." "[U]nsubstantiated opinion or narrative [and] evidence which is clearly inaccurate or erroneous . . . is not substantial evidence."[32] B11-8

The RDEIR fails to establish the appropriate environmental setting for air quality, health risks and hazards impacts. These inadequacies are described in detail in the sections below. The County must revise the RDEIR to include an adequate description of the environmental setting. Absent this information, the County cannot conclude that the Project's potentially significant impacts have been reduced to a less than significant level.

V. THE RDEIR FAILS TO IDENTIFY AND REDUCE THE PROJECT'S SIGNIFICANT AIR QUALITY IMPACTS

In this section, we address the RDEIR's analysis of the Project's environmental impacts as discussed in the RDEIR. Accordingly, the following comments analyze the potentially significant impacts that would result from the Project alone. The potentially significant impacts discussed here would be more severe if all Project components – the Santa Maria Rail Spur Extension Project, the Santa Maria Throughput Increase Project and the Marine Terminal Phase II and Phase III Throughput Increase Projects were analyzed together with the Propane Recovery Project, as required by CEQA. B11-9

[29] *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 125.
[30] *See* CEQA Guidelines §15063(a)(3) ("An initial study may rely upon expert opinion supported by facts, technical studies or other substantial evidence to document its findings.").
[31] CEQA Guidelines, §15384.
[32] Pub. Resources Code, § 21082.2(c).
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A. The RDEIR Substantially Underestimates the Project's Operational Emissions

The RDEIR estimates daily and annual Project operational emissions for nitrogen oxides ("NOx"), sulfur dioxide ("SO2"), particulate matter ("PM10 and PM2.5"), and reactive organic gases ("ROG").[33] The RDEIR compares the emissions estimates to the BAAQMD's daily and annual CEQA significance thresholds for NOx, PM10, PM2.5, and ROG. Dr. Fox and Dr Pless explain that there are several inadequacies with the RDEIR's analysis.

B11-10

As an initial matter, the RDEIR provides no significance threshold for SO2 and omits carbon monoxide ("CO") from the analysis completely. These omissions alone render the RDEIR inadequate.

Further, the emissions estimates in the RDEIR are unsupported and underestimated. Specifically the RDEIR underestimates locomotive emissions and NOx emission reductions from shutting down heater B-401 are incorrectly used to mitigate the Project's significant NOx emission increases. When the errors in the emission calculations are corrected, the resulting increases in daily and annual NOx and ROG emissions exceed CEQA significance thresholds.[34] These are significant unmitigated air quality impacts that were not identified in the RDEIR.

1. The RDEIR's Emissions Estimating Methodology is Unsupported

As an initial matter, the RDEIR's methodology for determining the Project's increased emissions is incorrect and unsupported. Dr. Fox and Dr. Pless provide the correct and standard way to estimate the Project's increased emissions – the sum of the difference between the Project's potential to emit and the average baseline emissions.[35] Dr. Fox and Dr. Pless explain that the RDEIR does not follow this standard approach. Instead, the RDEIR bases its emissions calculations on emissions increases and does not disclose the assumed baseline.[36] As Dr. Fox and Dr. Pless state, the County's approach "misses the point. The increases can only be

B11-11

[33] RDEIR, Tables 4.3-6 and 4.1-8.
[34] Fox/Pless Comments, p. 13.
[35] *Id.*
[36] *Id.*, p. 14; see also **Attachment 2**: Email from Lashun Cross to Rachael Koss re Marine Terminal Appendix C, December 4, 2014 ("Detailed records of the Refineries daily current baseline would not change the maximum increase and were not requested by the County. The impact(s) from the Project is not dependent on what the baseline is but the increase.").
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determined by following the calculation in Equation (1) [Project Increase in Emissions = Project Potential to Emit – Baseline]."[37]

B11-11

2. The RDEIR Underestimates the Project's Increase in Locomotive Emissions

Dr. Fox and Dr. Pless explain that locomotive emissions depend on the weight of the load that is carried, which is determined by the number of cars that are pulled and their contents.[38] Thus, the Project's increase in locomotive emissions depends on the increase in the number of rail cars that would export propane and butane from the Refinery, compared to baseline exports. The increase in the number of rail cars, in turn, depends on the increase in the amount of propane and butane that is exported after the Project is built, compared to the annual average of propane and butane exported during the baseline years.

B11-12

The RDEIR estimates that the Project's locomotive NOx emissions will increase 10.18 tons/year based on an increase from 8 to 20 rail cars per day.[39] The RDEIR provides no support for its assumptions or conclusions. Notably, the RDEIR does not provide the annual average amount of propane and butane recovered in baseline years. Moreover, Dr. Fox and Dr. Pless determined that the Project would increase locomotive NOx emissions by 13.85 tons/year, which is substantially more than the RDEIR's estimate of 10.18 tons/year, and which results in a significant impact.[40] Dr. Fox and Dr. Pless based their calculations on an increase in the number of rail cars from an annual average of four per day to a maximum of 24 per day, which is supported by substantial evidence in the record.[41] Thus, the RDEIR's conclusions regarding the Project's locomotive NOx emissions are unsupported and underestimated.

a. *The RDEIR Inflates the Baseline for Locomotive Emissions*

B11-13

The RDEIR presents the average annual baseline emissions from locomotives in Table 4.1-5. Dr. Fox and Dr. Pless explain that these baseline emissions are substantially overestimated because they rely on an incorrect assumption of the

[37] Fox/Pless Comments, p. 14.
[38] *Id.*, p. 15.
[39] RDEIR, Appx. B, pdf 6.
[40] Fox/Pless Comments, p. 19.
[41] *Id.*, p. 18.

number of rail cars (eight) used to export propane and butane during the baseline years.[42] The RDEIR provides no support for the assumption that the baseline number of rail cars is eight. In fact, the BAAQMD application for the Project's Authority to Construct states "[i]n the summer, 8 to 12 railcars (up to 9000 barrels) of butane are typically loaded on any given day. In the winter, 3 to 4 railcars (2,300 to 3,000 bbl) are loaded per month. ***The average number of railcars loaded for the past three years is 4 rail cars per day.***"[43] Thus, the proper baseline is four – the average number of railcars for the past three years – not eight. This is confirmed by other statements in the RDEIR. For example, the RDEIR states "[o]n any given day, the maximum number of additional railcars could increase by about 20, resulting in a total of 24 railcars when added to the baseline."[44]

B11-13

The record does not provide the average annual butane export volumes for the baseline period. However, Dr. Fox and Dr. Pless calculated the volumes based on the annual average baseline number of rail cars (four) and a capacity for each rail car of 700 to 750 barrels.[45] Dr. Fox's and Dr. Pless' calculations show that the annual average baseline butane exports are 1,058,500 bbl/year (or 102,251 tons/year).[46] From there, Dr. Fox and Dr. Pless calculated the Project's baseline locomotive emissions for NOx, PM10, PM2.5 and ROG. Dr. Fox and Dr. Pless provide the results of their calculations in Table 2 of their comments, which show that that *the RDEIR overestimates the Project's annual average baseline locomotive emissions by a factor of two.*[47] As a result, the RDEIR significantly underestimates the Project's increase in locomotive emissions (see below).

b. The RDEIR Underestimates the Annual Average Locomotive Emissions

B11-14

The RDEIR provides that the annual increase in the Project's locomotive emissions is based on an increase in propane and butane exports of 276,599 tons/year (3,000,317 bbl/year) and an increase in the number of rail cars of 12 per day on an annual average basis.[48] Based on information in the record, Dr. Fox and

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[42] *Id.*, p. 14.
[43] ERM, Rodeo Propane Recovery Project, BAAQMD Authority to Construct and Significant Revision to Major Facility Review Permit Application, February 2013 (emphasis added).
[44] RDEIR, Appx. B, pdf 30, 146.
[45] Fox/Pless Comments, pp. 16, citing RDEIR, p. 3-17, fn. 7.
[46] *Id.*.
[47] *Id.*
[48] RDEIR, Appx. B.

Dr. Pless determined that the Project actually allows a greater increase in propane and butane exports over the baseline of up to 390,332 tons/year (or 4,234,000 bbl/year), which results in an annual average increase in the number of rail cars of about 16 per day, four more than assumed in the RDEIR.[49] According to Dr. Fox and Dr. Pless, the RDEIR also incorrectly assumes that the switch locomotive would operate on site for the same amount of time per day as for the baseline (one hour), even though the number of rail cars that will need to be moved by the switch locomotive to accommodate the increased exports will increase by a factor of five.[50] As a result, Dr. Fox and Dr. Pless conclude that the RDEIR "substantially underestimates the increase in annual average locomotive emissions."[51] Dr. Fox and Dr. Pless provide a detailed discussion of the RDEIR's errors and provides revised emission calculations and estimates.[52] Dr. Fox and Dr. Pless find that the Project will increase annual locomotive emissions as follows:

B11-14

- **NOx**: 13.85 tons/year (a difference of 3.67 tons/year compared to the RDEIR's increase in annual locomotive NOx emissions);
- **PM10**: 0.35 tons/year (a difference of 0.09 tons/year compared to the RDEIR's increase in annual locomotive PM10 emissions);
- **PM2.5**: 0.34 tons/year (a difference of 0.09 tons/year compared to the RDEIR's increase in annual locomotive PM2.5 emissions); and
- **ROG**: 0.67 tons/year (a difference of 0.18 tons/year compared to the RDEIR's increase in annual locomotive ROG emissions).[53]

Annual Project increases in locomotive NOx emissions will be substantially more than estimated by the RDEIR.

c. The RDEIR Underestimates the Daily Average Locomotive Emissions

The RDEIR underestimates the Project's daily average locomotive emissions. For daily emissions estimates, the RDEIR assumes a Project increase of 8 additional rail cars per day over a baseline of 16 rail cars per day.[54] According to Dr. Fox and Dr. Pless, this assumption substantially underestimates the potential

[49] Fox/Pless Comments, p. 18.
[50] *Id.*
[51] *Id.*
[52] *Id.*.
[53] *Id.*, p. 19.
[54] *Id.*

increase in daily propane and butane exports and the additional daily number of rail cars. Therefore, the RDEIR substantially underestimates the Project's increase in daily average locomotive emissions.[55]

Dr. Fox and Dr. Pless explain that, based on Phillip 66's Authority to Construct application for the Project and the RDEIR, the Project will result in a *maximum daily increase of 24 rail cars per day*.[56] Based on the daily increase of 24 rails per day, Dr. Fox and Dr. Pless prepared revised daily emission estimates for the Project. Dr. Fox and Dr. Pless found that the Project will increase daily locomotive emissions as follows:

- **NOx**: 94.37 lbs/day (a difference of 15.4 lbs/day compared to the RDEIR's increase in annual locomotive NOx emissions);
- **PM10**: 2.40 lbs/day (a difference of 0.4 lbs/day compared to the RDEIR's increase in annual locomotive PM10 emissions);
- **PM2.5**: 2.31 lbs/day (a difference of 0.4 lbs/day compared to the RDEIR's increase in annual locomotive PM2.5 emissions); and
- **ROG**: 4.53 lbs/day (a difference of 0.7 lbs/day compared to the RDEIR's increase in annual locomotive ROG emissions).[57]

B11-14

Dr. Fox's and Dr. Pless' calculations show that the Project's locomotive emissions will tip the Project's NOx emissions over the BAAQMD's significance threshold of 54 lbs/day. Notably, Dr. Fox and Dr. Pless explain that the Project's emissions will likely be even greater than shown in their calculations because they assumed far less than the maximum load for each rail car (approximately 715 bbl/rail car vs. 750 bbl/rail car) and their calculations do not account for increased operations of the switch locomotive on site or emissions outside of the BAAQMD (see below).[58]

d. The RDEIR Incorrectly Excludes Locomotive Emissions Outside of the BAAQMD

The RDEIR also underestimates the Project's locomotive emissions because it excludes emissions outside of the BAAQMD. Dr. Fox and Dr. Pless explain that the locomotives used to transport recovered propane and butane from the Project are a

[55] *Id.*
[56] *Id.*, p. 20.
[57] *Id.*, p. 21.
[58] *Id.*, pp. 21-22.

major source of the Project's NOx emissions and contribute to the Project's ROG emissions.[59] The RDEIR underestimates these emissions because it fails to account for emissions released outside the boundary of the BAAQMD. Not only does CEQA require the County to consider all reasonably foreseeable indirect and direct emissions impacts from the Project, but it is common practice to base criteria pollutant emissions on the total track length within California. Other recent CEQA documents involving train transport of petroleum products include locomotive emissions for the entire distance travelled within California, from the Stateline to the project site (including the Phillips 66 Santa Maria Rail Spur Project RDEIR and the Valero Benicia Crude by Rail Project DEIR.[60]

The County's approach significantly underestimates total criteria pollutant emissions. According to Dr. Fox and Dr. Pless, had the County based its analysis on emissions released from outside of the BAAQMD (like it did for GHG emissions), the Project would result in a net increase in daily NOx emissions of 580 lbs/day.[61] These emissions exceed the BAAQMD's significance threshold for NOx of 54 lbs/day by a factor of ten. Similarly, even assuming the invalid NOx offsets (described below), the Project's net increase in annual NOx emissions is 68 tons/year.[62] This exceeds the BAAQMD's annual significance threshold of 10 tons/year by a factor of almost seven.[63] Thus, daily and annual NOx emissions from the Project based on the Statewide travel distance of locomotives result in significant air quality impacts that were not disclosed or mitigated in the RDEIR. B11-14

For ROG emissions, the increase in daily emissions from all Project sources (including emissions released from outside the BAAQMD) is 70.5 lbs/day, which exceeds the BAAQMD's daily significance threshold for ROG of 54 lbs/day by 30 percent.[64] Similarly, the increase in annual ROG emissions from all Project sources is 11.5 tons/year, which exceeds the BAAQMD's annual significance threshold for ROG of 10 tons/year.[65] Thus, daily and annual ROG emissions from the Project based on the Statewide travel distance of locomotives result in significant air quality impacts that were not disclosed or mitigated in the RDEIR.

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[59] *Id.*, pp. 22-25.
[60] *Id.*
[61] *Id.*
[62] *Id.*
[63] *Id.*
[64] *Id.*
[65] *Id.*

Notably, Dr. Fox and Dr. Pless explain that even if Project emissions are based only on the track length within the BAAQMD, rather than the entire State, the Project would still exceed the NOx daily significance threshold if the actual Union Pacific track length going south out of the District (90 miles) was used in the calculations, rather than the average of the Union Pacific and BNSF track lengths (67 miles).[66] The distance to the eastern boundary of the District is 44 miles and 90 miles to the southern boundary. The 67 miles used in the RDEIR's line haul emission calculations is the average of these two. However, there is no evidence that the Project would use the BNSF track. Rather, 100 percent of the trains for the Project could use the Union Pacific track. In that case, the daily NOx emission increase would be 57 lbs/day (even assuming the invalid heater B-401 emission offsets), which exceeds the BAAQMD's significance threshold for NOx of 54 lbs/day.[67] B11-14

3. The RDEIR Contains Invalid NOx Emission Reductions for Heater B-401

The RDEIR proposes mitigation measure APM-1 to offset significant daily and annual NOx emission increases.[68] APM-1 provides:

> Phillips 66 shall use the remaining unused NOx *emissions credits* associated with the decommissioned B-401 process heater in Unit 240 to offset significant NOx emissions related to the proposed Propane Recovery Project. Prior to operation of the Project, Phillips 66 shall provide documentation to the Department of Conservation and Development that documents that Phillips 66 has not applied for or used any additional NOx credits associated with the Unit B-401 process heater shutdown.[69] B11-15

Dr. Fox and Dr. Pless explain that these reductions are invalid as CEQA mitigation.

First, the shutdown of heater B-401 occurred in 2011.[70] Emission reductions that occurred in the past are not valid CEQA mitigation for the Project. Rather, the reductions are part of the baseline and are not available to offset the Project's NOx increases. Without the reductions, the RDEIR's estimated increase for daily (99.2

[66] *Id.*
[67] *Id.*
[68] RDEIR, pp. 3-43, 4.1-22, 23; Tables 4.1- 4.1-11.
[69] RDEIR, pp. 3-43, 4.1-22 (emphasis added).
[70] Fox/Pless Comments, p. 26.

lb/day) and annual (13.9 tons/year) NOx emissions exceed CEQA significance thresholds (54 lb/day and 10 tons/year, respectively) and are significant unmitigated impacts of the Project.

Second, the heater supplied heat to Phillip 66's hydrogen plant. This hydrogen plant, unit S-464, was shutdown as of October 12, 2011. However, the demand for hydrogen has not been reduced; rather, an off-site source now supplies hydrogen. Thus, NOx emissions would still increase, just elsewhere in the same air basin (the Air Liquide Hydrogen Plant (Site B7419), which is adjacent to the Rodeo Refinery). Therefore, for purposes of CEQA, the shutdown of the heater does not mitigate the Project's increased NOx emissions.[71]

Third, there is no basis for the RDEIR's use of 10.8 tons/year of NOx reductions from the heater shutdown for the Project's annual NOx emission calculations. The RDEIR provides no support for 10.8 tons/year. Further, Dr. Fox and Dr. Pless determined that the claimed reductions do not actually exist. Rather, the reductions were "created by shifting baseline dates and constitute double-counting." Dr. Fox and Dr. Pless provide a detailed account of why the reductions cannot be claimed. In short, the NOx emission reduction credits from the shutdown of heater B-401 were fully used by the Marine Terminal Offload Limit Revision Project (also called the Marine Terminal Phase II Throughput Increase Project). Even assuming actual or contemporaneous reductions (rather than emission credits) are available (which they are not), only 4.54 tons/year exist (not the purported 10.8 tons/year). Thus, the Project will result in a net increase in NOx emissions of 13.1 tons/year, which exceeds BAAQMD's annual significance threshold of 10 tons/year.[72] B11-15

Fourth, like annual NOx reductions, there is no basis for the RDEIR's use of 62.3 lbs/day of NOx reductions from the heater shutdown for the Project's daily NOx emission calculations. The RDEIR provides no support for 62.3 lbs/day. Further, Dr. Fox and Dr. Pless determined that there are no daily NOx reductions available to offset Project emissions because the reductions were used for the Marine Terminal Offload Limit Revision Project. Thus, the Project's daily NOx emissions

[71] *Id.*
[72] *Id.*, pp. 27-30 (Note, the actual increase in NOx emissions is actually much greater because the RDEIR excludes locomotive emissions emitted outside of the BAAQMD).
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(99.4 lbs/day) exceed the BAAQMD's CEQA significance threshold of 54 lbs/day. This is a significant unmitigated impact.[73]

B11-15

4. The RDEIR Fails to Identify Emissions from Other Sources

The Project will increase the emissions from other existing sources required to support the Project. Some of these were identified in Dr. Fox's previous comments on the Project DEIR and in the BAAQMD's March 12, 2014 comments on the Project. These include:

- An additional 135 tons/year of sulfur will be recovered at the Sulfur Recovery unit, which includes several emission sources. This will increase emissions of NOx, CO, ROG, H_2S, ammonia, sulfuric acid mist, and PM10; and
- The Air Liquid Hydrogen Plant will supply hydrogen to the new hydrotreater. This plant includes several sources of emissions including a hydrogen furnace, flare and cooling tower, which will emit additional ROG, NOx, CO, PM10, SO_2, SOx, and ammonia.[74]

B11-16

In response to these comments, the County admits to increases from the Sulfur Recovery Unit, but asserts that they "will not be discernible post-project" and calls them "speculative."[75] The County provides no support their statements. Dr. Fox and Dr. Pless explain that Phillips 66 monitors and reports its emissions from this unit to the BAAQMD and, thus, can calculate the baseline emissions. Further, according to Dr. Fox and Dr. Pless, Phillips 66 knows the post-Project increase, which can be determined from equipment design.[76] Thus, estimating increased emissions is not speculative. Moreover, without conducting the emission calculation or providing the baseline and post-project emissions for the record, the County lacks any evidence to support its assertion that emission increases will not be discernible. Dr. Fox and Dr. Pless provide that even "[s]mall increases are important as Project emissions are close to significance thresholds."[77]

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[73] *Id.*
[74] *Id.*, pp. 33-34.
[75] *Id.*, citing Contra Costa County, Responses to BAAQMD Comments of March 14, 2014, March 21, 2014, p. 1 of 5.
[76] *Id.*
[77] *Id.*
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With respect to the Hydrogen Plant, the County concedes an increase, but fails to include the increase in the RDEIR. The County estimates, again without any support in the record, that if hydrogen use increased by 5 mmscd, "[c]riteria pollutant emission increases would all be less than 1.7 tpd [tons/day], ROG would be 0.6 tpy [tons/year], and GHG emissions would be approximately 43,000 MT/yr."[78] According to Dr. Fox and Dr. Pless, if NOx emissions increased 1.7 tons/year, the 10 tons/year significance threshold for NOx would be exceeded (when the offset credit error discussed above is corrected.)[79] Further, the resulting increase in GHG emissions is nearly big enough to offset the County's claimed Project decrease in GHG emissions of -43,603 MT/year.[80] The additional GHG increase from increased operation of the combustion sources in the Sulfur Recovery Unit, which were not disclosed by the County, would likely erase the claimed GHG reduction.[81] Thus, the County's statements are unconvincing. B11-16

The increase in emissions from operation of all existing sources to support the Project must be disclosed in a revised RDEIR and included in revised emission estimates.

VI. THE RDEIR FAILS TO IDENTIFY AND REDUCE THE PROJECT'S SIGNIFICANT GREENHOUSE GAS EMISSIONS IMPACTS

The RDEIR states that the Project would decrease GHG emissions by 43,603 metric tons per year ("MT/year").[82] The RDEIR assumes that increases in GHG emissions from the Project's new boiler (65,091 MT/year), additional natural gas combustion (592,792 MT/year), locomotive and other emissions (5,370 MT/year) and other miscellaneous sources (7,372 MT/year) are offset by removing 14,500 bbl/day of butane and propane from the fuel gas system and replacing it with natural gas, which emits less GHG (-708,858 MT/year).[83] B11-17

Dr. Fox and Dr. Pless explain that the RDEIR takes credit for reducing GHG emissions by removing propane and butane from the refinery fuel gas but fails to include the resulting increase in GHG (and other criteria pollutant) emissions when

[78] *Id.*, citing Contra Costa County, Responses to BAAQMD Comments of March 14, 2014, March 21, 2014, p. 1 of 5.
[79] *Id.*
[80] RDEIR, Table 4.5-3.
[81] Fox/Pless Comments, p. 33.
[82] RDEIR, Table 4.5-3.
[83] Fox/Pless Comments, p. 30.
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this propane and butane is used elsewhere.[84] The County's approach violates CEQA. If the Project is the root of GHG emissions, no matter where they are released, they must be accounted for when determining the Project's impacts. This is what CEQA calls "indirect" impacts.

The BAAQMD agrees. In a comment letter to the County regarding the Project, the District stated:

> The refinery currently extracts butane for commercial sale and expects to recover more butane and begin extracting propane as a result of implementing this project. Both are widely used as transportation fuels, for space heating, and a variety of other processes that involve combustion. ***An analysis that demonstrates whether GHG emissions will increase or decrease that also considers the potential uses of commercial products is recommended.*** This may ***include estimating the percentage of emissions from butane used for combustion or other manufacturing*** based on existing commercial sales. An evaluation of possible uses of propane besides combustion in which to demonstrate an emissions reduction is also highly recommended.[85]

B11-17

The RDEIR ignores the BAAQMD's comment and, instead, argues, without any evidence, that propane could replace other higher emitting fuels, such as coal, home heating oil, fuel oil, diesel, kerosene, gasoline, and ethanol.[86] However, Dr. Fox and Dr. Pless explain that these fuels are not widely used for heating within California.[87] Further, the RDEIR contains no evidence that propane would be shipped outside of California.

The County further argues that it does not need to consider emissions from the use of the recovered butane and propane because Phillips 66 "cannot be certain how the propane and butane it would manufacture would ultimately be used; therefore, quantification of the associated net GHG emissions would be speculative

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[84] *Id.*
[85] *Id.*, pp. 30-31, citing BAAQMD Comment Letter, March 12, 2014, pp. 4- 5, Comment 6 (emphasis added).
[86] RDEIR, p. 4.5-13.
[87] Fox/Pless Comments, p. 31.
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and inclusion of such information in an EIR is precluded by CEQA Guidelines §15145."[88] Once again, the County is wrong.

Dr. Fox and Dr. Pless provide ample evidence that Phillips 66 knows how its propane and butane products are currently used.[89] Thus, it is easy to predict the future use of the same products, and the associated GHG emissions are far from speculative. Therefore, the County must estimate the Project's increase in GHG emissions from expanding the current uses of propane and butane. These are reasonably foreseeable indirect impacts of the Project and must be evaluated.[90] B11-17

Dr. Fox and Dr. Pless conservatively estimate the increase in GHG emissions from combusting only 1,000 bbl/day of propane in boilers within California. Their calculations indicate that the resulting increase in GHG emissions is 86,134 MT/year.[91] When this estimate is included in the total net annual Project operational GHG emissions, the Project results in a net increase in GHG emissions of 42,531 MT/year.[92] This exceeds the CEQA significance threshold of 10,000 MT/year and is a significant unmitigated impact.

VII. THE RDEIR FAILS TO IDENTIFY AND REDUCE THE PROJECT'S SIGNIFICANT HEALTH RISKS FROM THE PROJECT'S OPERATIONAL EMISSIONS

The RDEIR states that the Project will not result in significant health risk impacts from Project operational emissions. According to Dr. Fox and Dr. Pless, the RDEIR's conclusion is unsupported and based on substantially flawed estimates. In addition, according to Dr. Fox and Dr. Pless, the RDEIR's health risk assessment is methodologically flawed.[93] B11-18

First, the health risk assessment fails to identify the Point of Maximum Impact and only shows results for the Maximum Exposed Individual Receptor, residences near the Refinery, and the Maximum Exposed Individual Worker.

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[88] RDEIR, p. 4.5-13.
[89] Fox/Pless Comments, pp. 31-33.
[90] CEQA Guidelines §§15064(d)(3), 15358(a)(2).
[91] Fox/Pless Comments, p. 33.
[92] *Id.*
[93] *Id.*, p. 44.
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Second, the RDEIR's health risk assessment incorrectly relies on annual average toxic air contaminant ("TAC") emissions to determine health risks. Dr. Fox and Dr. Pless explain that acute health risks occur after exposure to TACs for short periods (from one to 24 hours). Thus, the RDEIR underestimates acute health risks, which must be based on short-term, not annual, average emissions.[94]

Third, the RDEIR states that the health risk assessment conservatively models 100 percent of locomotive emissions under load along 2.16 miles of the southern route (from the Refinery towards the Richmond Rail Yard) and 100 percent of locomotive emissions under load along 3.2 miles of the northern route (from the Refinery towards the Roseville Rail Yard).[95] Yet, the files provided by the County to support the RDEIR only include modeling along the southern route, not along the northern route. Thus, the health risk assessment underestimates locomotive emissions.

B11-18

Fourth, the health risk assessment completely fails to account for idling emissions from operation of the on-site switching locomotive. According to Dr. Fox and Dr. Pless, due to its location, the switching locomotive may contribute to substantial health risks at nearby receptors.[96]

Fifth, the RDEIR fails to acknowledge that the Project would result in increased idling of haul locomotives on-site or nearby. Thus, the health risk assessment (and the RDEIR's emissions estimates) fails to account for the associated emissions.[97]

Sixth, as discussed above, the RDEIR substantially underestimates the annual propane/butane exports and number of rail cars loaded on an annual average basis. Consequently, the RDEIR underestimates locomotive emissions. Therefore, the RDEIR's estimate of incremental cancer risks from the Project's increases in locomotive diesel particulate matter emissions is also underestimated. Dr. Fox and Dr. Pless calculated the Project's incremental cancer risks from the Project's increases in locomotive diesel particulate matter emissions to be 2.31 in one million, substantially more than the 1.7 in one million stated in the RDEIR.[98]

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[94] *Id.*
[95] RDEIR, Appx. B, p. B-156.
[96] Fox/Pless Comments, p. 44.
[97] *Id.*, p. 45.
[98] *Id.*
3105-015cv

Seventh, the RDEIR's health risk assessment fails to account for cancer risks associated with increased emissions of benzene due to a switch to Bakken crudes, which contain considerably higher amounts of benzene than the baseline crude slate.[99]

Eighth, for cancer risks from existing sources at the Rodeo Refinery, the RDEIR's cumulative health risk assessment relies on a facility-wide health risk assessment previously conducted for purposes of demonstrating compliance with AB2588, the Air Toxics "Hot Spots" Program. AB2588 does not address mobile source emissions or exempt sources. Thus, health risks associated with existing locomotive and other mobile source emissions at the Refinery are not accounted for.

Finally, the RDEIR's estimates of PM2.5 concentrations from Project emission increases in locomotive emissions suffer from the same problems as described above for criteria pollutant and diesel particulate emissions. Dr. Fox and Dr. Pless provide revised PM2.5 concentrations for these sources: 0.052 $\mu g/m^3$, an increase of 0.010 $\mu g/m^3$. When added to the RDEIR's estimate for PM2.5 concentrations from cumulative sources of 0.739 $\mu g/m^3$, this increase brings total PM2.5 concentrations to 0.749 $\mu g/m^3$ (when rounded up, meets the 0.8 $\mu g/m^3$ BAAQMD significance threshold). Further, the RDEIR's emission estimates for the Project do not account for fugitive dust PM2.5 emissions associated with locomotive and other mobile source travel. Finally, as discussed above, the RDEIR's health risk assessment for existing sources at the Rodeo Refinery does not account for PM2.5 emissions from mobile or exempt sources. According to Dr. Fox and Dr. Pless, when all of these issues are addressed, PM2.5 concentrations will exceed the BAAQMD's significance threshold for this pollutant by 0.8 $\mu g/m^3$.[100] The RDEIR does not identify this significant impact. B11-18

VIII. THE RDEIR FAILS TO IDENTIFY AND REDUCE THE PROJECT'S SIGNIFICANT CUMULATIVE IMPACTS

An EIR must disclose a Project's significant cumulative impacts.[101] A legally adequate cumulative impact analysis views a particular project in conjunction with other related past, present, and reasonably foreseeable future projects whose B11-19

[99] *Id.*
[100] *Id.*, p. 46.
[101] CEQA Guidelines § 15130(a).
3105-015cv

impacts might compound or interrelate with those of the project at hand. "Cumulative impacts can result from individually minor but collectively significant projects taking place over time."[102] A project has a significant cumulative effect if it has an impact that is individually limited but "cumulatively considerable."[103]

"Cumulatively considerable" is defined as "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."[104] Cumulative impact analyses are necessary because "environmental damage often occurs incrementally from a variety of small sources [that] appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact."[105] As discussed below, the RDEIR ignores CEQA's requirements and concludes that those Project's impacts that are not individually significant cannot be cumulatively significant. The RDEIR is patently wrong. B11-19

A cumulative impact analysis must first determine if baseline cumulative impacts (*i.e.*, impacts from all existing sources at the start of review) are significant. Then, it must determine whether a project's impacts taken alone are significant. Finally, it must determine whether a project's contribution to the baseline plus reasonably anticipated future projects is "cumulatively considerable" (*i.e.*, significant when considered in conjunction with other past, present and reasonably foreseeable projects).[106] The RDEIR skips one or more of these key steps, yet concludes that all cumulative impacts are insignificant.

A. The RDEIR's Cumulative Project List Incomplete

A cumulative impact analysis must be based on a complete list of all reasonably foreseeable potential projects. The RDEIR includes a list of "potential projects for cumulative effects evaluations."[107] This list is incomplete. Thus, the RDEIR's conclusions regarding cumulative impacts are invalid. B11-20

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[102] *Id.* § 15355(b).
[103] *Id.* §§ 15065(a)(3), 15130(a).
[104] *Id.* §15065(a)(3).
[105] *Communities for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal.App.4th 98, 114.
[106] CEQA Guidelines § 15064(h)(1).
[107] RDEIR, Table 5-1.
3105-015cv

The list fails to include the four projects that are inextricably tied to the Project (described above): the Marine Terminal Phase II and Phase III Throughput Increase Projects,[108] the Santa Maria Throughput Increase Project and the Santa Maria Rail Spur Project. The omission of the Marine Terminal Phase II and Phase III Throughput Increase Projects is especially egregious since they are located at the Rodeo Refinery.

In addition, there are other projects that will emit pollutants in California and share the same rail tracks with the Project trains that should be included in the cumulative project list. These include:

- Kinder Morgan Richmond Terminal, which is currently importing Bakken crude;
- SAV Patriot Terminal at McClellan, which is currently importing Bakken crude;
- Plains All American Crude Terminal in Taft, which is currently importing cost-advantage crude;
- Alon Crude Flexibility Project in Bakersfield, which was recently permitted;
- Targa Terminal at Port of Stockton; and
- Bakersfield Crude Terminal.[109]

B11-20

These projects must be included in the cumulative impact analysis because they will all emit significant amounts of criteria pollutants and greenhouse gases and will significantly increase rail traffic, increasing the probability of rail accidents that result in significant cumulative impacts.[110]

B. The RDEIR Fails to Identify Significant Cumulative Air Quality Impacts

B11-21

The RDEIR *does not analyze cumulative air quality impacts.* Instead, citing BAAQMD guidance, the RDEIR states:

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[108] The Marine Terminal Phase II and Phase III Throughput Increase Projects were included in the cumulative PM2.5 analysis (RDEIR, Table 4.1-13) and the health risk assessment (RDEIR, Table 4.1-14). However, they were not considered in any other cumulative impact analyses.
[109] Fox/Pless Comments, p. 36.
[110] *Id.*
3105-015cv

> if a project exceeds the identified significance threshold... its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing adverse cumulative air quality conditions (BAAQMD, 2009d). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in a less than significant regional air quality impact.[111]

This statement is inconsistent with the CEQA Guidelines. Under CEQA, "cumulatively considerable" means that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.[112] "Cumulative impacts can result from individually minor but collectively significant projects taking place over time."[113]

Further, the Project's emissions will be released both inside and outside the boundaries of the BAAQMD. The locomotives that transport the recovered propane and butane will travel outside of the BAAQMD, emitting pollutants in other air districts. The RDEIR completely fails to consider the project-level and cumulative impacts of these out-of-BAAQMD emissions. B11-21

Dr. Fox and Dr. Pless calculated the Project's cumulative annual and daily NOx and ROG emissions. Dr. Fox's and Dr. Pless' calculations are summarized in Tables 6 and 7 of their comments.[114] Dr. Fox and Dr. Pless show that the Project's cumulative daily and annual NOx and ROG impacts are significant when compared to the BAAQMD's significance thresholds (even when calculated using the RDEIR's underestimated emissions).[115] These cumulative emissions also exceed significance thresholds of air districts in the Sacramento and San Joaquin Air Basins, through which the trains would pass, as follows: (1) for both NOx and ROG in the Yolo-Solano Air Quality Management District (10 tons/year) and the Sacramento Metropolitan Air Quality Management District (65 lbs/day); (2) for NOx in the Placer County Air Pollution Control District (82 lbs/day); and (3) for ROG and NOx in the San Joaquin Valley Air Pollution Control District (10 tons/year).[116] Thus, the

[111] RDEIR, p. 4.1-30.
[112] CEQA Guidelines §15065(a)(3).
[113] *Id.* § 15355(b).
[114] Fox/Pless Comments, pp. 38.
[115] *Id.*
[116] *Id.*

cumulative impacts of the Project are significant not only within the BAAQMD, but within adjacent air districts. B11-21

C. The RDEIR Fails to Identify Significant Cumulative Greenhouse Gas Emissions

The RDEIR concludes that the Project's contribution to GHG emissions impacts would not be "cumulatively considerable" because the Project would result in a net decrease of 43,529 metric tons per year of carbon dioxide-equivalent ("CO_2e") emissions.[117] However, Dr. Fox and Dr. Pless show that when Project GHG emissions are correctly calculated, the Project results in both a significant project-level and cumulative GHG emissions impact.

First, as explained above, the RDEIR fails to include two existing sources of GHG emissions, which are both necessary for the Project – the Sulfur Recovery Units and the Air Liquide Hydrogen Plant. The County provides that the Hydrogen Plant could increase GHG emissions by 43,000 MT/year, but fails to provide an estimate for the Sulfur Recovery Units. According to Dr. Fox and Dr. Pless, "[t]hese two increases combined are likely enough to offset 100% of the claimed GHG emission reductions."[118] B11-22

Second, as explained above, the Project could not recover the proposed amount of propane and butane (14,500 bbl/day) from its baseline crude slate. An additional source of propane and butane is necessary for the Project. The four related projects that will supply the additional amounts of propane and butane must be evaluated as part of the Project and their GHG emissions must be included in both the project-level and cumulative impact analyses.

Third, Dr. Fox and Dr. Pless explain that Phillips 66's widely reported plans to replace heavy sour San Joaquin Valley crudes with propane- and butane-rich Bakken crudes at its Marine Terminal will increase the amount of propane and butane in the refinery fuel gas after the Project is built out.[119] The RDEIR's GHG emission calculations incorrectly include no increase in GHG emissions from the increase in propane and butane in its refinery fuel gas from refining Bakken crudes as replacements for other heavier crudes.

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[117] RDEIR, p. 5-9.
[118] Fox/Pless Comments, p. 39.
[119] *Id.*
3105-015cv

Finally, the RDEIR fails to include any increase in GHG emissions from the end use of propane and butane, which according to Dr. Fox and Dr. Pless can be reasonably anticipated and is likely known by Phillips 66.[120] For cumulative pollutants whose emissions contribute to a global problem like GHG, the emissions, regardless of where or how they occur, must be considered. Dr. Fox and Dr. Pless explain that, assuming as little as 1,000 bbl/day of propane is burned as a fuel (its most common use), the Project's increase in GHG emissions are significant.[121] Thus, for purposes of analyzing GHG emissions impacts, "it is not speculative to assume that the use of propane and butane would generate GHG emissions. It is an undisputed fact that the combustion of propane and butane generate GHG."[122]

Dr. Fox and Dr. Pless calculated the Project's cumulative GHG emissions increase. They provide the results in Table 8 of their comments. Dr. Fox and Dr. Pless conclude that when even a subset of the cumulative projects is considered, the GHG emissions increase 40,876 ton CO_2e/year. This increase exceeds the BAAQMD's significance threshold of 11,023 ton CO_2e/year by a factor of four.[123] Thus, the Project's cumulative GHG emissions are significant. Further, Dr. Fox's and Dr. Pless' calculation represents merely a lower bound because it does not include: (1) the increase in GHG emissions from increased amounts of propane and butane in the refinery fuel gas from refining Bakken crudes at the Refinery; (2) emissions from the downstream use of recovered propane and butane; (3) emissions from most of the cumulative projects outside of the respective air district boundaries; and (4) increases in GHG emissions from the many other proposed, recently permitted and operating crude-by-rail projects.[124] B11-22

D. The RDEIR Fails to Identify Significant Cumulative Hazards Impacts

The RDEIR concludes that "routine operations of the proposed Project would either not result in any impacts associated with hazards or hazardous materials or, would be less than significant...; thus routine operations would not contribute cumulatively to hazards-related impacts."[125] The RDEIR provides no further B11-23

[120] *Id.*
[121] *Id.*
[122] *Id.*
[123] *Id.*, pp. 39-40.
[124] *Id.*, p. 40.
[125] RDEIR, p. 5-9.

analysis of the Project's cumulative hazards impacts. The RDEIR is fundamentally flawed and fails to comply with CEQA, which requires the County to consider the Project's impacts in conjunction with other past, present and reasonably foreseeable projects.[126]

First, the analysis is incorrectly based on an increase in the number of tank car shipments of propane and butane from 5,840 per year (16 per day) to 8,760 per year (24 per day).[127] The RDEIR provides no support for the assumed baseline, which should be the average number of tank car shipments in the two to three years prior to the start of CEQA review. As discussed above, the three-year baseline average number of tank cars of butane is four per day. Thus, the RDEIR underestimates the increase in the risk of a tank car accident by a factor of about four.[128]

Second, the RDEIR's analysis is incorrectly based on the frequency of propane and butane releases.[129] However, Dr. Fox and Dr. Pless explain that many other similar substances are transported by rail.[130] Therefore, the County must base its analysis on all tank cars, rather than just a small fraction of them. B11-23

Third, the RDEIR's analysis is incorrectly based on historic 1990 to 2010 propane and butane rail traffic accident data. However, the same rail lines that will be used by the propane/butane trains will also be used by unit trains of 80 to 100 tank cars each, carrying crude oil to local refineries, all routed from the same Roseville Rail Yard.[131] These rail lines pass very close to residential and commercial areas in the vicinity of the Project, as well as elsewhere along the route. The RDEIR completely fails to analyze the cumulative accident impacts of the increase in propane/butane cars coupled with the post-2010 and future increase in crude rail cars.

Dr. Fox and Dr. Pless conclude that the Project's cumulative accident impacts are significant. Dr. Fox and Dr. Pless explain that small amounts of crude oil have long been transported by rail, but since 2009 rail transport of crude oil has

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[126] CEQA Guidelines § 15064(h)(1).
[127] RDEIR, Table 4.6-6.
[128] Fox/Pless Comments, p. 41.
[129] RDEIR, p. 4.6-27.
[130] Fox/Pless Comments, p. 41.
[131] RDEIR, p. 4.6-27.
3105-015cv

increased tremendously.[132] Nationwide, crude oil shipments increased from 10,800 car loads in 2009 to about 400,000 in 2013, which is significantly more than the 270,000 tank cars of propane and butane assumed in the RDEIR's analysis.[133] In Canada, shipments of crude oil by rail increased from 500 car loads in 2009 to 160,000 car loads in 2013.[134] Large increases in crude-by-rail shipments are expected to continue.[135] According to Dr. Fox, these crude trains will share the tracks with the Project's propane and butane trains, increasing the probability of accidents.[136] There are several recent examples of accidents involving the collision of unit trains carrying crude with trains carrying other commodities due to the significant increase in rail traffic.[137]

Fourth, the RDEIR's analysis is incorrectly based on the short segment of track from the Richmond Rail Yard to the Refinery.[138] However, Dr. Fox and Dr. Pless explain that trains could take multiple routes from the rail yards to the California border.[139] Many segments of California rail line pass through some of the state's most sensitive ecological areas and parallel the water supply for most of the state. These route segments also contain many high hazard areas for derailments. Emergency response teams have generally good coverage in the urban areas, but none are located near the high hazard areas in rural Northern California that the RDEIR fails to consider.[140]

B11-23

Fifth, the RDEIR fails to establish any threshold of significance for its hazard probability analysis and fails to cite any authority for concluding that accident impacts are not significant. Instead, the RDEIR compares the odds of death from an accident involving a rail car full of propane to other common causes of death, such as car accidents. This trivializes the risk to residents and businesses that are just a few feet from the rail tracks.

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[132] Fox/Pless Comments, p. 41.
[133] *Id.*, p. 42.
[134] *Id.*
[135] *Id.*
[136] *Id.*
[137] *Id.*
[138] *Id.*
[139] *Id.*
[140] *Id.*
3105-015cv

Finally, the RDEIR's probability of accident calculations is unsupported and misleading. The RDEIR reports a propane and butane release frequency of 1.04E-8 releases per mile travelled by tank car, based on 1990 to 2010 accident data.[141] The RDEIR also reports the annual probability of fatality associated with existing butane rail transport as 1.4E-6 and proposed butane/propane rail transport as 2.1E-6 (or one chance out of 500,000). This estimate is presented in a table with risks of other events, such as choking or drowning, to suggest the risks are *de minimis*.[142] The RDEIR's probability analyses are not supported.

Using the RDEIR's number of tanks cars and number of miles travelled, Dr. Fox and Dr. Pless calculated the resulting probability of propane/butane releases. Dr. Fox and Dr. Pless determined that when the Project is operational, an accidental propane/butane release could occur once every 17 years. When the correct baseline is used (four tank cars per day), Dr. Fox and Dr. Pless found that the risk of an accidental propane/butane release increases to once every 10 years.[143] According to Dr. Fox and Dr. Pless, these are very high accident probabilities that would increase the risk of accidents by a factor of four and constitute a significant impact.[144] This is a significant Project accident risk that was not identified or mitigated in the RDEIR. B11-23

The cumulative accident risk from other trains using the same tracks would be significantly greater than the Project risk. According to Dr. Fox and Dr. Pless, "[t]his cumulative accident risk puts communities along the rail lines at significant risk of property damage, serious injury, and death."[145] The RDEIR fails to identify this significant unmitigated impact.

[141] RDEIR, p. 4.6-27.
[142] *Id.*, Table 4.6-7.
[143] Fox/Pless Comments, p. 43.
[144] *Id.*
[145] *Id.*
3105-015cv

IX. CONCLUSION

We thank the County for this opportunity to comment on the RDEIR and urge the County to prepare and circulate a revised RDEIR which describes and analyzes the whole Project, identifies the Project's potentially significant impacts, and requires Phillips 66 to incorporate all feasible mitigation measures into the Project to reduce impacts to a less than significant level. B11-24

Sincerely,

Rachael E. Koss

REK:clv

Attachments

3105-015cv

ATTACHMENT 1

Comments

on

Recirculated Draft Environmental Impact Report

for the

Phillips 66
Propane Recovery Project

Rodeo, California

Prepared

for

Adams Broadwell Joseph & Cardozo

Prepared by

Phyllis Fox, Ph.D., PE
Consulting Engineer
745 White Pine Ave.
Rockledge, FL 32955

Petra Pless, D.Env.
Pless Environmental Consulting, Inc.
440 Nova Albion Way, Suite 2
San Rafael, CA 94903

December 5, 2014

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List of Exhibits

Exhibit 1:	Pless Comments on SMR Rail Spur Project RDEIR
Exhibit 2:	Fox Comments on SMR Rail Spur Project RDEIR
Exhibit 3:	Fox Comments on Valero Crude-by-Rail DEIR
Exhibit 4:	Fox Comments on SMR Rail Spur Project DEIR
Exhibit 5:	Fox Comments on Phillips 66 Propane Recovery Project EIR
Exhibit 6:	Pless Comments on SMR Rail Spur Project DEIR
Exhibit 7:	BAAQMD October 2014 Draft Engineering Evaluation for the Propane Recovery Project
Exhibit 8:	Phillips 66, 2014d, Attachment "Baseline Rail Annual.pdf."
Exhibit 9:	Phillips 66, 2014d, Attachment "Baseline Rail Daily.pdf"
Exhibit 10:	Baseline Butane Rail Car Loading

Exhibit A:	Application File 22904 including: Phillips 66, Application for Authority to Construct and Minor Modification to Major Facility Review Permit, Revision of Permit Condition 4336 Part 7, Phillips 66 San Francisco Refinery and Major Facility Review Permit, Phillips 66 – San Francisco Refinery, Facility #A0016, Condition 4336, pp. 497-498, August 1, 2014
Exhibit B:	Letter from Don Bristol, Phillips 66, to Brian Lusher, BAAQMD, Re: Revision of Permit Conditions 4336 Part 7, July 31, 2014, attaching: Phillips 66, Application for Authority to Construct and Minor Modification to Major Facility Review Permit, Revision of Permit Condition 4336 Part 7, Phillips 66 San Francisco Refinery, Facility A0016, undated
Exhibit C:	File: Application No. 25199 CEQA Docs 6-14 to 11-14.pdf
Exhibit D:	Email from Lashun Cross, Contra Costa County Department of Conservation, to Rachael Koss, Adams, Broadwell, Joseph & Cardozo Re: Marine Terminal Appendix C, December 4, 2014
Exhibit E:	Application File 25275: Banking Application for Heater B-401
Exhibit F:	BAAQMD Comment Letter, March 12, 2014

I. INTRODUCTION

The Phillips 66 Rodeo Refinery is proposing to add facilities to recover 14,500 barrels per day ("bbl/day") of propane and butane from the refinery fuel gas ("RFG") (collectively known as "liquefied natural gas" or "LNG") to export for sale. This would involve modifying some existing equipment and adding new equipment, including a hydrotreater, fractionation columns to recover propane and butane (Project), a new steam boiler, six propane storage vessels, a new loading rack and two new rail spurs. This RDEIR modifies the Draft Environmental Impact Report for a similar Project ("DEIR") issued in June 2013[1]. The RDEIR provides substantially updated sections on air quality, biological resources, energy conservation, geology and soils, greenhouse gas emissions, hazards and hazardous materials, and hydrology and water quality.

The Phillips 66 Rodeo Refinery is proposing to recover propane and increased amounts of butane from its refinery fuel gas and hydrogen plant feed gas and then ship it by rail to customers. This involves adding a new hydrotreater, fractionation columns, propane storage tanks and treatment facilities, and two new rail spurs. (RDEIR, p. ES-7.)

B11-25

Our evaluation, presented below, indicates the RDEIR fails as an informational document under CEQA for failure to disclose baseline conditions, post-Project conditions, and to adequately support analyses. Further, the RDEIR fails to disclose the link between the Propane Recovery Project (1) and four other directly related projects: (2 and 3) the Rodeo Refinery Marine Terminal Offload Limit Revision Projects (Phase II and Phase III); (4) the Santa Maria Refinery Throughput Increase Project; and (5) the Santa Maria Refinery Rail Spur Project. The impacts of all five directly related projects should have been evaluated as a single project. The entire Project, including these four piecemealed projects, would result in significant unmitigated project and cumulative air quality, global warming, risk of upset and other impacts, either not disclosed, improperly analyzed, or not adequately mitigated in the RDEIR or any of the CEQA documents for the other projects.

Further, the RDEIR significantly underestimated criteria pollutant and greenhouse gas emissions. When the errors and omissions in the RDEIR's analyses are corrected, the Project results in significant and unmitigated project-level and

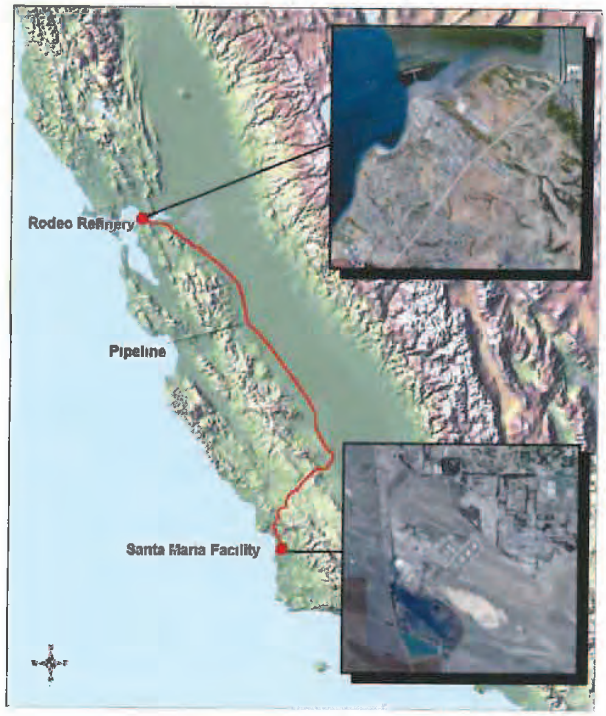
[1] Contra Costa County Department of Conservation and Development, Phillips 66 Propane Recovery Project, Draft Environmental Impact Report, SCH No. 2012072046, County File No. LP12-2073, June 2013; available at http://ca-contracostacounty2.civicplus.com/4729/Phillips-66-Propane-Recovery-Project.

cumulative impacts due to emissions of nitrogen oxides ("NOx") and reactive organic gases ("ROG"), both ozone precursors, and project-level and cumulative impacts due to greenhouse gas ("GHG") emissions. The cumulative health risk assessment is also plagued with errors and omissions, significantly underestimating impacts. The increase in ambient PM2.5 concentrations is a significant unmitigated cumulative adverse health impact not identified or mitigated in the RDEIR. Further, the increase in risk of property damage, injury, and death to communities along the rail line from accidents involving rail cars are individually and cumulatively significant.

II. THE PROJECT IS PIECEMEALED

The Phillips 66 San Francisco Refinery consists of two facilities linked by a 200-mile pipeline. The Santa Maria Refinery ("SMR") is located in Arroyo Grande in San Luis Obispo County, while the Rodeo Refinery is located in Rodeo in Contra Costa County in the San Francisco Bay Area.[2] Figure 1 shows the location of the two facilities comprising the San Francisco Refinery and the connecting pipeline.

Figure 1: Location of Santa Maria and Rodeo Refineries and Connecting Pipeline



(from: SMR Rail Spur Project RDEIR, Figure 2-2)

B11-25

[2] Phillips 66, Our Businesses, Refining, Western Pacific, San Francisco Refinery; http://www.phillips66.com/EN/about/our-businesses/refining/Pages/western-pacific.aspx .

The Santa Maria Refinery mainly processes heavy, high sulfur crude oil and sends semi-refined liquid products, *e.g.*, gas oil and pressure distillates[3], to the Rodeo Refinery for converting into finished products. (*See, e.g.*, RDEIR, p. 3-25.) In addition to the Project, there are other proposed projects at each end of this pipeline – three at the Rodeo end and two at the Santa Maria end – that are related and should have been evaluated as a single project under CEQA. (*See* Comment II.C.) The benefactor of these projects at each end of the pipeline is the Propane Recovery Project, which will receive increased amounts of propane and butane feedstock.

A. California Crude Supply Is in Decline

The current crude supply to both of these refineries from local California sources is in significant decline and is more expensive to deliver to the refineries than so-called "cost-advantaged" out-of-state crudes such as tar sands and Bakken crude. The decline at the Santa Maria Refinery is documented in comments filed on the SMR Rail Spur Project RDEIR by Dr. Pless[4], attached here as Exhibit 1. The decline at the Rodeo Refinery is documented in comments filed on this RDEIR by Greg Karras, separately submitted by Communities for a Better Environment ("CBE"). The decline is further evidenced by Phillips 66 itself in two applications it has submitted to the Bay Area Air Quality Management District ("BAAQMD") to replace declining pipeline imports with increased imports at the Rodeo Marine Terminal, jointly referred to in these comments as the "Marine Terminal Throughput Increase Project." The design basis amount of propane and butane proposed to be recovered, 14,500 barrels per day ("bbl/day"), could not be recovered in the baseline or after the Project is built without replacement crudes from these two projects on both ends of the connecting pipeline.

B11-25

The crudes that will replace these declining and costly California crudes – tar sands DilBits at Santa Maria and Bakken crudes at Rodeo – are rich in propane and

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[3] The permits to operate for the Santa Maria Refinery and various pump stations along the pipeline indicate that the materials sent from the Santa Maria Refinery to the Rodeo Refinery are gas oil and "pressure distillates." The "pressure distillates" are referred to as "naphtha" in the subject RDEIRs. However, there are different types of naphtha, depending upon the boiling range. Full range naphtha, which is presumably what "pressure distillate" is intended to capture, is the fraction of hydrocarbons boiling between 30°C and 200°C. It consists of a complex mixture of hydrocarbons generally having between 5 and 12 carbon atmos and comprises 15% to 30% of the crude oil by weight. Light naphtha is the fraction boiling between 30°C and 90 C and consists of molecules with 5 to 6 carbon atoms. *See, e.g.*, http://en.wikipedia.org/wiki/Naphtha.

[4] Petra Pless, Pless Environmental, Inc., Letter to Elizabeth Klebaner, Adams, Broadwell, Joseph & Cardozo, Re: Review of the Phillips 66 Company Rail Spur Extension and Crude Unloading Project Public Draft Environmental Impact Report and Vertical Coastal Access Project Assessment, January 27, 2014.

butane that would be recovered by the Project. The increased amounts of propane and butane available at Rodeo would increase the heat content of the refinery fuel gas if not recovered and, thus, could raise firing temperatures, increasing nitrogen oxide ("NOx") emissions from fired sources. Thus, the Propane Recovery Project is required to make beneficial use of increased amounts of propane and butane that will be arriving at a refinery that has historically processed much heavier crudes.

B11-25

B. Phillips 66 Is Planning to Change Its Crude Slate

Phillips 66 has announced in various investor presentations that it is planning to replace a significant portion of its baseline crude slate at all of its California refineries with cost-advantaged crudes delivered by ship and rail. These plans include refining tar sands crudes at the Santa Maria Refinery and Bakken crudes at the Rodeo Refinery, as summarized by Phillips 66 in a recent investor presentation, shown in Figure 2.

Figure 2: Phillips 66 crude sources and transportation routes

(from: Phillips 66, Barclays CEO Energy-Power Conference, September 3, 2014, Available at: http://investor.phillips66.com/files/doc_presentations/2014/BarclaysEnergyConf2014slides_ad.pdf)

In May of 2012, Clayton Reasor, Phillips 66 Senior Vice President for Strategy and Corporate Affairs, stated:

> In the refining side, the capacity won't grow, but we sure hope our returns and earnings will as we increase the amount of advantaged feedstocks that we run.

So you can see here that we run about 100,000 barrels a day of shale oils. We have the capacity to take that up to 460,000 barrels. We think it'll take us several years, two, three years, to be able to accomplish that as we build out new infrastructure to take trains or build new pipeline and terminal capacity…On the West Coast, we're looking at moving Bakken into the Pacific Northwest, and also improving our crude import infrastructure in our two California refineries.[5]

In August 2012, Greg Garland, Phillips 66 Chairman and CEO, stated:

But clearly with the California crude decline with the demand decline in California and the high operating cost that we see in California, a really challenged environment. *And so we are working to put advantaged crudes to the front of those refineries.* We are looking at our cost structure and how we can improve our cost structure to improve those assets.[6]

In December 2012, Greg Garland, CEO of Phillips 66, explained:

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West coast refining, challenged. It's – you go back to 2006 and it's the best assets in our portfolio from a return basis. But we do know since 2008 they've struggled. California is a challenging operating environment from a regulatory standpoint, we do not see that changing over the midterm. And so *our opportunity to improve performance in California is really around getting advantage crudes to the front end of the California refineries, it's rail,* it's ship, it's working on optimization of the cost structure and the export capabilities of those refineries. And we'll improve them to the extent that we can."[7]

These new crudes are essential to supply the propane and butane that will be recovered by the Propane Recovery Project. As explained in Dr. Fox's comments on the SMR Rail Spur Project RDEIR (Exhibit 2), the diluent present in the tar sands crudes is rich in propane and butane. As explained in Dr. Fox's comments on the Valero Crude-by-Rail Project DEIR (Exhibit 3), Bakken crudes imported at Rodeo's marine terminal are also rich in propane and butane.

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[5] Phillips 66, UBS Global Oil and Gas Conference, Clayton Reasor, Senior Vice President, Strategy and Corporate Affairs, May 24, 2012, *emphasis* added; available at: http://investor.phillips66.com/files/events/2012/Phillips%2066%20UBS%20Global%20Oil%20and%20Gas%20Conference.pdf.

[6] Thomson Reuters Streetevents, Edited Transcript, PSX - Q2 2012 Phillips 66 Earnings Conference Call Event Date/Time: August 1, 2012, *emphasis* added; available at: http://investor.phillips66.com/files/events/2012/Phillips%2066%20second-quarter%20earnings%202012.pdf.

[7] Thomson Reuters Streetevents, Edited Transcript, PSX - Phillips 66 First Annual Analyst Meeting, Event Date/Time: December 13, 2012; available at: http://investor.phillips66.com/files/events/2012/PSX_Investor_Transcript_12_13.pdf.

C. Closely Related Phillips 66 San Francisco Refinery Projects Are Improperly Piecemealed

There are currently five related projects at the San Francisco Refinery (comprising the Santa Maria and Rodeo Refineries) that have recently been permitted or that are currently in the process of being permitted that are inextricably linked and should have been evaluated as a single Project under CEQA. Three are located at the Rodeo end of the pipeline and two are located at the Santa Maria end of the pipeline. These five projects are:

1. Rodeo Refinery Propane Recovery Project;
2. Rodeo Refinery Marine Terminal Throughput Increase Project (Phase II);[8]
3. Rodeo Refinery Marine Terminal Throughput Increase Project (Phase III);[9]
4. Santa Maria Refinery Throughput Increase Project;[10] and
5. Santa Maria Refinery Rail Spur Project[11];

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Each of these five projects at the two refineries involves facilitating the import of increased amounts of cost-advantaged crudes, rich in propane and butanes. Dr. Fox previously commented on the relationship between the Santa Maria Refinery Throughput Increase Project, the Santa Maria Refinery Rail Spur Project, and the Rodeo Refinery Propane Recovery Project in comments on previous CEQA documents, included here as Exhibits 2, 4[12] and 5[13]. Dr. Pless also documented the relationship

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[8] ERM and BAAQMD, CEQA Initial Study, Marine Terminal Offload Limit Revision Project, Phillips 66 Refinery, Rodeo, California, BAAQMD Permit Application 22904, December 2012, included in RDEIR, Appx. B, pdf 181; Phillips 66, Application for Authority to Construct and Minor Modification to Major Facility Review Permit, Revision of Permit Condition 4336 Part 7, Phillips 66 San Francisco Refinery and BAAQMD Major Facility Review Permit, Phillips 66 – San Francisco Refinery, Facility #A0016, Condition 4336, pp. 497-498, August 1, 2014 (both in Exhibit A).

[9] Letter from Don Bristol, Phillips 66, to Brian Lusher, BAAQMD, Re: Revision of Permit Conditions 4336 Part 7, July 31, 2014, Attaching: Phillips 66, Application for Authority to Construct and Minor Modification to Major Facility Review Permit, Revision of Permit Condition 4336 Part 7, Phillips 66 San Francisco Refinery, Facility A0016, undated. (*See* Exhibit B, p. 82 *et seq.*).

[10] San Luis Obispo County Air Pollution Control District, Phillips 66 Santa Maria Refinery Throughput Increase Project, Final Environmental Impact Report, SCH #20081010111, October 2012 ("SMR Throughput Increase FEIR"); http://slocleanair.org/phillips66feir.

[11] San Luis Obispo County, Environmental Notices, Santa Maria Refinery Rail Spur Project; http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/railproject.htm.

[12] Phyllis Fox, Comments on Environmental Impact Report for the Phillips 66 Rail Spur Extension Project, Santa Maria, California, Prepared for Sierra Club, San Francisco, January 27, 2014.

[13] Phyllis Fox, Comments on Environmental Impact Report for the Phillips 66 Propane Recovery Project, Prepared for Shute, Mihaly & Weinberger LLP on behalf of Rodeo Citizens Association, November 15, 2013.

between the SMR Throughput Increase and SMR Rail Spur Project in her comments on the DEIR and RDEIR for the SMR Rail Spur Project, included here as Exhibits 6[14] and 3.

The Rodeo Marine Terminal Throughput Increase Projects (Phases II and III), which themselves are being piecemealed, are essential to carry out the Propane Recovery Project, as they allows the Rodeo Refinery to import Bakken crudes by marine vessel. Bakken crudes contain high concentrations of propane and butanes, which would be recovered by the Propane Recovery Project.

The Marine Terminal Throughput Increase Projects consist of two separate permitting actions, close in time, to replace pipeline-imported heavy California crudes with marine imports. The first application for an increase in marine terminal throughput, BAAQMD Application 22904[15], referred to in the RDEIR as "Marine Terminal Phase II" (RDEIR, Tables 4.1-13 and 4.1-14), underwent CEQA review in December 2012 and is included in the Rodeo Refinery's current Title V permit, Condition 4336, Part 7. This revision increased permitted throughput of crude oil at the Marine Terminal from 30,623 bbl/day to 51,182 bbl/day on an annual average basis. This increase replaces roughly equivalent volumes of heavy California crude delivered by pipeline to Rodeo with light Bakken or similar waterborne crudes, consistent with Phillips 66 assertions in various investor presentations.[16] The BAAQMD's engineering evaluation for this project explains: "The reason why the refinery is asking for this increase is that less crude oil is available by pipeline."[17] Another reason is that "cost-advantaged" marine crudes cost less than heavy California pipeline crudes and contain large amounts of recoverable propane and butanes, which have a lucrative and expanding market. B11-25

The second Marine Terminal throughput revision (Phase III), requested on the heels of the first, in July 2013, seeks to increase the Marine Terminal off-loading limit again, from 51,182 bbl/day to 100,182 bbl/day on a 12-month rolling average basis.[18] This project is referred to as Marine Terminal Phase III in the RDEIR. (RDEIR, Tables

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[14] Petra Pless, Pless Environmental, Inc., Letter to Laura Horton, Adams, Broadwell, Joseph & Cardozo, Re: Review of the Phillips 66 Company Rail Spur Extension and Crude Unloading Project Revised Public Draft Environmental Impact Report and Vertical Coastal Access Project Assessment, November 23, 2014.

[15] BAAQMD, Final Engineering Evaluation, Site A0016/Plant 21359, undated. (In Exhibit A.)

[16] RDEIR, Appx. B, pdf 181; Phillips 66, Application for Authority to Construct and Minor Modification to Major Facility Review Permit, Revision of Permit Condition 4336 Part 7, Phillips 66 San Francisco Refinery Major Facility Review Permit, Phillips 66 – San Francisco Refinery, Facility #A0016, Condition 4336, pp. 497-498, August 1, 2014. (Both in Exhibit A.)

[17] BAAQMD, Final Engineering Evaluation, Phillips 66, San Francisco Refinery, Application #22904 – Site A0016/Plant 21359. (In Exhibit A.)

[18] Exhibit B, p. 82 *et seq.*

4.1-13 and 4.1-14). This project would allow the Rodeo Refinery to import up to 77% of its crude capacity of 130,000 bbl/day by marine vessel, facilitating the import of Bakken crude from facilities such as the rail-to-marine terminal in Clatskanie, Oregon.[19] This second revision apparently has not yet undergone CEQA review or been permitted. These two clearly related projects that seek to replace declining pipeline supplies of expensive heavy California crudes with marine delivery of light, cost-advantaged crude, are referred to in these comments as the "Marine Terminal Throughput Increase Projects."

In lock step with these various projects, Phillips 66 has increased the proposed amount of propane and butane to be recovered. In the DEIR for this Project, Phillips 66 proposes to recover 13,500 bbl/day of propane and butane. (DEIR, Table 3-2.) In the RDEIR, this target was increased to 14,500 bbl/day (RDEIR, Table 3-2.) Finally, in the BAAQMD's October 2014 Draft Engineering Evaluation for the Propane Recovery Project[20] (Exhibit 7), a permit limit of 17,400 bbl/day of propane and/or butane is proposed. These evolving targets indicate significantly more propane and butane than measured in the single August 2011 sample (taken after the three-year baseline period). B11-25

D. Claimed Vapor Pressure Constraints Are Invalid

The SMR Rail Spur Project and Rodeo Refinery Propane Recovery RDEIRs both raise a new issue that seeks to demonstrate that these two projects are not related. The SMR Rail Spur Project RDEIR, p. 2-31, asserts without mentioning the Rodeo Propane Recovery Project, and without any supporting evidence:

> Prior to pipeline shipment to the Rodeo Refinery the naphtha and gas oils are stored in tanks located at the SMR. These storage tanks have vapor pressure limits are required by the San Luis Obispo County Air Pollution Control District (SLOAPCD) permit, which limits the vapor pressure to 11 pisa [sic]. Historically, and currently the SMR tanks operate at about 10 psia (pounds per square inch absolute). These pressure limits restrict the amount of propane/butane that can be contained in naphtha and gas oils that are shipped to the Rodeo Refinery. The majority of the propane/butane that is contained in the crude oils process at the SMR ends up in the refinery fuel gas. Figure 2-10 provides a simplified flow diagram of the SMR.

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[19] Rory Carroll, Exclusive: California Getting More Bakken Crude by Barge than Rail, Reuters, October 23, 2014. http://www.reuters.com/article/2014/10/23/us-california-bakken-barge-idUSKCN0IC17L20141023. See also: Eric de Place, The Northwest's Pipeline on Rails, May 2014, http://earthministry.org/wp-content/uploads/2014/04/Crude-Oil-By-Rail_May_Update1.pdf.

[20] BAAQMD, Engineering Evaluation, Draft Evaluation, Phillips 66 Company – San Francisco Refinery, Plant No. 21359, Application No. 25199, October 2014.

The Rodeo Refinery Propane Recovery Project RDEIR includes a brief discussion of the Santa Maria Refinery. This discussion first asserts that "[t]he proposed Project [Propane Recovery] is independent of and would have no effect on SMF [Santa Maria Facility] operations." Propane RDEIR, p. 3-25. It goes on to make an argument, again unsupported, that is very similar to the one cited above from the SMR Rail Spur Project RDEIR (Propane RDEIR, pp. 3-25/26):

> The storage tanks located along the 200-mile pipeline between the two refineries have maximum vapor pressure limits imposed by the San Luis Obispo County and San Joaquin Valley Air Pollution Control Districts which constrain the amount of butane and propane that can be included in the semi-refined products. Increasing the amount of butane and propane in the semirefined products would increase the vapor pressure of the material. Historically and currently these storage tanks contain products which are at or near the maximum vapor pressure limits. Additional butane and/or propane would cause the products to exceed the vapor pressure limits of the storage tanks. Accordingly, no new butane and propane can be added to the semi-refined products sent from the Santa Maria Refinery to the Rodeo Refinery regardless of the types of crude oil that may be processed at the Santa Maria Refinery.

B11-25

These arguments attempt to demonstrate that there can be no link between these two projects as vapor pressure permit limits on tanks that store the gas oil and pressure distillate sent from Santa Maria to Rodeo would prohibit any increase in propane and butane as they historically and currently operate near their limits. These claims are incorrect as the assertions are wrong. There either are no vapor pressure limits on the subject tanks, or the materials stored in them have vapor pressures far below their permitted limits.

These arguments are rebutted in Dr. Fox's comments on the SMR Rail Spur Project RDEIR. (Exhibit 2) In sum, the claims made in both RDEIRs in an attempt to decouple the SMR Rail Spur Project and the Rodeo Refinery Propane Recovery Project based on vapor pressure limits have no merit. Some of the tanks have no vapor pressure limits at all, as vapors are recovered. All of the tanks operate far below their permitted vapor pressure limits. Further, the pipeline connecting the Santa Maria and Rodeo Refineries is operated to send semi-refined materials directly to Rodeo, without interim storage in pump station tanks along the pipeline. Even if semi-refined products had to be offloaded, their vapor pressures are far below permit limits. Thus, there is ample head room to increase the vapor pressure of semi-refined products shipped from the Santa Maria Refinery to the Rodeo Refinery.

E. Baseline Quantity of Butane and Propane Is Inadequate

The San Francisco Refinery has historically refined heavy California crudes that do not yield 14,500 bbl/day of recoverable propane and butane, in excess of refined

products. (*See, e.g.*, Exhibit 4 and RDEIR, Appx. E, pdf 156-165.) A change in baseline crude slate is required to achieve the Project's design basis over the life of the Project, particularly given the well documented decline in the current crude slate. The necessary change in crude slate will be facilitated by the related projects on either end of the connecting pipeline.

The RDEIR asserts that "the Project is designed to recover LPG, and the Project is sized based on the Refinery's existing RFG [refinery fuel gas] produced by the existing Rodeo Refinery crude feedstocks. No changes to the current crude feedstocks are necessary or planned as part of this Project to increase or otherwise alter the amount of LPG produced, nor any connection to transportation of crude by rail." (RDEIR, p. 3-31.) In support of this assertion, the RDEIR points to two pieces of evidence. Neither is persuasive and neither is based on a credible CEQA baseline analysis.

The 2011 Data

The RDEIR first points to a summary of data collected in August 2011. (RDEIR, Fig. 3-7.) These data are characterized as "[a]ctual sampling and measurements of propane and butane in the RFG at the Refinery taken in 2011…" (RDEIR, p. 3-33.) The supporting measurements are not provided. However, other information suggests the August 2011 data are not relevant. B11-25

First, some of the subject measurements (daily flow rate data and three analyses of the chemical composition of U233 Refinery Fuel Gas) were attached to Phillips 66's Application for an Authority to Construct ("ATC") to the BAAQMD for the Project[21], but were omitted from the copy of the ATC Application provided in Appendix B to the RDEIR. These measurements are summarized in Table 1, which shows that the actual data are inconsistent with Phillips 66's summary.

Table 1:
Comparison of August 2011 U233 fuel gas flow data as summarized in RDEIR Table 3-7 with actual fuel gas flow data reported to BAAQMD

	Phillips 66 Summary	BAAQMD August 2011		
		Minimum	Maximum	Average
Flow (MSCFD)	36,582	29,242	36,666	32,971

As shown in Table 1, actual August 2011 refinery fuel gas flow data, obtained from the continuous flowmeter and reported to the BAAQMD, shows that Phillips 66 used the **MAXIMUM** measured daily value to calculate the amount of butane and propane that could be recovered from U233 Refinery Fuel Gas. The fuel gas flow rate varies on a daily basis. In August 2011, for example, the so-called basis of the Project

[21] Submitted by CBE into the record in comments on the FEIR.

design and Phillips 66's "summary" month, ranged from 29,242 to 36,666 MSCFD. The draft permit limit for the Project is expressed as a consecutive twelve-month average. (Exhibit 7, p. 20.) Thus, the flow rate (and butane and propane concentrations) should be calculated on this same basis, not using the maximum day. The use of the maximum daily flow rate overstates the amount of recoverable propane and butane from stream U233 based on a twelve month average by at least 11% (36,682/32,971 = 1.11) based on the August 2011 data.

Second, the Phillips 66 summary is not consistent with the RDEIR's Project description. The summary is based on calculations for two refinery fuel gas systems – U-233 and A. (RDEIR, Fig. 3-5.) Each of these systems processes gas streams collected from a number of different refining processes (*e.g.*, U-200, U-215, and U-240). Some of these streams will be routed to the Propane Recovery Unit under the Project (RDEIR, Fig. 3-5), while others will not (*e.g.*, natural gas, U-240, D-301). (Compare RDEIR Figures 3-4 and 3-5.)

Phillips 66's "summary" only reports data for all streams lumped together, rather than for those from which propane and butane would be recovered. A major portion of the U-233 fuel gas, for example, is natural gas, which can contain significant amounts of propane and butane, 5% to 10% v/v. This propane and butane would not be recovered by the Project, but is included in Phillips 66's "summary" propane and butane available for recovery. It is impossible based on the record at hand to back out this contribution and figure out the actual recoverable amounts as the composition of the natural gas (and other sub-streams that would not be sent to "RFG Propane Recovery" (RDEIR, Fig. 3-5) are not in the record. B11-25

Third, Phillips 66 currently **ADDS** butane to the fuel gas to control specific gravity. (*See* RDEIR, Appx. E, pdf 205: Flare Minimization Plan, Attach. M, p. 1.) This butane is included in the "summary" data and clearly is not recoverable under the Project. Butane levels must be high enough to assure efficient combustion in heaters, boilers, turbines and other combustion sources. Thus, Phillips 66 cannot recover all of the butane it asserts is recoverable without compromising the performance of combustion units. As only "summary" data have been reported, the minimum amount of butane that must remain in the fuel gas cannot be ascertained and thus, the recoverable amount cannot be confirmed.

The 2013 Data

The RDEIR also points to a bar graph summary for data collected during calendar year 2013 and reported on an average monthly basis. (RDEIR, Fig. 3-8.) The RDEIR asserts that these data indicate an average of 13,970 bbl/day of propane and butane are present in the RFG. (RDEIR, p. 3-33.)

First, 2013 is not part of the baseline, which is typically a 2-to 3-year annual average prior to the start of CEQA review. (The Notice of Preparation for the DEIR was published on July 24, 2012.) The RDEIR used the period July 25, 2009 to July 24, 2012 to support baseline heater B-401 NOx emission reduction. (RDEIR, Table 4.3.) The RDEIR contains no evidence that 2013 operations represent baseline conditions. It is possible, for example, that the Refinery has been importing Bakken and DilBit tar sands crudes through its Marine Terminal. The Santa Maria RDEIR admits that the Santa Maria Refinery has received Canadian crude oil for about one year, specifically Kearl Lake dilbit[22] tar sands crude, which made up 2% to 7% of its crude slate. (SMR Rail Spur Project RDEIR, p. 5-3.)

Thus, Rodeo was receiving semi-refined products from this lighter DilBit crude from the Santa Maria Refinery in 2013. Further, it is very likely that Bakken crudes were being refined at Rodeo in 2013. Sources include rail or tanker truck from the Richmond Kinder Morgan Terminal and the Rodeo Marine Terminal from ports in the Pacific Northwest. The RDEIR has failed to disclose critical crude slate information essential to address the relevance of the 2013 data to the asserted baseline propane/butane recovery claims.

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Second, the supporting data for this "summary" are also missing from the record. It is unknown, for example, whether the gas streams included in the underlying calculations include only those proposed for recovery under this Project or certain others that would not be recovered. Further, it is unknown whether the monthly estimates are based on maximum values (which inflates recovery amounts), monthly averages based on daily sampling, or monthly grab samples. As the supporting data are missing, there is no basis for evaluating their accuracy or representativeness.

Third, the summary shows that in half of the months, the amount of butane and propane that can be recovered is less than the RDEIR's reported design rate of 14,500 bbl/day. (RDEIR, Figure 3-8.) The RDEIR's own reported 2013 annual average of 13,970 bbl/day is less than the claimed design rate of 14,500 bbl/day, and substantially less than the proposed daily permit limit of 17,400 bbl/day. (Exhibit 7, p. 20.)

In sum, we conclude there is no credible evidence supporting the assertion that during the baseline period, the Rodeo Refinery's refinery fuel gas contained sufficient propane and butane to supply the 14,500 bbl/day design basis of the Project. Further, we conclude that, given the well-established decline in the Refinery's current crude

[22] Dilbit is bitumen (derived from tar sands) mixed with a diluent so it can be transported by pipeline or rail. The diluent is usually a lighter hydrocarbon such as natural gas liquids or naphtha. Dilbit is also known as tar sands oil.

slate, imports facilitated by the Santa Maria Throughput Project, the Santa Maria Rail Spur Project, and the Rodeo Marine Terminal Throughput Increase Projects would be required to supply the Project over its lifetime.

III. PROJECT OPERATIONAL EMISSIONS ARE UNDERESTIMATED

The RDEIR estimates daily and annual Project operational emissions for NOx, sulfur dioxide ("SO_2"), particulate matter equal to or smaller than 10 and 2.5 micrometers ("PM10" and "PM2.5"), ROG, and GHG. (RDEIR, Tables 4.1-7 through 4.1-10 and 4.5-3.) The resulting emissions are compared to the BAAQMD's daily and/or annual CEQA significance thresholds for NOx, PM10, PM2.5, ROG, and GHGs. No significance threshold is proposed for SO_2 emissions and carbon monoxide ("CO") emissions are omitted from the RDEIR's analyses completely.

The emissions estimates in the RDEIR are unsupported and underestimated. First, baseline emissions are overestimated. Second, post-project emissions are underestimated. Third, NOx emission reductions from shutting down heater B-401 are claimed as a mitigation measure for the Project (RDEIR, p. 3-43), even though they were previously claimed to mitigate a prior project. Further, they are incorrectly used to reduce otherwise significant NOx emission increases. Fourth, the RDEIR only estimates criteria pollutant emissions within the boundary of the BAAQMD, rather than the entire state. Fifth, GHG emissions increases are underestimated and incomplete. When these errors in the emission calculations are corrected, revised daily and annual NOx and ROG and annual GHG emissions exceed the BAAQMD's CEQA significance thresholds. These are significant impacts on air quality that are not identified or mitigated in the RDEIR. B11-25

A. Emissions Estimating Methodology

The increase in emissions from a project is estimated as the sum of the difference between the potential to emit ("PTE") of project sources and average baseline emissions for each emission source, as follows:

Project Increase in Emissions = Project Potential to Emit – Baseline (Equation 1)

The potential to emit is based on proposed permit limits or the physical constraints of the equipment. Baseline emissions are the "actual" average emissions at the time CEQA review is started; for refineries a three-year average is typically assumed to account for year-to-year fluctuations. (RDEIR, p. 4.1-12.)

For new sources, such as the new LPG Recovery Unit Boiler, new fugitive components, and the new hydrotreater, the baseline is zero and the increase in

emissions is the permitted level or the potential to emit allowed by equipment design. However, for existing sources, the increase in emissions resulting from implementing the Project must be calculated relative to an existing baseline, or "actual" emissions as shown in Equation (1). Existing sources include locomotives, truck and commuter auto trips, and increased use of the steam power plant, as well as increases in other existing equipment that is omitted entirely from the RDEIR's analyses (*e.g.*, sulfur recovery unit). (RDEIR, Tables 4.1-7 through 4.1-10.)

The RDEIR fails as an informational document as it does not tabulate the baseline and future Refinery emissions after implementation of the Project for all existing emission sources, as previously specifically requested by the BAAQMD in its comments on the DEIR and FEIR.[23] Instead, the RDEIR bases its emission calculations on emissions increases and does not disclose the assumed baseline for post-project emissions. (*See, e.g.*, RDEIR, Tables 4.1-7 to 4.1-9 and Appx. B, pdf 45.[24]) However, this misses the point. The increases can only be determined by following the calculation in Equation (1). Our review of the record for the RDEIR indicates that this essential information is still missing. What's more, the RDEIR's emission increase calculations for existing sources are fundamentally flawed due to its failure to use proper baseline emissions and other errors. B11-25

In fact, the RDEIR does not include an emission increase calculation, *i.e.*, Project minus existing baseline, for any source, as is typically provided in CEQA documents. Rather, it merely reports annual (but not daily) baseline emissions for two existing sources (steam power plant and rail) in a separate table (RDEIR, Table 4.1-5), without disclosing the supporting data (*i.e.*, annual and daily average volume of butane shipped in barrels per year in the baseline period) or even the period of record. What's more, these baseline emissions are not used to estimate emission increases from existing sources per Equation (1). Rather, emissions increases are simply asserted in Tables 4.1-7 through 4.1-10 (criteria pollutants) and Table 4.5-3 (GHGs) without adequate supporting calculations and without relating them to either the reported baseline, or the Project design basis. While this might be acceptable for "new" sources, as the baseline is zero, it is not acceptable for existing sources whose operation would be affected by the Project. This dilemma is discussed in detail below for locomotive emissions. The

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[23] BAAQMD Comments on the Phillips 66 Propane Recovery Project, Draft and Final Environmental Impact Reports, March 12, 2014. (File: Application No. 25199 CEQA Docs 6-14 to 11-14.pdf, pdf 118, attached as Exhibit C.)

[24] *See* also Email from Lashun Cross, Contra Costa County Department of Conservation, to Rachael Koss, Adams, Broadwell, Joseph & Cardozo, Re: Marine Terminal Appendix C, December 4, 2014, attached as Exhibit D. ("The baseline is the number of cars shipped and may fluctuate but the increase will only be 12 rail cars per day annual average, no matter the baseline. The impact(s) from the Project is not dependent on what the baseline is but the increase.")

emission estimates for other existing emission sources suffer from similar errors, which should be corrected by the Applicant and included in a revised RDEIR.

B. Project Increases in Locomotive Emissions Are Underestimated

Emissions from locomotives depend on the weight of the load they carry, which is determined by the number of cars that are pulled and their contents. The total weight pulled (gross) is the sum of the weight of the rail car (tare) plus its contents (load). Thus, the **increase** in locomotive emissions depends on the increase in the number of rail cars that would export LPG (propane + butane) from the Refinery over the baseline exports of butane (assuming the same volume of product carried per car). The increase in the number of rail cars, in turn, depends on the increase in the amount of LPG that is recovered and exported after the Project is built, compared to the annual average in the baseline years (which are not disclosed). The RDEIR is missing this essential information and is full of contradictory and misleading assertions. (These are compiled in Attachment A to these comments.)

1. *Average Annual Baseline Locomotive Emissions*

The RDEIR presents average annual baseline emissions from locomotives in Table 4.1-5. Our review shows that these baseline emissions are substantially overestimated because they rely on an incorrect assumption regarding the number of rail cars and volume of LPG exported during the baseline years. (Exhibit 8: Phillips 66, 2014d, Attachment "Baseline Rail Annual.pdf.") While the RDEIR does not directly incorporate the incorrect baseline emission estimates to determine Project emission increases, these incorrect assumptions are implicitly incorporated into Project increase assumptions. (*See* Comment III.B.2.) The baseline emission estimates must be corrected in a revised RDEIR to provide adequate disclosure under CEQA (and used as a basis to determine Project increases in emissions).

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Specifically, the RDEIR's average annual baseline locomotive emissions are based on 221,212 tons/year of LPG exports and 8 rail cars per day. (RDEIR, Appx. B, pdf 6). These assumptions are contradicted by information about baseline exports of LPG in the record. The Applicant's February 2013 ATC application to the BAAQMD discloses: "In the summer, 8 to 12 railcars (up to 9,000 barrels) of butane are typically loaded on any given day. In the winter, 3 to 4 railcars (2,300 to 3,000 bbl) are loaded per month. **The average number of railcars loaded for the past three years is 4 rail cars per day.**" (RDEIR, Appx. B, pdf 21, emphasis added.) This annual average in the past three years (2009-2012) is the baseline. (The RDEIR, pp. 3-17, 3-36, and 4.6-8, cites the same numbers for summer and winter transports but omits the statement regarding the average annual number of rail cars exporting butane during the baseline period.)

Elsewhere, in produced documents not included or cited in the RDEIR, we discovered a table of monthly rail car loading for the period August 2009 to October 2014, captioned "Baseline Butane Rail Car Loading." (Exhibit 10). This tabulation show an average daily number of rail cars loaded of 4.4 for the period August 2009 to July 2012, described as the "original baseline period." This "original baseline period" is, in fact, the baseline period used in the RDEIR to estimate emission offsets for the shutdown of heater B-401. RDEIR, Table 4.1-4. This is a reasonable baseline period as it is the three years prior to publication of the Notice of Preparation. This tabulation also notes a new "proposed baseline period" of November 11, 2011 to October 2014, with 6.4 rail cars per day. This "proposed baseline period" is not the baseline as it includes 15 months after the publication of the NOP. Neither of these estimates were used to estimate locomotive emissions, but rather, an ever higher, unsupported number. Thus, it appears that the RDEIR has engaged in baseline shopping to minimize the increase in emissions

B11-25

The record does not contain average annual butane export volumes for the baseline period; however, these can be approximated based on the annual average baseline number of rail cars per day (4) and the rail car capacity of 700 to 750 barrels. (*See* RDEIR, Footnote 7, p. 3-17.) Thus, annual average baseline butane exports can be estimated at 1,058,500 bbl/year or 102,251 tons/year.[25] Based on this baseline LPG export and baseline annual average number of rail cars, revised baseline locomotive emissions can be calculated as summarized in Table 2 for NOx, PM10, PM2.5, and ROG.

[25] (4 rail cars/day)((700+750 bbl/rail car)/2))(365 days/year) = **1,058,500 bbl/year**; (1,058,500 bbl/year)(butane: 4.6 lb/gal)(42 gal/bbl)/(2000 lb/ton) = **102,251 tons/year**.

Table 2: RDEIR annual baseline locomotive emissions compared to revised annual baseline locomotive emissions (tons/year)

	NOx	PM10	PM2.5	ROG
RDEIR[a]				
Small Line Haul	1.78	0.04	0.04	0.09
Large Line Haul	6.33	0.18	0.18	0.35
Switch	0.24	0.01	0.01	0.01
Total Baseline	**8.35**	**0.23**	**0.23**	**0.45**
Revised				
Small Line Haul[b]	0.85	0.02	0.02	0.04
Large Line Haul[b]	3.02	0.09	0.09	0.17
Switch[c]	0.24	0.01	0.01	0.01
Total Baseline	**4.11**	**0.12**	**0.12**	**0.22**
Difference RDEIR - Revised	**-4.24**	**-0.11**	**-0.11**	**-0.23**

a RDEIR, Appx. B, pdf 6

b Calculated as: (RDEIR baseline emissions) × [(revised baseline LPG export: 102,251 tons/year) + (4 rail cars/day)(365 days/year)(tare weight rail car: 50.4 tons)] / [(RDEIR baseline LPG export: 221,212 tons/year) + (8 rail cars/year)(365 days/year) (tare weight rail car: 50.4 tons)]

c Switch locomotive emissions are not affected by the above discussion because they are based on the number of hours per day required to move rail cars on site, assumed at by the RDEIR at 1 hour per day

As shown, due to its incorrect assumptions, the RDEIR overestimates annual average baseline locomotive emissions by a factor of about two. B11-25

2. *Project Increases in Annual Average Locomotive Emissions*

The RDEIR estimates the annual increase in locomotive emissions from the Project based on an increase in LPG exports of 276,599 tons/year (3,000,317 bbl/year[26]) and an increase in the number of rail cars of 12 per day on an annual average basis. (RDEIR, Appx. B, pdf 75.) Our review of the record indicates that the Project permits a far greater increase in LPG exports over the baseline, up to 390,332 tons/year or 4,234,000 bbl/year (calculations below), which results in an annual average increase of the number of rail cars of about 16 per day, 4 more than assumed by the RDEIR. Further, the RDEIR assumes the switch locomotive would operate on site for the same amount of time per day as for the baseline, 1 hour (RDEIR, Appx. B, pdf 6 and 75), even though the number of rail cars that need to be moved by the switch locomotive to accommodate the increased LPG export will increase by a factor of four (16/4 rail cars per day on an annual average basis). Thus, the RDEIR substantially underestimates the increase in annual average locomotive emissions. We discuss these errors in more detail below and provide revised emission estimates in Table 3.

[26] (276,599 tons/year)/(average liquid density of butane and propane: 4.4 lb/gal)/ (42 gal/bbl) (2000 lb/ton) = **3,000,317 bbl/year.**

Rail unloading facilities are exempt from BAAQMD permit requirements pursuant to Rule 2-1-123.3.1 and currently do not have any permit limits on annual (or daily) loading volume or number of rail cars. (Exhibit 7: "The new two-sided railcar loading rack is also exempt from permitting per 2-1-123.3.1.") Therefore, the annual volume of LPG that could be recovered and exported is limited only by the existing and the new rail facility design capacity restrictions, tank capacity and limits, and the proposed daily and annual permit limits for the LPG unit of "17,400 bbl/day and/or 5,295,500 bbl in any consecutive 12-month period." (Exhibit 7: emission limit for S-521 LPG Recovery Unit.)

With respect to the design loading capacity, the RDEIR provides that the existing facility can load up to 16 rail cars and the new facility can load up to 8 rail cars per day (4 on each rail spur), for a combined maximum capacity of 24 rail cars per day and 8,760 rail cars per year. (RDEIR, pp. 3-37, 4.1-20, 4.5-12, 4.6-9, and Appx. B, pdf 22.) This combined annual capacity for rail car loading, 8,760 rail cars per year, by far exceeds the LPG export that could occur under the proposed permit limit for the LPG unit of about 7,300 rail cars/year ((5,295,000 bbl/year)/(725 bbl/rail car)) or 20 rail cars per day ((7,300 rail cars/year)/(365 days/year). Thus, annual LPG exports are restricted only by the permit limit for the LPG unit, *i.e.*, 5,295,000 bbl/year on a consecutive 12-month basis. Therefore, the Project increase in annual average LPG exports can be calculated at 4,234,000 bbl/year (permit limit: 5,295,000 bbl/year – baseline: 1,058,500 bbl/year) or 390,332 tons/year[27], requiring an additional 5,840 rail cars per year ((4,234,000 bbl/year)/(725 bbl/rail car)) and an additional 16 rail cars per day on an annual average basis ((5,840 rail cars/year)/(365 days/year)), 4 more than assumed by the RDEIR's emission calculations. As the RDEIR's calculations only assume 4 additional rail cars per day on an annual average basis, it substantially underestimates locomotive emissions due to both the weight of the additional LPG that could be exported from the Refinery (load) and the weight of the additional rail cars (tare). B11-25

With respect to operations of the switch locomotive to move rail cars on site, the RDEIR assumes for its Project increase emissions estimates that 1 switch locomotive would operate on site for 1 hour to move 1 train per day with an average train size of 30 cars supporting the export of 276,599 tons/year of LPG (RDEIR, Appx. B, pdf 75), the exact same assumptions it makes for the baseline export of 221,212 tons/year of LPG (RDEIR, Appx. B, pdf 6). We find the RDEIR's assumptions that no increase in switch locomotive operating time would be required to move the additional rail cars unconvincing. Further, the RDEIR relies on emission factors for the switch locomotive

[27] (4,234,000 bbl/year)(average liquid density of butane and propane: 4.4 lb/gal)(42 gal/bbl)/(2000 lb/ton) = **390,332 bbl/year**.

derived from a report published by the U.S. Environmental Protection Agency ("EPA"). These emission factors represent nationwide averages, not the actual switch locomotive on site at the Rodeo Refinery. Moreover, the RDEIR uses higher locomotive emission factors for its baseline estimates than for its estimate of Project locomotive emissions increases (compare RDEIR Appx B, pp. 6 and 75) even though presumably the switch locomotive on site would remain the same. Both emission estimates should be revised to reflect emission factors for the actual on-site switch locomotive based on the engine's Tier certification (or lack thereof). Finally, the RDEIR does not account for increased idling of haul locomotives on site or nearby. Thus, neither the RDEIR's emissions estimates nor the health risk assessments account for associated emissions.

We prepared revised annual emission estimates for the Project increase in LPG export and increased number of rail cars based on the above discussion. For switch locomotive emissions we adjusted revised Project emission estimates accounting for the same emission factors used for the baseline emission estimates for consistency. Our revised estimates for Project increase in locomotive emissions are summarized in Table 3.

Table 3: RDEIR annual Project increase in locomotive emissions compared to revised annual Project increase in locomotive emissions (tons/year)

	NOx	PM10	PM2.5	ROG
RDEIR[a]				
Small Line Haul	2.46	0.06	0.05	0.13
Large Line Haul	7.39	0.19	0.19	0.34
Switch	0.33	0.01	0.01	0.02
Total Project Increase	**10.18**	**0.26**	**0.25**	**0.49**
Revised				
Small Line Haul[b]	3.37	0.08	0.07	0.18
Large Line Haul[b]	10.12	0.26	0.26	0.47
Switch[c]	0.36	0.01	0.01	0.02
Total Project Increase	**13.85**	**0.35**	**0.34**	**0.67**
Difference Revised - RDEIR	**+3.67**	**+0.09**	**+0.09**	**+0.18**

a RDEIR, Appx. B, pdf 75

b Calculated as: (RDEIR Project emissions increase) × [(revised Project LPG export increase: 386,766 tons/year) + (16 rail cars/day)(365 days/year)(tare weight rail car: 50.4 tons)] / [(RDEIR Project LPG export increase: 276,599 tons/year) + (12 rail cars/year)(tare weight rail car: 50.4 tons)]

c Calculated as: (RDEIR emissions) × (RDEIR baseline emission factor) / (RDEIR Project increase emission factor)

As shown, annual Project increases in locomotive NOx emissions (13.9 tons/year) will be substantially higher (3.7 tons/year) than estimated by the RDEIR (10.2 tons/year), by far exceeding the BAAQMD significance threshold of 10 tons/year. These emission estimates are conservative because they do not account for additional idling on site or nearby.

B11-25

3. Project Increases in Daily Locomotive Emissions

For Project locomotive emissions increases on a daily basis, the RDEIR's assumptions are likewise incorrect, resulting in even more substantial underestimates. (The RDEIR does not provide baseline emission estimates on a daily basis.)

The RDEIR provides no support for the estimates of daily Project increase in locomotive emissions it presents in Tables 4.1-7 and 4.1-9 aside from referring to "ERM, 2012" which, according to the RDEIR's References section, is the "Environmental Resources Management (ERM), 2012. Rodeo Propane Recovery Project, Air Quality Supplement," which is partially contained in Appendix B. This document discloses:

> An estimated 12 additional tank cars per day on an annual average will be required to ship the propane and butane recovered by PRP [Propane Recovery Project], resulting in a total of 16 railcars when added to the baseline, on an annual average. On any given day, the maximum number of additional railcars could increase to 20, resulting in a total of 24 when added to the baseline. Emissions associated with increased locomotive engine load due to these additional tank cars on existing train trips were calculated within the BAAQMD for the purpose of estimating Project emissions increases."

(RDEIR, Appx. B, pdf 146.) The document further provides a summary table for criteria pollutant and precursor emissions from large line haul, small line haul, and switch locomotives (Table 5) and claims that "Attachment 1 presents the details of the railcar emissions estimates, as well as for other operational and construction components of the proposed project." However, Attachment 1 was not included in the RDEIR's Appendix B and, thus, the RDEIR's detailed assumptions are undisclosed and the RDEIR's emission estimates are not supported. From the above discussion, it is unclear how many additional rail cars and load the RDEIR assumed for its daily emissions estimates.

B11-25

Our review of the RDEIR's daily and annual emission estimates for locomotives (Tables 4.1-7 through 4.1-10 and Table 5 to the Air Quality Supplement) as well as daily baseline emission estimates we obtained from the County (Exhibit 9: Phillips 66, 2014d, Attachment "Baseline Rail Daily.pdf") indicates that the RDEIR calculated far fewer emissions for the Project increase in daily locomotive emissions than it assumed for the baseline. Specifically, it appears that the RDEIR assumed a Project increase of 8 additional rail cars per day over a baseline of 16 rail cars per day (determined as the maximum number of rail cars loaded during the baseline period). This assumption substantially underestimates the potential increase in daily LPG exports and the additional daily number of rail cars over the baseline and, thus, substantially underestimates daily Project increase in locomotive emissions.

To determine short-term impacts on air quality for purposes of determining the significance of Project emissions, daily emissions must be assessed as the maximum increase that could result from a project on any given day. Here, the RDEIR assesses the Project's potential increase in locomotive emissions based on an increase in additional rail cars (8) that could be loaded under the combined rail car facility design capacity (16+8 = 24) over the maximum rail car loading that occurred on some unspecified day in the past (16) as the baseline. As a result, the RDEIR's emission estimates for the baseline are considerably higher than those for the Project increase, as shown in Table 2. This approach obscures the significant impacts on air quality that will occur on most days throughout the year now that the Refinery will export LPG on a continuous basis rather than mostly in summer.

As discussed above, the Applicant's ATC application to the BAAQMD for the Project discloses: "In the winter, 3 to 4 railcars (2,300 to 3,000 bbl) are loaded **per month**." (RDEIR, Appx. B, pdf 21, emphasis added.) Thus, on most winter days during the baseline period **no rail cars were loaded** at the facility, *i.e.*, the baseline for those days is **zero**. Further, the RDEIR describes the capacity of the existing and new rail car facilities as follows: "The total new Propane and butane loading capacity following implementation of the proposed Project would be a maximum of 24 tank cars per day (16 existing + 8 new with the Project)." (RDEIR, p. 3-37.) Thus, a maximum daily increase of 24 additional rail cars per day could occur after implementation of the Project over a baseline of zero, 8 additional rail cars per day more than assumed by the RDEIR's emission estimates. As admitted by the RDEIR, only 8 to 12 railcars of butane are currently loaded on a typical summer day (RDEIR, pp. 3-17, 3-36, 4.6-8); thus, on most summer days, the Project could result in an additional 12 to 16 rail cars. Thus, to only assume a Project increase of only 8 additional rail cars per day substantially underestimates the potential increases in daily locomotive emissions that would affect air quality.

B11-25

We prepared revised daily emission estimates for the Project increase in LPG export and increased number of rail cars based on the above discussion for two scenarios: a) 24 additional rail cars per day (baseline zero rail cars/day), and b) 20 additional rail cars per day (baseline 4 rail cars/day), as summarized in Table 4 below. As for revised annual emissions estimates, for switch locomotive emissions we adjusted revised Project emission estimates to account for the same emission factors used for the baseline emission estimates for consistency.

Table 4: RDEIR baseline and daily Project increase in locomotive emissions compared to revised daily Project increase in locomotive emissions (lbs/day)

	NOx	PM10	PM2.5	ROG
RDEIR[a]				
Total Baseline[a]	**91.45**	**2.54**	**2.47**	**4.95**
Total Project Increase[b]	**79.0**	**2.0**	**1.9**	**3.8**
Revised (24 additional rail cars)				
Small Line Haul[c]	27.69	0.68	0.56	1.46
Large Line Haul[c]	83.18	2.14	2.14	3.83
Switch[d]	1.98	0.06	0.06	0.12
Total Project Increase	**112.85**	**2.87**	**2.76**	**5.41**
Difference Revised - RDEIR	**+33.8**	**+0.9**	**+0.9**	**+1.6**
Revised (20 additional rail cars)				
Small Line Haul[e]	23.07	0.56	0.47	1.22
Large Line Haul[e]	69.32	1.78	1.78	3.19
Switch[d]	1.98	0.06	0.06	0.12
Total Project Increase	**94.37**	**2.40**	**2.31**	**4.53**
Difference Revised - RDEIR	**+15.4**	**+0.4**	**+0.4**	**+0.7**

a Exhibit 9: Phillips 66, 2014d, Attachment "Baseline Rail Daily.pdf"

b RDEIR, Tables 4.1-9 and 4.1-9

c Calculated as: (Revised annual Project increase emissions from Table 3)((2000 lbs/ton)/(365 days/year)(24/16 rail cars/day)

d Calculated as: (Revised annual Project increase emissions from Table 3)(2000 lbs/ton)/(365 days/year)

B11-25

As shown, the RDEIR substantially underestimates daily Project increases in locomotive emissions because it does not account for the maximum daily increase that would occur on many days. Project increases of locomotive NOx emissions by themselves by far exceed the BAAQMD's significance threshold of 54 lbs/day. On days where 24 additional rail cars are loaded, locomotive emissions will tip total Project NOx emissions, as calculated by the RDEIR, over the BAAQMD's significance threshold for this pollutant of 54 lbs/day. These emission estimates are conservative as they assume far less than the maximum load for each rail car (~715 bbls/rail[28] car vs. 750 bbls/rail car) and also do not account for increased operations of the switch locomotive on site (or the potentially higher emission factors from this engine than assumed) or emissions outside of the BAAQMD.

[28] (386,776 tons/year)(16 cars/day)(365 days/year)(2000 lbs/ton)/(4.4 lbs/gal)/(42 gal/bbl) = **716.8 bbls/car.**

4. The RDEIR Excludes Locomotive Emissions Outside of the BAAQMD

The locomotives used to transport recovered propane and butane from the Refinery to market are the major source of NOx emissions (>70% of total Project emissions) and an important contributor to ROG emissions (8%). (RDEIR, Tables 4.1-7 to 4.1-9. These emissions were underestimated by counting only emissions released within the boundary of the BAAQMD, rather than the entire distance the locomotives will travel within the BAAQMD and elsewhere in California. CEQA covers at least all emissions released within the State and in some cases, emissions released outside of the State that impact in-State resources, such as GHG emissions. (RDEIR, Appx. B, pdf 147 and Attach. A-5.)

The total rail track length[29] within the BAAQMD was used to calculate locomotive criteria pollutant emissions in RDEIR Tables 4.1-7 through 4.1-10. This was estimated as 12 miles from the Refinery to the Richmond Yard (small line haul[30]) and 67 miles from the Richmond Yard to the BAAQMD boundary (large line haul[31]), based on 50% of the trains using the Union Pacific ("UP") route and 50% using the Burlington Northern Santa Fe ("BNSF") route. (RDEIR Appx. B, Attach. A-5, pdf 75; RDEIR, p. 4.1-21.) Thus, the criteria pollutant emission calculations exclude emissions outside of the BAAQMD.

B11-25

This significantly underestimates total criteria pollutant emissions within California. The GHG emissions, on the other hand, were based on the total track length from the Refinery to the California-Arizona border. The long haul emissions used to calculate GHG emissions were based on 659 miles from the Richmond Yard to the California-Arizona border, based on the same 50/50 assumption of Union Pacific/BNSF routes. (RDEIR, p. 4.5-12 and Appx. B, Attach. A-5, pdf 75.) Thus, 9.8 times more long haul criteria pollutant emissions (659/67 = 9.8) would be released in transit outside of the BAAQMD than accounted for in the RDEIR.

We revised the daily and annual locomotive line haul emissions for NOx and ROG using the total track length within California, but otherwise relying on all of the

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[29] Locomotive emissions were calculated as the sum of small long haul [from the Richmond Yard to the Refinery with empty cars and from the Refinery to the Richmond Yard (12 miles) with full cars] + [large long haul with full cars, from the Richmond Yard to BAAQMD boundary (67 miles)]. This calculations excludes emissions from delivering empty tank cars to the Richmond Yard.

[30] Small line haul locomotives use low power engines to haul short trains between the Refinery and the Richmond Rail Yard. Small line hauling was assumed from the Refinery to the Richmond Yard. (RDEIR, Appx. B, pdf 31.)

[31] Large line haul locomotives use high power engines to haul long trains over long distances. Large line hauling was assumed from the Richmond Rail Yard to the BAAQMD border. (RDEIR, Appx. B, pdf 31.)

RDEIR's assumptions (which themselves underestimate emissions, as discussed in Comments III.B.2 and III.B.3). The results of our calculations are shown in Table 5.

Table 5: Revised locomotive large line haul ROG and NOx emissions

	Daily (lbs/day)			Annual (tons/year)		
	RDEIR[a]	Revised[b]	Significance Threshold	RDEIR[a]	Revised[b]	Significance Threshold
NOx	76.03	**580**	54	9.84	**75**	10
ROG	3.63	27	54	0.47	3.5	10

Note: **bold** indicates a revised locomotive line haul emission rate that exceeds the significance threshold all by itself, without considering increases from any other sources.

a RDEIR, Appx. B, Air Quality Supplement, November 2012, pdf 148.

b From RDEIR, Appx. B, Air Quality Supplement, November 2012, pdf 148. Line haul emissions within California = small line haul from Richmond terminal to refinery + large line haul from California border to Richmond terminal. The large line haul emissions, which are based on 67 miles from the BAAQMD border to the Richmond Yard, are adjusted to account for the entire distance from the California-Arizona border to the refinery or 659 miles/67 miles. For NOx in lbs/day: 57.06(659/67) = **561.23 lbs/day**; for NOx in tons/year: 7.39(659/67) = **72.69 tons/year.** For ROG in lbs/day: 2.65(659/67) = **26.06 lbs/day;** for ROG in tons/year: 0.34(659/67) = **3.34 tons/year.** The total line haul emissions then become (the sum of small + large line haul emissions): For NOx in lbs/day: 18.97 + 561.23 = **580.2 lbs/day;** for NOx in tons/year: 2.46 + 72.69 = **75.15 tons/year.** For ROG in lbs/day: 0.97 + 26.06 = **27.03 lbs/day;** for ROG in tons/year: 0.13 + 3.34 = **3.47 tons/year.**

B11-25

As shown, locomotive emissions within California alone are sufficient to tip NOx emissions over the BAAQMD's daily and annual CEQA significance thresholds, even including the invalid heater B-401 NOx emission offsets discussed in Comment III.C. These revised large line haul emissions combined with all other claimed emission increases and decreases as reported in the RDEIR, Tables 4.1-7 through 4.1-10, exceed the BAAQMD significance thresholds for both daily and annual NOx and ROG emissions, as explained below.

The net increase in daily NOx emissions, including the revised large line haul emissions of 580 lbs/day (Statewide) and the invalid NOx offsets of 62.3 lbs/day, is 541 lbs/day.[32] These emissions exceed the BAAQMD's significance threshold for NOx of 54 lbs/day by a factor of ten. The exceedance would be even greater if the revised locomotive emissions in Table 4 were used as the basis of these calculations.

Similarly, the net increase in annual NOx emissions, including the revised large line haul emissions of 75 tons/year (Statewide) and the invalid NOx offsets, is 68 tons/year.[33] This exceeds the BAAQMD's annual significance threshold of

[32] Total revised daily NOx emissions: 20.4 + 18.97 + 561.23 + 2.98 - 62.3 + <0.1 = **541.38 lbs/day.**

[33] Total revised annual NOx emissions: 3.7 + 2.46 + 72.69 + 0.33 – 10.8 = **68.38 tons/year.**

10 tons/year by nearly a factor of seven. The exceedance would be even greater if the revised locomotive emissions in Table 3 were used as the basis of these calculations.

The RDEIR indicates the shutdown of Process Heater B-401 reduced daily NOx emissions by 244 lbs/day. (RDEIR, Table 4.1-4.) The RDEIR also indicates the shutdown of Process Heater B-401 reduced annual NOx emissions by 44 tons/year. (*Ibid.*) However, even assuming 100% of these shutdown emissions were available for the Project, they would not be adequate to offset the daily increases in large line haul NOx emissions when the full distance from the Richmond Yard to the Arizona-California Stateline is used to calculate locomotive emissions, as summarized in Table 5. Regardless, 100% of Process Heater B-401 NOx reductions are not available as some of them (33.16 tons/year and 303 lbs/day) were used to offset NOx emission increases of the Marine Terminal Offload Limit Project. (RDEIR, Appx. B, Marine Terminal Initial Study, Table 3.3-2.)

The increase in daily ROG emissions from all Project sources, including the revised large line haul locomotive emissions, is 70.5 lbs/day,[34] which exceeds the BAAQMD's daily significance threshold for ROG of 54 lbs/day by 30%. Similarly, the increase in annual ROG emissions from all Project sources, including the revised large locomotive line haul emissions, are 11.5 tons/year,[35] which exceeds the BAAQMD's annual significance threshold for ROG of 10 tons/year. Thus, daily and annual ROG emissions from the Project based on the Statewide travel distance of locomotives result in significant air quality impacts that were not disclosed in the RDEIR and are not mitigated.

B11-25

Even if emissions were based only on the track length within the BAAQMD, rather than the entire State, the Project would still exceed the NOx daily significance threshold if the actual UP track length going south out of the District (90 miles) was used in the calculations, rather than the average of the UP and BNSF track lengths (67 miles).

The distance to the eastern boundary of the District is 44 miles and to the southern boundary, 90 miles. The 67 miles used in the RDEIR's line haul emission calculations is the average of these two (90 + 44 / 2 = 67). (RDEIR, Appx. B, p. 377, 6/28/13 Phillips Response Letter, p. 12, Response to Comment #15.) However, nothing in the RDEIR would prevent 100% of the trains from using the UP track going south out of the District. The daily NOx emission increase, assuming the UP track length of 90 miles within the District, but otherwise using all of the RDEIR's assumptions,

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[34] Total revised daily ROG emissions: 18.1 + 25.1 + 0.97 + 26.06 + 0.18 + <0.1 = **70.51 lbs/day.**

[35] Total revised annual ROG emissions: 3.3 + 4.6 + 0.13 + 3.34 + 0.02 + <0.1 = **11.49 tons/year.**

including the invalid heater B-401emission offsets, would be 57 lbs/day, which exceeds the BAAQMD's significance threshold for NOx of 54 lbs/day.[36]

Basing criteria pollutant emissions on the total track length within California is not speculative and is consistent with other analyses in the RDEIR as well as other CEQA documents for similar projects. For Impact 4.3-3, transportation energy use, the RDEIR estimated the increase in fuel consumption to transport the increased propane and butane, assuming trains travel 659 miles from the California-Arizona border to the Richmond Yard and then 12 miles from the Richmond Yard to the Refinery. (RDEIR, pp. 4.3-9 and 4.3-10.) Similarly, greenhouse gas emissions from locomotives were estimated assuming trains travel from the California-Arizona border to the Richmond Yard (659 miles) and then 12 miles to the Refinery. (RDEIR, p. 4.5-12.) The RDEIR only restricted the locomotive travel distance to 67 miles within the boundary of the BAAQMD for criteria pollutant emissions. The increase in NOx and ROG emissions from the Project are both highly significant when the entire travel distance from the Refinery to the Stateline is used to estimate emissions, even when Measure APM-1 is deployed.

B11-25

Other recent CEQA documents involving train transport of petroleum products have included locomotive emissions for the entire distance travelled within California, from the Stateline to the Project site, including the Phillips 66 SMR Rail Spur Project RDEIR,[37] the Valero DEIR.[38]

C. Heater B-401 NOx Emission Reductions Are Invalid

The RDEIR proposes Measure APM-1 to offset otherwise significant daily and annual NOx emission increases (RDEIR, pp. 3-43, 4.1-22, and 4.1-23; Tables 4.1-7 through 4.1-10.):

> Phillips 66 shall use the remaining unused NOx emissions credits associated with the decommissioned B-401 process heater in Unit 240 to offset significant NOx

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[36] From RDEIR, Appx. B, Air Quality Supplement, November 2012, pdf 148: Line haul emissions within California = small line haul from Richmond terminal to refinery + large line haul from boundary of BAAQMD to Richmond terminal. Line haul emissions for NOx in lbs/day: 18.97 + 57.06 × (90/67) = **95.6 lbs/day.** The net increase = 20.4 + 95.6 + 2.98 - 62.3 = or **56.7 lbs/day** > 54 lbs/day.

[37] SMR Rail Spur Project RDEIR, Appx. B, p. B-9; available at http://www.slocounty.ca.gov/Assets/PL/Santa+Maria+Refinery+Rail+Project/Phillips+66+Company+Rail+Spur+Extension+Project+(Oct+2014)/Technical+Appendices/Appendix+B+-+Air+Emission+Calculations.pdf.

[38] City of Benicia, Valero Benicia Crude by Rail Project, Draft Environmental Impact Report, SCH #2013052074, June 2014, Appendix E.5, pdf 3; available at: http://www.ci.benicia.ca.us/index.asp?SEC={FDE9A332-542E-44C1-BBD0-A94C288675FD}.

> emissions related to the proposed Propane Recovery Project. Prior to operation of the Project, Phillips 66 shall provide documentation to the Department of Conservation and Development that documents that Phillips 66 has not applied for or used any additional NOx credits associated with the Unit B-401 process heater shutdown.

These reductions are invalid.

First, the shutdown of heater B-401 occurred in 2011, during the CEQA baseline period. Therefore, the reductions are part of the baseline and are not available to offset Project NOx increases. The increase in the RDEIR's estimate of both daily (99.2 lbs/day > 54 lbs/day) and annual NOx emissions (13.9 tons/year > 10 tons/year) exceed CEQA significance thresholds without Process Heater B-401 reductions and are, thus, significant unmitigated impacts of the Project.

Second, the subject heater supplied heat to Phillip 66's hydrogen plant. This hydrogen plant, unit S-464, was shut down as of October 12, 2011. However, the demand for hydrogen has not been reduced, but rather is now supplied from an off-site source. Thus, NOx emissions would increase elsewhere. Therefore, for purposes of CEQA, the shutdown of this heater does not mitigate the increase in NOx emissions from the Project. This shutdown just shifts the same emissions to a different source in the same air basin, the Air Liquide Hydrogen Plant (Site B7419), [39] which is adjacent to the Rodeo Refinery.[40] Regardless, the claimed annual and daily reductions are overstated, as discussed in the following comments.

B11-25

1. *Annual NOx Reductions*

The RDEIR's emission calculations presented in Table 4.1-8 use 10.8 tons/year of NOx reductions from the shutdown of heater B-401 to reduce annual Project NOx emissions from 13.9 tons/year to 3.1 tons/year. The RDEIR does not explain how it arrived at the figure of 10.8 tons/year of NOx reductions. Based on our review of the record, these claimed reductions are imaginary and do not exist.[41] Rather, they have been created by shifting baseline dates and constitute double-counting.

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[39] RDEIR, Appx. E, pdf 1658 et seq.

[40] *See*, e.g., CEQA Initial Study, Marine Terminal Offload Limit Revision Project, December 2012, p. 7; BAAQMD, Draft Engineering Evaluation, Phillips 66, Plant #21359, Application #25199, October 2014, p. 2.

[41] We found the following explanation in the County's March 21, 2014 draft response to the BAAQMD's March 12, 2014 comments, which confirms these offsets are not valid: "The DEIR (Table 4.3-4) baseline NOx emission rate was 44 tons/year using a 3-year period from 7/25/09 through 7/24/12. The Air Quality Supplement (AQ Supplement) baseline NOx emission rate was 52 tons/year using a 3-year period from 3/4/09 through 3/3/12. After offsetting the 33.2 tons/year NOx associated with another project, the emissions remaining were 10.8 tons/year in the DEIR and 18.8 tons/year in the AQ

The BAAQMD banking application for the shutdown of heater B-401 estimated 33.890 tons/year of "actual" (or "contemporaneous") NOx reductions and 24.566 tons/year of RACT-adjusted NOx emissions, based on the period December 21, 2010 to December 20, 2012. (Ap. 25275[42], Table 3.) This baseline period was selected based on an agreement between the Applicant and the BAAQMD. (Ap. 25275, p. 1. May 20, 2014, p. 1.)

Previously, the Negative Declaration for the Marine Terminal Project used 33.16 tons/year of "actual" reductions to offset the increase in NOx from marine vessels, using a baseline of 37.7 tons/year for the period March 4, 2009 to March 3, 2012. (Marine Terminal Negative Declaration, Table 3.3-2, Ap. 22904, p. 7, and Ap. 25275, Table 4.) This left only 4.54 tons/year of "actual" NOx reductions (37.7 – 33.16 = 4.54). However, if the subsequently agreed-upon baseline in the banking application were used, this would leave only 0.73 tons/year after offsetting the Marine Terminal Project. (33.89 – 33.16 = 0.73).

The BAAQMD's draft engineering evaluation for the Propane Recovery Project, which will be published after the RDEIR is certified, in the future, improperly uses the superseded baseline. (Exhibit 7, p. 16.) If the agreed-upon baseline is used, only 0.73 tons/year of NOx reductions would be available to offset the increase in NOx emissions from the Project. In this case, the increase in NOx emissions from the Project would be 13.17 tons/year (10.8 + 3.1 – 0.73 = 13.17), which exceeds the significance threshold of 10 tons/year and is thus a significant impact.

B11-25

However, the RDEIR asserts a new baseline, July 25, 2009 to July 24, 2014, which results in "actual" NOx reductions of 44 tons/year. (RDEIR, Table 4.1-4.) We were unable to confirm these calculations, which supported claimed NOx reductions, as the record does not contain the supporting data, daily firing rate in million British thermal units per hour ("MMBtu/hour") and NOx emissions in pounds per MMBTU ("lb/MMBtu), despite several requests. The RDEIR then subtracts the same 33.16 tons/year of actual reductions, previously used to offset increases from the Marine Terminal Project which are based on a different baseline (March 4, 2009 to March 3, 2012), from the new estimate of "actual" reductions (44 tons/year) to arrive at Project NOx reductions of 10.8 tons/year (44 – 33.16 = 10.8).

Supplement. Because the amount remaining in the AQ Supplement of 18.8 tons/year was greater than the increase from the project of 13.9 tons/year NOx, only 13.9 tons/year reduction was reported as being used to mitigate the increase."

[42] BAAQMD, Engineering Evaluation, Phillips 66 Company – San Francisco Refinery, Plant No. 21359, Banking Application No. 25275, April 17, 2014. (In Exhibit E.)

Measure APM-1 relies on "NOx emission credits," not "contemporaneous" or "actual" emission reductions. The emission banking application for the shutdown of Heater B-401 indicates that the BAAQMD only allowed 4.540 tons/year of "contemporaneous" emissions reductions for the Propane Recovery Project (Application No. 25199) and no "emission reduction credits", as the heater operated in violation of its NOx permit limit during the baseline period and the RACT-adjusted emissions are less than the emission increase from the Marine Terminal Project. (Ap. 25275, Tables 3 and 4.) Assuming 4.54 tons/year of annual reductions, the Project would increase NOx emissions by 9.36 tons/year using the RDEIR's faulty locomotive emissions in Table 4.1-8. However, using the revised estimate for increases in NOx emissions from locomotives (13.85 tons/year), as calculated above in Table 3, and assuming only 4.54 tons/year of annual reductions, results in a total Project annual operational NOx emissions increase of 13.1 tons/year.[43] This exceeds the BAAQMD's annual CEQA significance threshold of 10 tons/year and is a significant unmitigated air quality impact of the Project.

Alternatively, considered from the standpoint of emission reduction credits, the BAAQMD emission reduction credits allowed for heater B-401 shutdown are only 24.566 tons/year, which is less than the amount of "contemporaneous offsets" already relied on by the Marine Terminal Project (33.16 tons/year). Thus, no "emission reduction credits" are available for the Propane Recovery Project. Assuming no emission reduction credits after offsetting the Marine Terminal Project, the Propane Project would increase NOx emissions from 3.1 ton/year reported in the RDEIR, Table 4.1-8 to 13.9 tons/year (10.8 + 3.1 = 13.9). The unmitigated amount would be even higher if corrected for the underestimate in locomotive emissions, discussed in Comment III.B.2.

B11-25

The emission reduction credits are lower than "actual" reductions because offsets must be "RACT-adjusted" under BAAQMD Rule 2-2-201. Heater B-401 operated in violation of its NOx permit limit of 0.033 lb/MMBtu for many days in the baseline period. Thus, the BAAQMD adjusted the NOx emissions on days in which NOx emissions exceeded this limit by multiplying the actual daily firing rate in MMBtu/day by the limit of 0.033 lb/MMBtu NOx.

The baselines used in these various calculations also differed. The RDEIR's NOx reductions are based on the three-year period from July 25, 2009 to July 24, 2012 (RDEIR, Table 4.1-4), while the official offsets are based on the period December 21, 2009 to December 20, 2012, pursuant to an agreement between the BAAQMD and Phillips 66. (Ap. 25275, p. 1.) The majority of the difference in the offsets used in the

[43] Revised increase in NOx emissions (Table 4.1-8): 3.7 + 13.85 + <0.1 - 4.54 = **13.1 tons/year.**

RDEIR and to offset emission increases in the BAAQMD's analysis is due to out-of-compliance operation of the heater.

In sum, there are no unused NOx emission reduction credits from the shutdown of heater B-401 that can be used to offset Project NOx increases. They were fully used by the Marine Terminal Project. Even assuming "actual" or "contemporaneous" reductions, rather than "emission reduction credits" as stipulated in Measure APM-1, only 4.54 tons/year remain when the official offset baseline is used, instead of 10.8 tons/year. This results in a significant net increase in NOx emissions of 13.1 tons/year (adjusted for revised locomotive emissions from Table 3) compared to the BAAQMD's annual significance threshold of 10 tons/year.

The actual increase in annual NOx emissions is much greater than discussed in this comment as the RDEIR excluded locomotive emissions emitted outside of the BAAQMD and does not account for increased operations of the switch locomotives, amongst other errors, as discussed previously. The increase in annual NOx emissions when all of these errors are corrected greatly exceed the BAAQMD's significance threshold for NOx of 10 tons/year.

2. *Daily NOx Reductions*

The daily Project emission calculations in Table 4.1-7 use 62.3 lbs/day of NOx reductions from decommissioning of process heater B-401 to reduce daily Project NOx emission increases from 99.4 lbs/day to 37.1 lbs/day. (RDEIR, Table 4.1-7.) The RDEIR does not explain how it arrived at the figure of 62.3 lbs/day of NOx reductions from heater B-401 shutdown. B11-25

The RDEIR states it relied on NOx emissions during a 3-year average baseline from July 25, 2010 to July 24, 2012 to estimate NOx reductions. The 3-year average daily NOx emissions during this period are 244 lbs/day. (RDEIR, Table 4.1-4.) The RDEIR's calculation in Table 4.1-7 assumes that only 181.7 lbs/day were previously used. However, the Marine Terminal Project used 303 lbs/day of NOx emission reductions from the shutdown of this same heater to offset its NOx emission increases. Marine Terminal ND, Table 3.3-5. This value (303 lbs/day) is greater than the average reduction during the RDEIR's assumed baseline period or 244 lbs/day. Thus, there are no excess daily NOx reductions that can be used to offset Project emissions. Daily Project NOx emissions are 99.4 lbs/day, which exceeds the BAAQMD's CEQA significance threshold of 54 lbs/day. This is a significant unmitigated Project impact as there are no unused daily NOx emission reduction credits.

D. Greenhouse Gas Emissions Are Underestimated

The RDEIR estimated that the Project would decrease GHG emissions by 43,603 metric tons per year ("MT/year"). (RDEIR, Table 4.5-3.) The increases in GHG

emissions from a new boiler (65,091 MT/year), additional natural gas combustion (592,792 MT/year), locomotive and other emissions (5,370 MT/year) and other miscellaneous sources (7,372 MT/year) are assumed to be offset by removing 14,500 bbl/day of butane and propane from the fuel gas system and replacing it with natural gas, which emits less GHG (-708,858 MT/year).[44]

The RDEIR took credit for reducing GHG emissions by removing propane and butane from the refinery fuel gas but failed to include the resulting increase in GHG (and other criteria pollutant) emissions when this propane and butane is used elsewhere. This action just moves the location where the emissions will occur. As greenhouse gases are global pollutants, widely recognized as being cumulatively significant in the baseline, anywhere GHG emissions are released should be counted for determining the Project's impacts. The increase at the new location is a direct consequence of their removal at the Refinery. These reductions and increases are two sides of the same coin and depend directly upon one another. Thus, emissions from subsequent uses are indirect emissions of the Project and must be estimated.

B11-25

The BAAQMD, for example, commented:

> The refinery currently extracts butane for commercial sale and expects to recover more butane and begin extracting propane as a result of implementing this project. Both are widely used as transportation fuels, for space heating, and a variety of other processes that involve combustion. An analysis that demonstrates whether GHG emissions will increase or decrease that also considers the potential uses of commercial products is recommended. This may include estimating the percentage of emissions from butane used for combustion or other manufacturing based on existing commercial sales. An evaluation of possible uses of propane besides combustion in which to demonstrate an emissions reduction is also highly recommended.[45]

The RDEIR ignored the BAAQMD's comment and instead, argues that propane could replace other higher emitting fuels, such as coal, home heating oil, fuel oil, diesel, kerosene, gasoline, and ethanol, without presenting substantial evidence. (RDEIR, p. 4.5-13.) However, these fuels are not widely used for heating within California and the RDEIR contains no evidence that propane would be shipped outside of California. (RDEIR, pp. 4.1-22, 4.5-13, 4.1-14.) The RDEIR, for example, does not include GHG emissions increases from rail transport outside of California.

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[44] Supporting calculations in Excel Spreadsheet ESA 2004 for all sources except mobile source emissions, which are not supported in the record we reviewed.

[45] BAAQMD Comment Letter, March 12, 2014, pp. 4-5, Comment 6. (In Exhibit F.)

The RDEIR argues that it does not need to consider emissions from the use of the recovered butane and propane as Phillips 66 "cannot be certain how the propane and butane it would manufacture would ultimately be used; therefore, quantification of the associated net GHG emissions would be speculative and inclusion of such information in an EIR is precluded by CEQA Guidelines §15145." (RDEIR, p. 4.5-13.)

However, it is not believable that a major capital investment in new equipment and facilities, such as proposed here, would be made without purchase contracts in hand and customers identified. The design of the LPG facility, for example, targets a specific use, *e.g.*, sulfur removal equipment to cleanup LPG to user specifications. Phillips 66's responses to a BAAQMD question noted as follows[46]:

> LPG loaded into rail cars will meet specifications that are established by the customer. Generally, these will be commercial grade propane and butane specifications. These specifications typically requires less than 5 ppm H_2S.

Elsewhere, Phillips 66 notes it produces LPG to "meet specifications that are established by the customer." (RDEIR, Appx. E, pdf 393: 4/30/13 Phillips Response Letter, Response to Comment 2.) To produce a product to customer specifications, one must know the customer. Further, the RDEIR explains that the recovered propane is being treated using sodium hydroxide and potassium hydroxide pellets (RDEIR, p. 3-33, 4.1-20) to remove hydrogen sulfide (H_2S) and water to meet commercial-grade standards of less than 5 ppm H_2S. (6/28/13 Phillips Response Letter, p. 2.) Thus, Phillips 66 is anticipating a specific use(s) for the propane and butane. Commercial-grade propane is primarily used as a fuel.[47] Thus, the speculation argument has no merit. Phillips 66 knows how its LPG will be used. The anticipated use establishes the design basis and operation of the facility. Phillips 66 has simply failed to disclose the information, rendering the RDEIR deficient.

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Phillips 66 has a long history of recovering and selling butane and thus has an established market. The BAAQMD permitting file discloses that Phillips 66 currently sells butane from the Rodeo Refinery in California. (RDEIR, Appx. E, pdf 393: 4/30/13 Phillips Response Letter.) Thus, it is reasonable to assume that Phillips 66 would continue to sell into this market, which is known. The RDEIR states: "Currently, a portion of the butane produced at the Refinery is shipped via rail from the Rodeo Refinery to refineries or chemical plants where it is used as a chemical feedstock,

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[46] Letter from Don Bristol, Phillips 66, to Brian Lusher, BAAQMD, Re: Response to Incomplete Letter 3/1/13 Application #25199, April 30, 2013, Response to Comment #3, p. 2. See RDEIR, Appx. E, pdf 393.

[47] *See, e.g.*, Tesoro Safety Data Sheet, Propane - Commercial Grade, Available at: http://www.tsocorp.com/stellent/groups/corpcomm/documents/tsocorp_documents/msdspropane.pdf.

gasoline feedstock, or where it is blended into gasoline." (RDEIR, p. 3-18. *See* also RDEIR, p. 3-36.)

While we agree that these are common uses for butane and that they would generate less GHG emissions than burning it as fuel gas, this does not excuse the failure to estimate the resulting GHG emissions. If Phillips 66 knows how its products are currently used, as it apparently does, it should be required to estimate the resulting increase in GHG emissions from expanding these current uses of butane.

This argument is even less credible for propane, which is primarily used as a fuel. As to propane, the Project simply moves propane used as a fuel in refinery fuel gas to another combustion source outside of the Refinery. A recent Energy Information Agency ("EIA") report[48] notes that

> Propane consumption remains strongly seasonal. Propane is consumed in the United States primarily in residential and commercial buildings for water heating, cooking, and seasonally as a fuel for space heating, located in regions where natural gas supply is limited or unavailable. Propane stocks build in the summer and are drawn down in the winter to meet heating needs. Propane is also used seasonally at farms to keep livestock warm and to dry crops such as corn.

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The RDEIR suggests the propane could replace other fuels that emit more GHG than propane, such as coal, fuel oil and diesel. The RDEIR contains no evidence that any of these fuels are used for the stated purposes in California nor that the proposed propane would replace current uses. Further, it is not believable that large amounts of any of these fuels are used in residential and commercial building in California, especially coal. Thus, increases in criteria and GHG emissions from the use of increased amounts of propane as a fuel within California is a reasonably foreseeable and indirect impact caused by the Project and must be evaluated. (14 Cal Code Regs. §§15064(d)(3) and 15358(a)(2).)

There is nothing in the RDEIR that would prohibit Phillips 66 from selling 100% of the recovered propane for new uses as a fuel anywhere, including within California. Thus, unless the County imposes a condition requiring that 100% of the propane is sold for non-combustion, non-GHG emitting uses, the RDEIR must include criteria pollutant and GHG emissions from its use and mitigate the resulting impacts, which are significant.

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[48] EIA, Hydrocarbon Gas Liquids (HGL): Recent Market Trends and Issues, November 2014, p. 24; Available at: http://www.eia.gov/analysis/hgl/pdf/hgl.pdf.

We conservatively estimated the increase in GHG emissions from combusting only 1,000 bbl/day of propane in boilers within California. These calculations indicate that the resulting increase in GHG emissions is 86,134 MT/year.[49] Including this estimate in the total net annual Project operational GHG emissions (RDEIR, Table 4.5-3) results in a net increase in GHG emissions of 42,531 MT/year. This exceeds the CEQA significance threshold of 10,000 MT/year by a factor of more than four and is a significant and unmitigated air quality impact.

E. Other Omitted Emissions

The Project will increase the emissions from other existing sources required to support the Project. Some of these were previously identified in Dr. Fox's comments on the Propane Recovery EIR in Exhibit 5. Omitted existing emission sources were also identified in the BAAQMD's March 12, 2014 comments. These include:

- An additional 135 tons/year of sulfur will be recovered at the Sulfur Recovery unit, which includes several emission sources. This will increase emissions of ROG, NOx, CO, PM10, PM2.5, H_2S, ammonia, and sulfuric acid mist;
- The Air Liquid Hydrogen Plant will supply hydrogen to the new hydrotreater. This plant includes several sources of emissions including a hydrogen furnace, flare and cooling tower, which will emit additional ROG, NOx, CO, PM10, PM2.5, SO_2, SOx, and ammonia.

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In response to these comments, the County admits to increases from the Sulfur Recovery Unit, but asserts that they "will not be discernible post-project" and calls them "speculative", without any support.[50] Phillips 66 monitors and reports its emissions from this unit to the BAAQMD and, thus, can calculate the baseline emissions. It further knows the post-Project increase, which can be determined from equipment design. Thus, estimating increased emissions is not speculative. Without making the emission calculation, as set out in Equation (1), and providing the baseline and post-project emissions for the record, it is not possible to assert or affirm that emission increases will not be discernible. Small increases are important as Project emissions are close to significance thresholds.

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[49] The GHG emissions from combusting 1,000 bbl/day of propane are: (1,000 bbl/day)(42 gal/bbl)(91,420 Btu/gal)(10^{-6} MMBtu/Btu)(61.46 kg CO_2/MMBtu)(365 days/year)(10^{-3} MT/kg = **86,134 MT/year.** Higher heating value of propane = 91,420 Btu/gal. (http://www.afdc.energy.gov/fuels/fuel_comparison_chart.pdf). CO_2 emissions from burning propane (61.46 kg CO_2/MMBtu) from RDEIR, p. 4.5-11.

[50] Contra Costa County, Responses to BAAQMD Comments of March 14, 2014, March 21, 2014, p. 1 of 5.

As to the Hydrogen Plant, the County concedes an increase, but this increase did not end up in the RDEIR. The County estimated, again without any support in the record, that if hydrogen use increased by 5 mmscd, "[c]riteria pollutant emission increases would all be less than 1.7 tpd [tons/day], ROG would be 0.6 tpy [tons/year], and GHG emissions would be approximately 43,000 MT/yr."[51] Which criteria pollutant would increase by 1.7 tons/year? If NOx, this would be sufficient to push emissions over the 10 tons/year significance threshold for NOx when the offset credit error discussed in Comment III.C is corrected. The resulting increase in GHG emissions is nearly big enough to offset the claimed Project decrease in GHG emissions of -43,603 MT/year. (RDEIR, Table 4.5-3). The additional GHG increase from increased operation of the combustion sources in the Sulfur Recovery Unit, which were not disclosed by the County, would likely wipe out the claimed GHG reduction.

The increase in emissions from operation of existing sources (besides the steam boilers, which was disclosed) to support the Project should have been reported in the RDEIR and included in emission estimates.

IV. CUMULATIVE IMPACTS ANALYSIS IS DEFICIENT AND CUMULATIVE IMPACTS ARE SIGNIFICANT

B11-25

An EIR must disclose a Project's significant cumulative impacts. (CEQA Guidelines § 15130(a).) A legally adequate cumulative impact analysis views a particular project over time and in conjunction with other related past, present, and reasonably foreseeable future projects whose impacts might compound or interrelate with those of the project at hand. "Cumulative impacts can result from individually minor but collectively significant projects taking place over time." (CEQA Guidelines 15355(b).) A project has a significant cumulative effect if it has an impact that is individually limited but "cumulatively considerable." (*Id.* §§ 15065(a)(3), 15130(a).)

"Cumulatively considerable" is defined as meaning that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (*Id.* §15065(a)(3).) Cumulative impact analyses are necessary because "environmental damage often occurs incrementally from a variety of small sources [that] appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact." (*Communities for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal.App.4th 98, 114.) As discussed below, the RDEIR ignores these clear requirements and concludes that Project

[51] *Ibid.*

impacts that are not individually significant cannot thus be cumulatively significant, consigning the environment to "death by a thousand cuts."

A cumulative impact analysis must first determine if baseline cumulative impacts, *i.e.*, impacts from all existing sources at the start of review, are significant. Next, it must determine whether a project's impacts taken alone are significant. Finally, it must determine whether a project's contribution to the baseline plus reasonably anticipated future projects is "cumulatively considerable" (*i.e.*, significant when considered in conjunction with other past, present and reasonably foreseeable projects). (CEQA Guidelines § 15064(h)(1).) The RDEIR concluded all cumulative impacts were insignificant, skipping one or more of these essential steps.

A. Cumulative Project List Is Incomplete

A cumulative impact analysis must be based on a complete list of all reasonably foreseeable potential projects. The RDEIR includes a list of "potential projects for cumulative effects evaluations." (RDEIR, Table 5-1.) This list is incomplete, invalidating the RDEIR's conclusions as to cumulative impacts.

First, as discussed in Comment II.C, the Propane Recovery Project is piecemealed. It is just one of five related projects that will facilitate the refining of cost-advantaged crudes at Phillips 66 refineries at Santa Maria and Rodeo. These five projects, discussed in our prior comments (incorporated here by reference in Exhibits 1 and 3 through 5) and further discussed in Comment II.C are: B11-25

1. Rodeo Propane Recovery Project;
2. Rodeo Marine Terminal Throughput Increase Project (Phase II);
3. Rodeo Marine Terminal Throughput Increase Project (Phase III);
4. Santa Maria Throughput Increase Project; and
5. Santa Maria Rail Spur Project.

The cumulative project list in the RDEIR, Table 5-1, does not include the two Santa Maria projects nor the Rodeo Marine Terminal Throughput Increase Projects. The omission of the latter projects is especially egregious as they occur at the same exact location as the Propane Recovery Project and in fact facilitate it by allowing the import of cost-advantaged, propane- and butane-rich crudes. The Rodeo Marine Terminal Throughput Increase Projects were included in the cumulative PM2.5 analysis (RDEIR, Table 4.1-13) and health risk assessment (RDEIR, Table 4.1-14). However, they were not considered in any other cumulative analyses, which is a major omission, as demonstrated below in the following comments.

In addition, there are other projects that will emit pollutants in California and share the same rail tracks with the Propane Recovery Project trains that should have been included in the cumulative project list. These include[52]:

1. Kinder Morgan Richmond Terminal, which is currently importing Bakken crude;
2. SAV Patriot Terminal at McClellan, which is currently importing Bakken crude;
3. Plains All American Crude Terminal in Taft, which is currently importing cost-advantage crude;
4. Alon Crude Flexibility Project in Bakersfield, which was recently permitted;
5. Targa Terminal at Port of Stockton; and
6. Bakersfield Crude Terminal.[53]

These other projects are important to consider as they will all emit significant amounts of criteria pollutants and greenhouse gases and will significantly increase rail traffic, increasing the probability of rail accidents that result in significant cumulative impacts. B11-25

B. Cumulative Air Quality Impacts Are Significant

The RDEIR does not evaluate cumulative air quality impacts, arguing instead that the increase in emissions is less than the BAAQMD's significance thresholds and, thus, cumulative impacts are *per se* not significant. The RDEIR asserts that according to BAAQMD, "if a project exceeds the identified significance threshold… its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing adverse cumulative air quality conditions (BAAQMD, 2009d). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in a less than significant regional air quality impact." (RDEIR, p. 4.1-30.)

The cited BAAQMD guidance[54] does not supersede the CEQA Guidelines. "Cumulatively considerable" under CEQA is defined as meaning that "the incremental

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[52] David Hackett, Stillwater Associates LLC, RRT Quarterly Meeting, California Petroleum & Background, Signal Hill, CA, Prepared for California Energy Commission, August 13, 2014; available at: www.rrt9.org/go/doc/2763/2228946/.

[53] HDR, Authority to Construct Application Package, Bakersfield Crude Terminal, LLC, Taft, CA, May 2012; Authority to Construct, Bakersfield Crude Terminal, LLC, September 23, 2014. This project proposes to offload up to two unit trains (168,000 bbl) per day of cost-advantaged crude.

effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (*Id.* §15065(a)(3).) The BAAQMD's significance thresholds do not consider the effects of probable future projects.

Further, all of the Project's emissions will not be released within the boundaries of the BAAQMD. The locomotives that transport the recovered propane and butane will travel outside of the BAAQMD, emitting pollutants in other air districts. The RDEIR did not consider the project or cumulative impacts of these out-of-BAAQMD emissions, which are estimated in Comment III.B.4.

The cumulative annual and daily NOx and ROG air quality impacts of the Project and three nearby proposed projects are summarized in Tables 6 and 7. These cumulative emission calculations are based on uncorrected Project emissions as reported in RDEIR Tables 4.1-7 through 4.1-10. These are underestimated as explained in Comments III.B.2 and III.B.4 and have not been corrected for these errors, including the exclusion of train emissions outside of the BAAQMD. We prepared revised emission estimates (Tables 6 and 7), which show that cumulative daily and annual NOx and ROG impacts are significant when compared to the BAAQMD's significance thresholds, even when estimated using the RDEIR's underestimated emissions. B11-25

Table 6: Cumulative Increase in Annual NOx and ROG Emissions

Project	NOx (tons/year)	ROG (tons/year)	Reference
Marine Terminal II	33	2	Ap. 22904, p. 5
Marine Terminal III	79	5	Ap. 22904[a]
Valero Crude-by-Rail Project	-2	1	Valero RDEIR, Table 4.1-5/6
Total Proposed Projects	**110**	**8**	
Propane Recovery Project	**3**	**8**	RDEIR, Table 4.1-8
Cumulative Increase	**114**	**16**	
BAAQMD Significance Threshold	10	10	
Significant?	**YES**	**YES**	

a (33.16 ton/year)(49,000 bbl/day)/(20,500 bbl/day)

[54] BAAQMD, Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance, October 2009; available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Revised%20Draft%20CEQA%20Thresholds%20%20Justification%20Report%20Oct%202009.ashx?la=en.

Table 7: Cumulative Increase in Daily NOx and ROG Emissions

Project	NOx (lbs/day)	ROG (lbs/day)	Reference
Marine Terminal II	182	11	Ap. 22904, p. 5
Marine Terminal III	434	26	Ap. 22904[a]
Valero Crude-by-Rail Project	-322	-9	Valero RDEIR, Table 4.6-5
Total Proposed Projects	**294**	**28**	
Propane Recovery Project	**37**	**47**	RDEIR, Table 4.1-7
Cumulative Increase	**331**	**75**	
BAAQMD Significance Threshold	54	54	
Significant?	**YES**	**YES**	

a (2,324 ton/year)(49,000 bbl/day)/(20,500 bbl/day)

These cumulative emissions would also exceed significance thresholds of air districts in the Sacramento and San Joaquin Air Basins, through which the trains would pass, including: for both NOx and ROG in the Yolo-Solano Air Quality Management District (10 ton/year) and the Sacramento Metropolitan Air Quality Management District (65 lb/day); for NOx in the Placer County Air Pollution Control District (82 lb/day); and for ROG and NOx in the San Joaquin Valley Air Pollution Control District (10 tons/year). Thus, the cumulative impacts of the Project are significant not only within the BAAQMD, but within adjacent air districts.

B11-25

C. Cumulative Greenhouse Gas Emissions Are Significant

The RDEIR concludes that the Project's contribution to GHG impacts would not be "cumulatively considerable" as the Project would result in a net decrease of 43,529 metric tons per year (47,983 MT/year) of carbon dioxide-equivalent ("CO_2e) emissions. (RDEIR, p. 5-9.) However, when Project GHG emissions are correctly calculated, the Project results in both a significant project and cumulative GHG impact.

First, the BAAQMD's March 12, 2014 comments noted two existing sources of GHG emissions that were not included in the RDEIR, increases in emissions from the existing Sulfur Recovery Units and the Air Liquide Hydrogen Plant, which are required to support the Project. In the County's response to these comments, it concedes the Air Liquide Hydrogen Plant could increases GHG emissions by 43,000 MT/year, but fails to supply an estimate for the Sulfur Recovery Units. These two increases combined are likely enough to offset 100% of the claimed GHG emission reductions.

Second, the proposed Project could not recover the design basis amount of propane and butane (14,500 bbl/day) from its baseline crude slate. An additional source of propane and butane is required. Comment II. Regardless, even assuming it could recover the design basis amount in the baseline slate, the Project could not continue to operate at the design basis in the future without replacing declining pipeline imports. The related projects that supply the additional amounts of propane

and butane needed to meet the Project design basis and replace declining pipeline imports are required to facilitate the continued operation of the Refinery. These projects should have been evaluated as part of the Project and their GHG emissions should have been included in both the project and cumulative impact analyses.

Third, Phillips 66's widely reported plans to replace heavy sour San Joaquin Valley crudes, currently imported by pipeline, with propane- and butane-rich Bakken crudes at its Marine Terminal will increase the amount of propane and butane in the refinery fuel gas, after the Project is fully built out. The RDEIR's GHG emission calculations do not include any increase in GHG emissions from the increase in propane and butane in its refinery fuel gas from refining Bakken crudes as replacements for other heavier crudes.

Fourth, the RDEIR failed to include any increase in GHG emissions from the end use of propane and butane, which can be reasonably anticipated and is likely known by Phillips 66. For cumulative pollutants, such as GHG, whose emissions contribute to a global problem, the emissions, regardless of where or how they occur, must be considered. If it is assumed that as little as 1,000 bbl/day of propane is burned as a fuel, its most common use, the increase in GHG emissions from the Project are significant. Thus, for purposes of analyzing GHG impacts, it is not speculative to assume that the use of propane and butane would generate GHG emissions. It is an undisputed fact that the combustion of propane and butane generate GHG. B11-25

The RDEIR did not conduct any analysis to arrive at its no cumulative GHG impact conclusion. It, for example, failed to consider GHG increases from nearby projects that facilitate the Propane Recovery Project by supplying crude that would be refined to generate the propane and butane proposed to be recovered. When a subset of the proposed projects is considered, the increase in GHG emissions increases from -88,858 ton CO_2e/year to + 40,876 ton CO_2e/year. (*See* Table 8.) The cumulative increase (40,876 ton ton CO_2e/year) exceeds the BAAQMD's significance threshold of 11,023 ton CO_2e/year (10,000 MT CO_2e/year) by a factor of almost four. Thus, GHG emissions are cumulatively considerable and significant.

Table 8: Cumulative Increase in GHG Emissions

Project	GHG Emissions (ton CO_2e/year)	Reference
Marine Terminal II	2,324	Ap. 22904, p. 5
Marine Terminal III	5,555	Ap. 22904[a]
Valero Crude-by-Rail Project	7,414	Valero RDEIR, Table 4.6-5
Santa Maria Rail Spur Project	21,828	SMR Rail RDEIR, Table 4.3.25
Santa Maria Throughput Project	3,208	SMR Throughput DEIR, Table 4.1-15
Alon Crude Flexibility Project	48,529	Alon FEIR, Table 4.5-3
Total Proposed Projects	**88,858**	
Propane Recovery Project	**-47,982**	RDEIR, Table 4.5-3
Cumulative Increase	**40,876**	
BAAQMD Significance Threshold	11,023	
Significant?	**YES**	

a (2,324 ton/year)(49,000 bbl/day)/(20,000 bbl/day)

This calculation represents merely a lower bound as it does not include: (1) the increase in GHG emissions from increased amounts of propane and butane in the refinery fuel gas from refining Bakken crudes at the Refinery; (2) emissions from the downstream use of recovered propane and butane; (3) emissions from most of the above projects outside of the respective air district boundaries; and (4) increases in GHG emissions from the many other proposed, recently permitted and operating crude-by-rail projects.

D. Cumulative Hazard Impacts Are Significant

B11-25

The RDEIR concluded that "routine operations of the proposed Project would either not result in any impacts associated with hazards or hazardous materials or, would be less than significant…; thus routine operations would not contribute cumulatively to hazards-related impacts." (RDEIR, p. 5-9.) Thus, the RDEIR terminated the analysis without considering impacts in conjunction with other past, present and reasonably foreseeable projects, as required by CEQA Guidelines § 15064(h)(1). Thus, the hazard analysis is fundamentally flawed and fails to properly evaluate both project and cumulative hazard impacts.

First, the analysis is based on an increase in the number of tank car shipments of propane and butane from 5,840 per year (16 per day) in the baseline to 8,760 per year (24 per day). (RDEIR, Table 4.6-6.) The RDEIR does not provide any support for the assumed baseline, which should be the average number of tank car shipments in the 2 to 3 years prior to the start of CEQA review. As discussed in Comment III.B.1, the 3-year baseline average number of tanks cars of butane was 4 per day. Thus, the RDEIR has underestimated the increase in the risk of a tank car accident by a factor of about four. (RDEIR, Fig. 4.6-4.)

Second, the probability analysis is based only on the frequency of LPG releases. (RDEIR, p. 4.6-27.) Many other similar substances are transported by rail. The RDEIR should have based its analysis on all tanks cars, rather than just a small fraction of them.

Third, the probability analysis was based only on historic 1990 to 2010 LPG rail traffic accident data. The same rail lines that will be used by the propane/butane trains will also be used by unit trains of 80 to 100 tank cars each, carrying crude oil to local refineries, all routed from the same Roseville Rail Yard. (RDEIR, p. 4.6-27.) These rail lines pass very close to residential and commercial areas in the vicinity of the Project, within feet of the tracks, and as well as elsewhere along the route. The cumulative accident impacts of the increase in LPG cars coupled with the post-2010 and future increase in crude rail cars was not evaluated and are significant.

Small amounts of crude oil have long been transported by rail, but since 2009 the increase in rail crude oil movements has been enormous. Nationwide, crude oil shipments have increased from 10,800 car loads in 2009 to about 400,000 in 2013[55], significantly more than the 270,000 tank cars of LPG assumed in the RDEIR's analysis. (RDEIR, p. 4.6-27.) In Canada, shipments of crude oil by rail increased from a mere 500 car loads in 2009 to 160,000 car loads in 2013.[56] Continued large increases are expected in 2014.[57] These crude trains will be sharing the tracks with the Project's propane and butane trains, increasing the probability of accidents involving the use of shared tracks.

B11-25

The RDEIR's hazard analysis is based on data from a period when far fewer trains were transporting hydrocarbon products over the same rail lines. The significant increase in rail traffic since 2010 and the projected further increase to support crude-by-rail projects listed in Comment IV.A, will increase the probability of accidents involving the Project's LPG trains and those carrying cost-advantaged crudes along the same rail lines. Many recent accidents, for example, have involved the collision of unit trains carrying crude with trains carrying other commodities, due to the significant increase in rail traffic. Cumulative impacts can result from individually minor but collectively significant projects taking place over time. (CEQA Guidelines 15355(b).) The RDEIR does not contain any analysis of collectively significant projects taking place at the same time.

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[55] TSBC, Rail Safety Recommendations, January 23, 2014; available at: http://www.tsb.gc.ca/eng/recommandations-recommendations/rail/2014/rec-r1401-r1403.pdf.

[56] *Ibid.*

[57] American Association of Railroads, "Moving Crude Petroleum by Rail," May 2013, p. 3-5; available at: https://www.aar.org/keyissues/Documents/Background-Papers/Crude-oil-by-rail.pdf.

Fourth, it appears the RDEIR's probability analysis was only based on the short segment of track from the Richmond Rail Yard to the Refinery. Trains could take multiple routes from the rail yards to the California boarder. Many segments of California rail line pass through some of the state's most sensitive ecological areas and parallel the water supply for most of the state. These route segments also contain many high hazard areas for derailments, for example, the Feather River Canyon where a Union Pacific freight train derailed on November 25, 2014 with several rail cars plunging into the canyon.[58] (The Feather River drains into Lake Oroville, the second largest reservoir in California.) Emergency response teams have generally good coverage in the urban areas, but none are located near the high hazard areas in rural Northern California that the RDEIR apparently did not analyze.[59]

Fifth, the RDEIR does not establish any threshold of significance for its hazard probability analysis and does not cite any authority for concluding accident impacts are not significant. Instead, the RDEIR compares the odds of death from an accident involving a rail car full of propane to other common causes of death, such as car accidents, falls, choking, drowning, etc. (RDEIR, Table 4.6-7.) This trivializes the risk to residents and businesses that are just a few feet from the rail track as it ignores the severity of the risks when accidents occur.

B11-25

The significance of a rail car accident, resulting in an explosion, fire, or toxic release, depends on the juxtaposition of its frequency (probability) and the consequences when it occurs. The RDEIR evaluated only the probability of a rail car accident in a vacuum, isolated from its consequences.

The significance of accidental releases and their consequences in California is typically evaluated using the process developed by Santa Barbara County[60], which has been widely used by California state agencies, including the California Coastal Commission and the California State Lands Commission. These thresholds, for example, were used by Phillips 66 to evaluate rail accidents resulting from its proposed Santa Maria Rail Spur Project. (SMR Rail Spur Project RDEIR, Sec. 4.7.) These thresholds identify zones on a risk profile curve to determine significance, based on both the probability and consequence of an accident. The RDEIR does not contain a responsive analysis and does not set out any thresholds to evaluate the significance of its probability of accident analysis. Rather, it merely asserts the risks are not significant,

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[58] AVC, News 10, Derailment Sends Section of Train into the Feather River Canyon, November 25, 2014; http://www.news10.net/story/news/local/california/2014/11/26/train-derailment-feather-river-canyon/70133634/ .

[59] Interagency Rail Safety Working Group, State of California, Oil by Rail Safety in California. Preliminary Findings and Recommendations, June 10, 2014.

[60] Santa Barbara County, Public Safety Thresholds, August 1999.

analyzing only the probability, without acknowledging the consequences to nearby neighbors.

Finally, the RDEIR's probability of accident calculations are misleading. The RDEIR reports an LPG release frequency of 1.04E-8 LPG releases per mile travelled by tank car, based on 1990 to 2010 LPG accident data. (RDEIR, p. 4.6-27.) The RDEIR also reports the annual probability of fatality associated with existing butane rail transport as 1.4E-6 and proposed butane/propane rail transport as 2.1E-6 (or one chance out of 500,000). This estimate is presented in a table with risks of other events, such as choking or drowning, to suggest the risks are *de minimis*. (RDEIR, Table 4.6-7.) The RDEIR's probability analyses are not supported. However, using the RDEIR's number of tanks cars (RDEIR, Table 4.6-6) and number of miles travelled (RDEIR, Appx. B, pdf 75), the resulting probability of LPG releases would be:

Existing: (1.04E-8 releases per tank car-mile)(5,820 tank cars/year)(671 miles) = **0.04 releases per year**

Proposed: (1.04E-8 releases per tank car-mile)(8,760 tank cars/year)(671 miles) = **0.06 releases per year**

In other words, the RDEIR's analysis indicates an accidental LPG release could occur once every 25 years in the assumed baseline and once every 17 years after the Project is operational. Correcting the RDEIR's baseline to assume an annual average of 4 tank cars per day (*see* Comment III.B.1), yields a baseline accident probability of 0.01 per year, or a release once every 10 years. These are very high accident probabilities that would be significant under the Santa Barbara County thresholds. The Project would increase the risk of accidents by a factor of four. This is a significant Project accident risk that was not identified and must be mitigated. B11-25

The cumulative accident risk, from other trains using these same tracks, was not analyzed in the RDEIR. It would be significantly greater than the Project risk, due to the huge increase in rail traffic from crude-by-rail projects. This cumulative accident risk puts communities along the rail lines at significant risk of property damage, serious injury, and death.

V. HEALTH RISKS DUE TO OPERATIONAL EMISSIONS ARE UNDERESTIMATED AND SIGNIFICANT

The RDEIR presents a health risk assessment for Project operational emissions of toxic air contaminants ("TACs") including diesel particulate matter ("DPM") and PM2.5 emissions from stationary sources including the propane recovery unit boiler/increased use of the steam power plant and fugitive components (tanks and piping) and increased

emissions from locomotives. In addition, the RDEIR presents a cumulative health risk assessment for impacts associated with emissions from the existing Rodeo Refinery and several planned or permitted projects at the Rodeo Refinery as well as a number of projects in the vicinity of the Refinery site, the existing rail line adjacent to the Refinery site, and Interstate 80. The RDEIR finds that Project operational emissions would result in less-than-significant impacts as well as less-than-significant cumulative impacts with respect to health risks. (RDEIR, pp. 4.1-24 through 4.1-36.) The health risks presented by the RDEIR and its conclusions as to their significance are based on the results of dispersion modeling for TAC concentrations in ambient air resulting from TAC emissions, which are based on substantially flawed estimates. In addition, the RDEIR's health risk assessment suffers from methodological flaws.

First, the RDEIR's health risk assessments fail to identify the Point of Maximum Impact ("PMI"), only summarizing results for the Maximum Exposed Individual Receptor ("MEIR"), residences near the Refinery site, and the Maximum Exposed Individual Worker ("MEIW"). (RDEIR, Tables 4.1-11 and 4.1-12, Figures 4.1-2 and 4.1-3 (Project), Tables 4.1-13 and 4.12-14 (cumulative).)

Second, our review of the modeling files indicates that the RDEIR's health risk assessments rely on annual average TAC emissions to determine acute health risks. Acute health risks result after exposure to TACs for short periods, from an hour to 24 hours. Thus, the RDEIR has underestimated acute health risks which must be based on short-term, not annual average emissions.

B11-25

Third, the RDEIR, Appx. B, p. B-156, claims that the health risk assessment for locomotive emissions conservatively models 100% of locomotive emissions under load along 2.16 miles of the southern route (from the Refinery towards the Richmond Rail Yard) and 100% of locomotive emissions under load along 3.2 miles of the northern route (from the Refinery towards the Roseville Rail Yard). Yet, the files provided on CD as support for RDEIR, Appendix B only include modeling along the southern route but not along the northern route. The RDEIR provides no explanation for this omission.

Third, the health risk assessment for locomotive emissions fails to account for idling emissions from operation of the on-site switching locomotive, which due to its location may contribute to substantial health risks at nearby receptors.

Fourth, as discussed before, the RDEIR does not acknowledge that the Project would result in increased idling of haul locomotives on site or nearby. Thus, neither the RDEIR's emissions estimates nor the health risk assessments account for associated emissions.

Fifth, the RDEIR's determination of incremental cancer risks resulting from increased concentrations of DPM in ambient air due to increased locomotive emissions

suffers from the same problems as the RDEIR's estimates of criteria pollutant emissions from locomotives. Specifically, concentrations of DPM in ambient air were modeled based on annual emissions estimates. As discussed in Comment III.B.2 for criteria pollutant emissions, the RDEIR substantially underestimates annual LPG exports and number of rail cars loaded on an annual average basis and, consequently, underestimates locomotive emissions by a factor of 1.36[61]. Accounting for this factor, the RDEIR's estimate of incremental cancer risks at the MEIR (1.7 in one million) due to Project increases in locomotive DPM emissions can be revised to 2.31 in one million (1.7 in one million × 1.36). This revised estimate does not account for switch locomotive emissions or increased idling of haul locomotives on site or nearby.

Sixth, the RDEIR's health risk assessment does not account for cancer risks associated with increased emissions of benzene due to a switch to Bakken crudes, which contain considerably higher amounts of benzene than the baseline crude slate. (*See* Exhibit 2.) This problem is likely also inherent in the health risk assessments for the Marine Terminal Projects.

Seventh, for cancer risks from existing sources at the Rodeo Refinery (5.95 in one million at the MEIR), the RDEIR's cumulative health risk assessment relies on a facility-wide health risk assessment previously conducted for purposes of demonstrating compliance with AB2588, the Air Toxics "Hot Spots" Program. (RDEIR, Appx. B, p. B-59 referring to ENSR 2003.) AB2588 does not address mobile source emissions or exempt sources. Thus, health risks associated with existing locomotive and other mobile source emissions at the Refinery are not accounted for. Revised cancer risks for increased locomotive emissions can be estimated based on the revised Project cancer risk (2.31 in one million) and the revised baseline over revised Project PM10 emissions at 0.75 in one million (2.13 in one million × 0.12 tons/year / 0.34 tons/year). Cancer risks from other projects considered in the cumulative health risk assessment may likewise be underestimated. This revised estimate does not include any other mobile sources or exempt sources.

B11-25

Seventh, the RDEIR's estimates of PM2.5 concentrations due to Project emission increases in locomotive emissions suffer from the same problems as described above for criterial pollutant and DPM emissions. Revised PM2.5 concentrations for these sources can be estimated at 0.052 $\mu g/m^3$ (1.36 × 0.042 $\mu g/m^3$), an increase of 0.010 $\mu g/m^3$. Added to the RDEIR's estimate for PM2.5 concentrations for cumulative sources of 0.739 $\mu g/m^3$, this increase brings total PM2.5 concentrations to 0.749 $\mu g/m^3$, which rounds up to 0.8 $\mu g/m^3$, the BAAQMD significance threshold. What's more, the RDEIR's emission estimates for the Project do not account for fugitive dust PM2.5

[61] Calculated as: (revised annual emissions)/(RDEIR annual emissions). For example for NOx: (13.85 tons/year)/(10.18 tons/year) = 1.36.

emissions associated with locomotive and other mobile source travel. Finally, as discussed above for DPM, the RDEIR's health risk assessment for existing sources at the Rodeo Refinery does not account for PM2.5 emissions from mobile or exempt sources. When all these issues are addressed, PM2.5 concentrations will exceed the BAAQMD's significance threshold for this pollutant of 0.8 $\mu g/m^3$. This is a new significant impact that must be identified and mitigated in a revised RDEIR for the Project.

B11-25

Attachment A
RDEIR Citations to LPG Export via Rail Car

RDEIR

- p. ES-7: In the summer, up to 9,000 barrels per day are shipped by rail.
- p. 3-17: Currently, up to 16 tank cars of butane can be loaded per day. In the summer, 8 to 12 tank cars7 (up to 9,000 barrels) of butane are typically loaded on any given day. In the winter, 3 to 4 tank cars (2,300 to 3,000 barrels) of iso-butane are loaded per month...
- Table 3-2: Current processing rate: Maximum of 16 butane tank cars per day. Loaded on two, two-sided racks, each rack side can accommodate 4 tank cars. Proposed processing rate: An increase of 8 new tank cars per day for a new maximum of 24 per day.
- p. 3-36: The Refinery currently has loading racks on the western shoreline of the Refinery that can load butane into a maximum of 16 butane tank cars per day. In the summer, between 8 to 12 tank cars (a tank car holds approximately 700 – 750 Barrels of butane) of butane are typically loaded on any given day. In the winter, 3 to 4 tank cars of iso-butane are loaded per month.
- p. 3-37: The total new propane and butane loading capacity following implementation of the proposed Project would be a maximum of 24 tank cars per day (16 existing + 8 new with the Project).
- Table 3-3: Current shipping rate: average 8-12 propane/butane tank cars per day, maximum 16. Post-Project shipping rate: average 16-20 per day, maximum 24. B11-25
- p. 3-39: … the increase in butane and propane products would result in a maximum of 24 tank cars per day. These tank cars would result in an increase in train length by up to 8 cars from the existing maximum of 16 up to 24 tank cars but the number of daily train trips into and out of the Refinery would not change.
- Table 4.1-5: Rail baseline emissions.
- p. 4.1-20: The total propane and butane loading capacity under the Project would be 24 cars per day.
- p. 4.3-9: … increasing propane and butane transport by 8 tank cars per day on an annual average… An average of 8 additional tank cars per day would be used to transport the propane and butane… Currently, the Refinery can export up to 16 tank cars per day of butane. With the proposed Project, a maximum of 24 tank cars may be exported per day.
- Table 4.3-5: Daily increase: 8 propane/butane tank cars using 346,833 gal/year diesel.
- p. 4.5-12: … the loading capacity for butane and propane would increase from 16 tank cars per day to 24 tank cars per day. On an average basis, up to 12 new tank cars would be used per day over current baseline use.

- p. 4.6-8: The Refinery currently loads up to 16 tank cars per day of butane (to a maximum of 5,840 tank cars of butane per year)… The current butane annual export cycle is that in the summer, 8 to 12 tank cars (up to 9,000 barrels) of butane are typically loaded on any given day. In the winter, 3 to 4 tank cars (2,300 to 3,000 barrels) of iso-butane are loaded per month…
- p. 4.6-9: The proposed Project would increase daily loading capacity from 16 tank cars of butane to 24 tank cars of butane and propane, with up to eight cars transporting only propane, (to a maximum of 8,760 tanks cars of LPG annually).
- Table 4.6-6: Existing tank car shipments: 5,840 butane tank cars/year + 0 propane tank cars, 3,900,000 bbls/year total volume transported; proposed tank car shipments: 7,300 butane tank cars/year + 1,460 propane tank cars, 5,850,000 bbl/year total volume transported.

RDEIR, Appendix B

- pdf 6: Baseline annual rail emissions: 8 cars/day, 2,920 cars/year.
- pdf 16: In the summer, up to 9,000 barrels per day are shipped by rail.
- pdf 21: The refinery currently has loading racks on the western shore line of the refinery that can load butane into up to a maximum of 16 railcars per day… In the summer, 8 to 12 railcars (up to 9,000 barrels) of butane are typically loaded on any given day. In the winter, 3 to 4 railcars (2,300 to 3,000 bbl) are loaded per month. The average number of railcars loaded for the past three years is 4 railcars per day.
- pdf 22: This new loading facility would be designed to load a maximum of 20 additional railcars per day. The total maximum daily propane and butane loading capacity after the project would be 24 cars per day. On an annual average basis, the loading facility will be able to load an additional 12 railcars per day, resulting in a total of 16 railcars per day when added to the baseline.
- pdf 30: An estimated 12 additional railcars per day on an annual average basis will be required to ship the propane and butane recovered by PRP, resulting in a total of 16 railcars when added to the annual average baseline. On any given day, the maximum number of additional railcars could increase by 20, resulting in a total of 24 railcars when added to the baseline.
- pdf 146: An estimated 12 additional tank cars per day on an annual average will be required to ship the propane and butane recovered by PRP, resulting in a total of 16 railcars when added to the baseline, on an annual average. On any given day, the maximum number of additional railcars could increase to 20, resulting in a total of 24 when added to the baseline.

B11-25

ATTACHMENT 2

Rachael E. Koss

From: Lashun Cross [Lashun.Cross@dcd.cccounty.us]
Sent: Thursday, December 04, 2014 7:02 AM
To: Rachael E. Koss
Subject: RE: Marine Terminal Appendix C

Rachael:

Additional Information was provided to you regarding Table 4.1-4 earlier today. You were provided the pending but halted baaqmd application for the Marine Terminal Phase III yesterday. Gary and I also reviewed the Administrative Record with regarding the location of data responses and monitoring data.

In reference to Table 4.1-5, the original Land Use Permit provided the current operations information and is displayed within the Environmental Impact Report, Project Description. The Project proposes an annual average of 12 cars per day for propane and butane the maximum increase. The baseline is the number of cars shipped and may fluctuate but the increase will only be 12 rail cars per day annual average, no matter the baseline. Detailed records of the Refineries daily current baseline would not change the maximum increase and were not requested by the County. The impact(s) from the Project is not dependent on what the baseline is but the increase. The source is identified within the EIR. No other material(s) is due.

We will not be extending the comment deadline. A written response was sent via email.

Thank you,
Lashun

Lashun Cross, Principal Planner
CONTRA COSTA COUNTY
Department of Conservation and Development
30 Muir Road
Martinez, CA 94553
(925) 674-7786-Direct
(925) 674-7258-Fax

-----Original Message-----
From: Rachael E. Koss [mailto:rkoss@adamsbroadwell.com]
Sent: Wednesday, December 03, 2014 2:08 PM
To: Lashun Cross
Subject: Re: Marine Terminal Appendix C

3.2-241

B11-26

Comment Letter B11

3.2.11 Letter B11 – Responses to Comments from Adams, Broadwell, Joseph & Cardoza

B11-1 This comment is noted.

B11-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

B11-3 The commenter asserts that the County has not made all of the documents referenced or relied upon in the RDEIR available for public review, as required by the CEQA. CEQA does require that the RDEIR's reference documents be accessible to the public, and accordingly they are available upon request, but neither CEQA nor the CEQA Guidelines require that all reference materials be circulated for comment or be posted online for the duration of the public comment period.

The commenter further asserts that public has been given inadequate time to review the RDEIR's reference documents. The documents were promptly provided in response to the commenters October 28, 2014 Public Records Act request, as well in response to the commenters June 12, 2014 Public Records Act request.

See Master Response 2.1, which provides a detailed discussion of the requirements for the public review period for DEIRs and describes the public comment process and public participation activities for the proposed Project.

B11-4 See Master Response 2.1.

B11-5 See Master Response 2.2.

B11-6 See Master Response 2.4, which discusses propane and butane volumes associated with the proposed Project.

B11-7 See Master Responses 2.2 and 2.4.

B11-8 This comment is an introductory statement about perceived deficiencies in the background data used in the air quality and health risks and hazards sections. The comment is explained in further detail below.

B11-9 The commenter states that the proposed Project's potentially significant impacts would be more severe if all Project components were analyzed together. However, what the commenter calls project components – the Santa Maria Rail Spur Extension Project, the Santa Maria Throughput Increase Project, and the Marine Terminal Phase II and III Throughput Increase Project – are all separate projects and consequently do not and should not be analyzed as if they were one project. However, the Marine Terminal Phase II and III project was analyzed as part of the cumulative HRA because it represents

foreseeable future projects that are located within 1,000 feet of the proposed Project. See Master Response 2.6, which discusses cumulative impacts.

B11-10 The commenter states that the RDEIR includes no significance threshold for SO_2 and omits carbon monoxide from the analysis. The commenter is correct on both counts. BAAQMD has opted to not develop thresholds for SO_2, primarily because the San Francisco Bay Area Air Basin is in attainment for the state and federal SO_2 standards. In addition, and as shown in RDEIR Section 4.1, *Air Quality*, the proposed Project would result in substantial reductions of SO_2. Consequently, even if BAAQMD had opted to develop an SO_2 threshold, the project Proposed would be less than significant because it has a beneficial effect by reducing SO_2 emissions.

As for carbon monoxide (CO), BAAQMD cites the California ambient air quality standards as the significance thresholds for CO in their 2011 CEQA Thresholds document. BAAQMD's thresholds are the California Ambient Air Quality Standards (CAAQS), which equal 20 part per million (ppm) for the 1-hour average and 9.0 ppm for the 8-hour average. BAAQMD's threshold guidance includes screening criteria that apply to land use development projects, but not to stationary source projects. Those screening criteria apply to projects that increase on-road traffic volumes at affected intersections. BAAQMD has not developed screening criteria for stationary sources, such as the proposed Project, because past violations of the CO standards were primarily due to on-road vehicle trips. Also, no violations of the 1-hour or 8-hour CAAQS have been recorded in the San Francisco Bay Area Air Basin in over a decade, and recorded concentrations have decreased substantially over the past decade.

For clarity, however, the proposed Project's CO emissions are shown in the following revised Tables 4.1-9, 4.1-10, 4.1-11, and 4.1-12. These revised tables are being incorporated into the RFEIR.

TABLE 4.1-7 REVISED
TOTAL PROJECT DAILY OPERATIONAL EMISSIONS WITH BOILER (pounds per day)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
LPG Recovery Unit Boiler	20.4	41.7	25.0	25.0	18.1	24.8
Fugitive Organic (Tanks & Piping)	0	0	0	0	25.1	0
Locomotive Sources	79.0	0.1	2.0	1.9	3.8	14.0
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Refinery Fuel Gas Hydrotreating	--	-986	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-62.3	--	--	--	--	--
Proposed Project Net Emissions	**37.1**	**-944.1**	**27.1**	**27.0**	**47.0**	**39.0**
Significance Threshold	54	-	82	54	54	-
Exceeds Threshold?	No	--	No	No	No	--

SOURCE: ERM, 2012a; NO_x reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. For CO, BAAQMD has an ambient threshold equivalent to the California Ambient Air Quality Standards but does not have a mass emissions threshold. All calculations reviewed and confirmed by ESA.

TABLE 4.1-8 REVISED
TOTAL PROJECT ANNUAL OPERATIONAL EMISSIONS WITH BOILER (tons per year)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
LPG Recovery Unit Boiler	3.7	7.6	4.6	4.6	3.3	4.5
Fugitive Organic (Tanks & Piping)	0	0	0	0	4.6	--
Locomotive Sources	10.2	<0.1	0.3	0.3	0.5	1.8
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.27
Refinery Fuel Gas Hydrotreating	--	-180	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-10.8	--	--	--	--	--
Proposed Project Net Emissions	**3.1**	**-172.4**	**4.8**	**4.8**	**8.4**	**6.4**
Significance Threshold	10	-	15	10	10	--
Exceeds Threshold?	No	--	No	No	No	--

SOURCES: ERM, 2012a; NO_x Reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. For CO, BAAQMD has an ambient threshold equivalent to the California Ambient Air Quality Standards but does not have a mass emissions threshold. All calculations reviewed and confirmed by ESA.

TABLE 4.1-9 REVISED
TOTAL PROJECT DAILY OPERATIONAL EMISSIONS WITH INCREASED USE OF SPP
(pounds per day)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
Increased Use of Steam Power Plant	18.4	0.63	8.0	8.0	8.6	93.7
Fugitive Organic (Tanks & Piping)*	0	0	0	0	25.1	0
Locomotive Sources	79.0	0.1	2.0	1.9	3.8	14.0
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Refinery Fuel Gas Hydrotreating	--	-986	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-62.3**	-	-	-	-	--
Proposed Project Net Emissions	**35.1**	**-985.3**	**10.0**	**9.9**	**37.5**	**107.8**
Significance Threshold	**54**	**-**	**82**	**54**	**54**	**-**
Exceeds Threshold?	No	--	No	No	No	

* Fugitive organic emissions include boiler-related emissions; therefore, the estimate is considered to be conservative for the increased use of the SPP option.

** In addition to this NO_x reduction, decommissioning of the B-401 Process Heater also results in offsets of SO_2, PM_{10}, $PM_{2.5}$, ROG, & CO; however, APM-1 only commits Phillips 66 to using the remaining unused NO_x emissions reductions; therefore, this analysis does not account for the reductions that would be associated with the other pollutants.

SOURCES: ERM, 2012a; increased use of the SPP obtained from Phillips 66, 2014a; and NO_x reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. All calculations reviewed and confirmed by ESA.

TABLE 4.1-10 REVISED
TOTAL PROJECT ANNUAL OPERATIONAL EMISSIONS WITH INCREASED USE OF SPP
(tons per year)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
Increased Use of Steam Power Plant	3.4	0.12	1.5	1.5	1.6	17.1
Fugitive Organic (Tanks & Piping)*	0	0	0	0	4.6	--
Locomotive Sources	10.2	<0.1	0.3	0.3	0.5	1.8
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.27
Refinery Fuel Gas Hydrotreating	--	-180	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-10.8**	--	--	--	--	--
Proposed Project Net Emissions	**2.8**	**-179.9**	**1.8**	**1.8**	**6.7**	**19.2**
Significance Threshold	10	-	15	10	10	-
Exceeds Threshold?	No	--	No	No	No	--

* Fugitive organic emissions include boiler-related emissions; therefore, the estimate is considered to be conservative for the increased use of the SPP option.

** In addition to this NO_x reduction, decommissioning of the B-401 Process Heater also results in offsets of SO_2, PM_{10}, $PM_{2.5}$, ROG, & CO; however, APM-1 only commits Phillips 66 to using the remaining unused NO_x emissions reductions; therefore, this analysis does not account for the reductions that would be associated with the other pollutants.

SOURCES: ERM, 2012a; emissions from increased use of the SPP obtained from Phillips 66, 2014a; and NO_x reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. All calculations reviewed and confirmed by ESA.

B11-11 The commenter asserts that the methodology used to estimate baseline emissions is incorrect. The RDEIR shows the net emissions increase that would result from the proposed Project above baseline. Those emission estimates are used to assess the criteria pollutant and toxic air contaminant air emissions. This procedure has been reviewed and approved by the BAAQMD as the correct approach, as it shows the resulting change in emissions that would result from the proposed Project.

B11-12 The commenter states that locomotive emissions depend on the weight of the load that is carried, which is determined by the number of cars that are pulled and their contents. The commenter's statement is correct and this is the approach that was used to estimate locomotive emissions. The increase in the number of rail cars depends on the increase in the amount of propane and butane that is to be exported after the proposed Project is built. The RDEIR estimates the proposed Project's locomotive NO_x emissions will increase by 10.18 tons per year based on an increase of 12 rail cars per day, as shown in Appendix B of the RDEIR. In contrast, the commenter's calculations assume an increase of 16 rail cars per day. However, the increase in the average number of rail cars per day is 12. Consequently, the commenter's estimate of the number of railcars and resulting emissions is incorrect.

B11-13 The commenter claims that the baseline emissions from locomotives in the RDEIR Table 4.1-5 are substantially overestimated because they rely on incorrect assumptions used to export propane and butane during the baseline years. As described in Appendix B of the RDEIR, the proposed Project would increase rail traffic by up to 12 railcars per day on an annual average, with a maximum increase of up to 20 on any given day. Consequently, an estimated 12 additional tank cars per day on an annual average will be required to ship the propane and butane recovered by the proposed Project. The proposed Project's impacts from the increased load on locomotives was based on these 12 additional tank cars per day on an annual average.

B11-14 The commenter again states that the proposed Project would increase the number of rail cars per day by 16 on an annual average. However, the actual number of additional tank cars will be 12 per day on an annual average, as stated in Table 3-3 of the RDEIR project description. See also Responses B11-12 and B11-13. The increase in switch locomotive operation associated with these additional 12 tank cars would require one additional hour of operation per day. This represents a doubling of switch locomotive use, not an increase by a factor of five as estimated by the commenter. The increase in switch locomotive operation represents only a minor component of total proposed Project rail emissions (3.2 %). For these reasons, commenter is incorrect in stating that locomotive NO_x, particulate matter less than 10 microns in size (PM_{10}), particulate matter less than 2.5 microns in size ($PM_{2.5}$), and Reactive Organic Gases (ROG) emissions will be substantially more than estimated in the RDEIR.

The commenter also states that it is common practice to base criteria pollutant locomotive emissions on total track length within California. This argument is questionable at best.

While it may apply to projects that clearly require statewide train travel, the proposed Project clearly does not fit this situation. The emission estimates for the proposed Project are limited to travel within the BAAQMD for a specific reason: the markets for the Project's butane and propane are unknown and it would be speculative and likely erroneous to assume extensive train travel throughout the state. Consequently, the emission estimates conservatively assume travel within the BAAQMD and base the emissions and impact evaluation on this assumption.

The commenter makes several incorrect arguments. First, the commenter estimates criteria pollutant emissions for train travel throughout the state, but then compares those emissions to emission thresholds specific to BAAQMD. As mentioned above, estimating emissions for train travel through the state is incorrect because the markets for the Project's butane and propane are unknown. See also Response B6-20. Second, it is clearly incorrect to apply specific air district thresholds to emissions that would occur outside of an air district. The commenter makes the same incorrect statements regarding ROG emissions.

The commenter further states that there is no evidence that the proposed Project would use the BNSF track and instead claims that 100 percent of the trains for the proposed Project would use the BNSF track. The commenter does not provide any evidence to support this assumption, either in the comment or in the supporting documents to the comment. The RDEIR uses reasonable worst-case assumptions to estimate train travel within the BAAQMD.

B11-15 Emission reductions that occurred in the past are valid mitigation because Phillips 66 still has the option of using those reduced NO_x emissions to offset increases from other future NO_x increases APM-1 (included in Section 3.8, *Maintenance Activities of the Project Description*) would apply 10.8 tons NO_x per year (62.3 pounds per day) of offsets. The mitigation as worded would retire the remaining Phillips 66 NO_x emission offsets so that they could no longer be used after they have been used as mitigation for the proposed Project.

The commenter incorrectly argues that the shutdown of the heater does not mitigate the Project's NO_x emissions. The commenter is incorrect because even if the off-site location releases NO_x in supplying hydrogen, it does not change the fact that Phillips 66 still has the option of using its remaining NO_x credits resulting from the heater shutdown to offset NO_x emissions from other projects. Also, the off-site source of hydrogen referred to was previously permitted as part of the Clean Fuels Project and its NO_x emissions are stringently limited by that permit.

The commenter incorrectly concludes that there is no basis or support for the RDEIR's use of 10.8 tons/year of NO_x reductions from the heater shutdown. The commenter further states that the claimed reductions do not actually exist and were created by shifting baseline dates and constitute double counting. The commenter also states that the NO_x emission reduction credits from the shutdown of the heater B-401 were fully used by

the Marine Terminal Offload Limit Revision. Page 4.1-23 of the RDEIR explains that the shutdown of the heater resulted in reduction on baseline NO_x emissions of 44 tons per year (244 pounds per day), of which 33.2 tons per year (181.7 pounds per day) were used to offset NO_x emissions for the Marine Terminal Project. There was no shifting of baseline dates or double counting used, as claimed by the commenter. Consequently, the remaining unused NO_x emissions of 10.8 tons NO_x (62.3 pounds per day) were applied correctly to the proposed Project. Appendix B of the RDEIR show the Unit B-401 Process Heater annual average baseline emissions calculations.

As shown in the RDEIR Section 4.1, *Air Quality* and Appendix B, the calculations were conducted correctly and the resulting net change in NO_x emissions is less than significant.

B11-16 The commenter claims additional emissions from recovery of 135 tons/year of sulfur and from operation of the Air Liquide Hydrogen Plant. This comment has been previously raised and addressed in the RDEIR.

The commenter is incorrect about the proposed Project and the existing operating Air Liquid hydrogen plant. As stated in the fourth paragraph of page 3-1 of the 2013 DEIR:

> "The Refinery generates steam, fuel gas, and electricity, and Phillips 66 also purchases resources, such as natural gas and water. Pacific Gas and Electric Company (PG&E) supplies natural gas and electricity to the Refinery. Air Liquide's hydrogen plant sells hydrogen, steam and power to the Phillips 66 Refinery. Air Liquide purchases water, heater fuel gas and hydrogen plant feed gas from the Refinery. The proposed Project will recover *butane* and *propane* from the feed gas stream. Natural gas will be substituted for the recovered butane and propane. <u>The proposed Project would not have any impacts on the Air Liquide plant operation [underline added for emphasis]</u>…"

The elements of the proposed Project are described in the 2013 DEIR and RDEIR Chapter 3, *Project Description*. There is no relationship between the proposed Project and the hydrogen plant.

The proposed Project would generate an additional 135 tons per year of sulfur for processing at the refinery's sulfur recovery plants. This is based on 270 tons per year of SO_2 reduction from fuel gas combustion. This represents about 0.2% of the total sulfur currently processed by the sulfur plant annually (82,000 tons per year). This is a minor increase in processing throughput that would result in a negligible increase in emissions from the refinery's sulfur recovery plants.

B11-17 Regarding the GHG emissions that would be associated with the combustion of butane and propane produced under the proposed Project, the RDEIR discloses the justification to support the fact that quantification of the associated net GHG emissions would be overly speculative and inclusion of such information in the EIR is precluded by CEQA Guidelines Section 15145. Also, refer to Responses B6-10 and B6-11.

The commenter indicates that the BAAQMD agrees with the commenter's position regarding the need for quantification of GHG emissions associated with combustion of propane and butane that would be recovered by the proposed Project, and includes a statement from a BAAQMD comment letter to the County to support the claim. However, the referenced BAAQMD comment letter is relative to the 2013 DEIR for the proposed Project. In fact, the reason the County elected to proceed with the RDEIR was based in part on the BAAQMD's comments on the 2012 DEIR. As noted in the following paragraph of BAAQMD's comment letter on the RDEIR (see Agency Comment Letter A3), the BAAQMD found that the RDEIR has addressed its concerns relative to the GHG emission estimates:

> "The RDEIR also addresses the Air District's recommendation that the County fully explain the estimated decrease of GHG emissions anticipated to result from the Project. The RDEIR justifies the Project's GHG emissions decrease based on the anticipated change in fuel gas use and the conclusion that accounting for the end use of propane and butane is too speculative to estimate downstream emissions."

The commenter also appears to suggest that since coal, home heating oil, fuel oil, diesel, kerosene, gasoline, and ethanol are not widely used for heating within California, these fuels would not be replaced by propane recovered by the proposed Project. However, there is currently no way to determine whether or not the end use for the exported propane would occur in California. Furthermore, there are other non-heating applications for most of the stated fuels, including transportation-related fuels.

The Refinery currently does not recover propane so it does not have information about current users or their uses for propane. However, a recent wholesale purchaser of butane recovered at the Refinery has advised Phillips 66 that the most common uses its customers make of butane are chemical blending, chemical feedstock, gasoline blending (additive), or gasoline feedstock. As disclosed in the *Butane* discussion on RDEIR page 4.5-14, these blending activities and uses do not generate GHG emissions.

The commenter provided a GHG emissions estimate associated with combusting 1,000 barrels of propane per day in boilers in California and suggests that the associated emissions estimate should be included in the total net GHG emissions tally for the proposed Project. However, the estimate is based on purely speculative assumptions that do not appear to be supported by facts or based on sound evidence. Including such an emissions estimate in the RDEIR is clearly precluded by CEQA Guidelines Section 15145 given its speculative nature.

B11-18 The commenter makes nine comments regarding health risks. Each comment is responded to separately below:

1) Health risk fails to identify the Point of Maximum Impact.

The HRA identifies the points of Maximum Exposed Individual Receptor and Maximum Exposed Individual Worker because these locations represent the locations of maximum risk.

2) Health risk incorrectly relies on annual average toxic air contaminant (TAC) emissions to determine health risks, not on shorter periods (one to 24 hours).

Cancer and chronic health risks associated with diesel particulate matter (DPM) exposure are based on annual average TAC emissions because these cancer risk and chronic hazard indices are based on annual average concentrations. Although the California Office of Environmental Health Hazard Assessment has established cancer risk and chronic hazard indices for DPM, they have not established acute hazard indices for DPM.

The proposed Project's acute health risks focus on boiler operation (for the boiler option) and increased operation of the steam power plant (for the SPP option). For both the boiler and SPP options, operation is assumed to be continuous throughout the year. Thus, hourly emissions are simply annual emissions divided by 8,760 hours per year. Fugitive emissions are treated in a similar manner. Consequently, the RDEIR does not underestimate acute health risks because they are based on hourly, short-term emissions.

3) Files provided by the County only include modeling along the southern route, not along the northern route.

In conducting the HRA, the analysis conservatively assumes that 100 percent of the proposed Project's locomotive travel would take the southerly route and 100 percent would take the northern route. The files provided by the County include the AERMOD modeling results, which include modeling along both routes. The HRA does not underestimate locomotive emissions and actually models worst-case risks.

4) HRA fails to account for idling from operation of the on-site switching locomotive.

The locomotive HRA conservatively assumes that 100 percent of the proposed Project's locomotive travel would take the northern route and 100 percent would take the southern route. In both directions, the emissions include both large and small line haul and switch emissions. Therefore, the HRA is conservative.

5) Similar to four, states that RDEIR fails to acknowledge increase idling of haul locomotives.

There is no validity to the argument that the proposed Project would increase idling of haul locomotives.

6) RDEIR underestimates annual propane/butane exports and number of rail cars on an annual basis. Therefore, underestimates locomotive emissions and DPM.

As discussed in Responses B11-12, B11-13, and B11-14, the RDEIR does not underestimate locomotive emissions and, therefore it also does not underestimate incremental cancer risks.

7) RDEIR's HRA fails to account for cancer risks associated with increased emissions of benzene due to switch to Bakken crudes.

As mentioned in several responses, the proposed Project does not involve the use of Bakken crudes, consequently the estimated emissions of benzene and the resulting health risk estimates based on those emissions are accurate.

8) Cumulative HRA relies on facility wide HRA conducted for purposes of demonstrating compliance of Assembly Bill 2588, which does not address mobile source emissions or exempt sources. Thus health risks associated with existing locomotive and other mobile source emissions at the Refinery are not accounted for.

The cumulative HRA included the existing Phillips 66 Refinery. The commenter is correct in that the refinery piece of the HRA does not include mobile sources. However, as shown in Table 4.1-14, the cumulative HRA included the proposed Project, the existing Phillips 66 Refinery, along with locomotives operating on the rail line and transportation sources on Highway 80. BAAQMD has reviewed the individual and cumulative HRA and concluded that it was prepared correctly (see Comment A3-1).

9) The commenter complains that the RDEIR's $PM_{2.5}$ concentration estimates are incorrect.

The commenters provide revised $PM_{2.5}$ concentrations for these sources, but provide no guidance on how those estimates were prepared. The commenters conclude that the total $PM_{2.5}$ concentrations equal 0.749 ug $PM_{2.5}$/m3, which meets the 0.8 micrograms per cubic meter of air (ug/m3) BAAQMD significance threshold. However, even if one were to accept the commenters' estimates, which is hard to do since no documentation has been provided, their estimated concentration rounds to 0.7 ug/m3, which is less than BAAQMD's significance threshold.

The commenter also states that the $PM_{2.5}$ concentrations do not account for mobile or exempt sources. However, as shown in Table 4.1-13, the cumulative $PM_{2.5}$ concentrations included emissions from a number of exempt transportation sources, including the existing rail line, Interstate 80, and the Phillips 66 marine terminal. Even when considering all of these sources, the total cumulative $PM_{2.5}$ concentrations are less than the BAAQMD's $PM_{2.5}$ significance threshold. This result has been reviewed and approved by the BAAQMD.

B11-19 The commenter states that the RDEIR ignores CEQA's requirements and concludes that those projects' impacts that are not individually significant cannot be cumulatively significant. The commenter is partially correct. The RDEIR concludes that proposed Project' criteria pollutant emissions are less than significant on a project basis because they are less than the BAAQMD's CEQA significance thresholds. Similarly, the RDEIR also concludes that the proposed Project' criteria pollutant emissions are less than significant on a cumulative basis because BAAQMD CEQA guidance states that if a projects' emissions are less than the CEQA significance thresholds, they would have a less than significant contribution to cumulative impacts.

While this is true for the proposed Project's criteria pollutant emissions, it is not the same situation with the HRA. For health risks, BAAQMD has developed separate project specific and cumulative health risk criteria. The RDEIR uses those BAAQMD criteria in the HRA.

B11-20 See Master Response 2.6, which discusses cumulative impacts.

B11-21 With regard to the portion of the comment about cumulative emissions, see Response B11-19.

With regard to the portion of the comment about ignoring emissions outside of the BAAQMD, see Response B9-31.

B11-22 The proposed sulfur recovery unit (referred to in the RDEIR as the hydrotreater) would result in no direct GHG emissions; however, it would require ancillary equipment, such as pumps and compressors that would be powered by approximately 1.0 Megawatts (MW) of electricity obtained from Pacific Gas and Electric (PG&E)'s electrical grid. This electricity demand represents the majority of the total net increase of 1.28 MW of electricity demand that would be associated with the Project. As disclosed in the *Indirect Emissions from Increased Electrical Demand* discussion on RDEIR page 4.5-12, the indirect GHG emissions from the additional 1.28 MW of electricity consumption under the proposed Project, which includes the electricity consumption that would be associated with operations of the hydrotreater, would be approximately 2,002 metric tons CO_2e.

As disclosed in the RDEIR Chapter 3, *Project Description* on page 3.4-36, due to the amount of hydrogen present in the existing gas streams that would be sent to the proposed hydrotreater, no additional hydrogen would be necessary for the hydrotreating process. The required hydrogen is already present in the Refinery gas streams being hydrotreated. Therefore, there would be no increased production demand on the existing Refinery hydrogen plant or on the nearby Air Liquide Hydrogen Plant, and there would be no associated increase in GHG emissions.

As disclosed in RDEIR Chapter 3, *Project Description* Section 3.4.1.1, *Crude Oil Feedstocks*, the proposed Project would have no effect on the types and/or quantities of crude oil feedstocks that can be processed at the Refinery. Under existing conditions at the Refinery, the processing of the current crude oil feedstocks produces RFG that includes commercial quantities of butane and propane. Actual sampling and measurements of propane and butane in the RFG at the Refinery taken in 2011 was used as the basis for the 14,500 BPD Project design and the BAAQMD permit limit. Sampling data from calendar year 2013 indicates an average of 13,970 BPD of propane and butane is present in the RFG (see RDEIR Section 3.4.2.1, *Refinery Fuel Gas Propane/Butane Recovery Unity and Associated Propane Treatment*). If less than 14,500 BPD propane and butane are available in the existing crude slate, then the lesser amount would be captured and removed from the RFG. Again, the proposed Project would have no effect on the types of crude oil feedstocks that can be processed at the Refinery.

The County agrees that it is an undisputed fact that the combustion of propane and butane generate GHG emissions and that the use of Project-recovered propane and butane may generate GHG emissions. However, after conducting a thorough investigation on the issue, the County maintains that quantification of such emissions, including any emissions that would be displaced, would require the use of assumptions that would be too speculative. Therefore, such emissions were not quantified. For responses associated with the RDEIR's handling of the GHG emissions that would be associated with the propane and butane recovered by the proposed Project, refer to Response B11-21.

The commenter appears to indicate that the GHG emissions cumulative impact analysis should have considered the GHG emissions associated with the cumulative projects combined with the proposed Project GHG emissions for comparison to the BAAQMD's significance threshold of 10,000 metric tons CO_2e. As stated in the RDEIR Section 5.4.3.5, *Greenhouse Gas Emission*s, cumulative impact discussions (page 5-9), both BAAQMD and the California Air Pollution Control Officers Association consider GHG impacts to be exclusively cumulative impacts; as such, the County's assessment of significance is based on a determination of whether the GHG emissions from the proposed Project represent a cumulatively considerable contribution to the global atmosphere. Because the net emissions estimated for the proposed Project contribution to GHG impacts would not exceed the BAAQMD's significance threshold, the County has determined that the proposed Project would not be cumulatively considerable, and there would be no cumulative impact associated with the proposed Project.

B11-23 Cumulative impacts related to hazards and hazardous materials can be found in RDEIR Section 5.4.3.6, *Hazards and Hazardous Materials*.

B11-24 This comment is noted.

B11-25 This comment summarizes issues raised in previous comments. See Master Responses 2.2, 2.4 and 2.6 and Responses B11-1 through B11-23.

B11-26 See Response B1-2.

References

Bay Area Air Quality Management District (BAAQMD), 2009. *Revised Draft Options and Justification Report California Environmental Quality Act Thresholds of Significance*, October 2009.

BAAQMD, 2014, *Improving Air Quality and Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004 -2013*)

Phillips 66, January 13, 2015, *Personal Communication between Brent Estep, Phillips 66 and Gary Kupp, Contra Costa County. Copies of Permits from San Joaquin Valley Air Pollution Control District*: S-1518-4, S-1518-5, S1518-31-5, S-1518-1-5, S-1518-8-4.

South Coast Air Quality Management District (SCAQMD), 2008. *Board Meeting Agenda Item No. 31, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans*, December 5, 2008.

3.3 Response to Individuals Comments

Lashun Cross

From: Chris Lish <lishchris@yahoo.com>
Sent: Monday, December 01, 2014 8:35 PM
To: Lashun Cross
Subject: Please reject the Rodeo refinery expansion -- Public comment on the Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073)

Monday, December 1, 2014

Attention: Ms. Lashun Cross, Principal Planner
Contra Costa County Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

Subject: Please reject the Rodeo refinery expansion -- Public comment on the Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (County File Number LP12-2073)

Dear Contra Costa Board of Supervisors

I am writing to express my deep concern about the proposed Phillips 66 Rodeo refinery expansion project. This project presents significant, unavoidable, unnecessary, and unacceptable risks—to our climate and to Bay Area communities and communities across California—which the initial Environmental Impact Report does not address. Bringing tar sands oil to California will undermine our state's efforts to be a global leader addressing climate change, and the trains used to transport the tar sands oil will put our communities and environment throughout California directly in harm's way. I strongly urge the Contra Costa County Department of Conservation and Development and the Contra Costa County Board of Supervisors to deny the Phillips 66 Rodeo refinery expansion proposal. C1-1 C1-2 C1-3

> *"Our duty to the whole, including to the unborn generations, bids us to restrain an unprincipled present-day minority from wasting the heritage of these unborn generations. The movement for the conservation of wildlife and the larger movement for the conservation of all our natural resources are essentially democratic in spirit, purpose and method."*
> *-- Theodore Roosevelt*

This proposal should not be reviewed in isolation. In order to comprehensively assess the impacts of the Rodeo proposal, the EIR must include an assessment of the Phillips 66 Santa Maria refinery expansion proposal, which if approved, would result in tar sands crude being processed at the Rodeo refinery. Together, these proposals will also increase the number of unsafe oil trains moving through California communities. C1-4 C1-5

> *"It is our task in our time and in our generation, to hand down undiminished to those who come after us, as was handed down to us by those who went before, the natural wealth and beauty which is ours."*
> *-- John F. Kennedy*

Emergency responders are not prepared for these heavy, dangerous trains used to transport the tar sands oil, and current safety standards won't protect the public. The recirculated draft Environmental

Impact Report (EIR) needs to adequately assess the risks of an oil train disaster and address how first responders will be informed and how they will respond. Given that more crude oil spilled from trains in 2013 than spilled during the past four decades, the draft EIR's analysis must include important data about crude oil rail accident frequency and magnitude in 2013 and 2014. The EIR must look at recent data, including accident data from Canada which has also experienced increased crude by rail incidents. This data reflects the increased quantities of dangerous crude oil being transported in old and unsafe tank cars and will provide a more accurate assessment of accident risk and magnitude along the rail lines that would serve this project. C1-5

"As we peer into society's future, we—you and I, and our government—must avoid the impulse to live only for today, plundering for our own ease and convenience the precious resources of tomorrow. We cannot mortgage the material assets of our grandchildren without risking the loss also of their political and spiritual heritage. We want democracy to survive for all generations to come, not to become the insolvent phantom of tomorrow."
-- Dwight D. Eisenhower

The EIR must fully analyze the potential worst-case scenario of a spill near each of the many watersheds crossed en route to and from the Rodeo facility. The proposed rail route brings oil trains through the San Francisco Bay-Delta watershed, and then on along California's treasured central coast. The EIR's worst case scenario spill analysis must accurately reflect that most crude trains are comprised of 100 or more tank cars and that a worst case scenario spill would be of more than three million gallons of explosive, toxic crude oil. Such a spill could devastate sensitive ecosystems, our homes and other private property, and our local economy, and would pose a significant threat to public health and safety. A derailment near a river, stream, reservoir, or above a groundwater aquifer could contaminate drinking water for millions of Californians. This project cannot be approved without analyzing and mitigating its true impacts. During a time of extreme drought, Contra Costa County must not approve this project and create contamination risk for the rest of our state. C1-6

"Every man who appreciates the majesty and beauty of the wilderness and of wild life, should strike hands with the farsighted men who wish to preserve our material resources, in the effort to keep our forests and our game beasts, game-birds, and game-fish—indeed, all the living creatures of prairie and woodland and seashore—from wanton destruction. Above all, we should realize that the effort toward this end is essentially a democratic movement."
-- Theodore Roosevelt

The Rodeo project also risks significant water quality impacts because the project relies upon a once-through cooling system, a process that the State wants to eventually decommission because of its significant impacts to water quality and biological resources.

"These temple destroyers, devotees of ravaging commercialism, seem to have a perfect contempt for nature, and, instead of lifting their eyes to the God of the Mountains, lift them to the almighty dollar."
-- John Muir

The EIR should also assess the risk of lower-quality tar sands feedstock running through refinery components, which increases the likelihood of catastrophic failure or pipe ruptures due to corrosion, as occurred during the August 2012 Chevron Richmond Refinery fire that sent more than 15,000 people to area hospitals. C1-7

"The ultimate test of a moral society is the kind of world that it leaves to its children."
-- Dietrich Bonhoeffer

The proposed rail spur and the pipe complex that would connect the propane tanks to the trains would be sited on a liquefaction zone next to the Bay. This only increases the risk of a propane explosion at the Rodeo facility—like the ones that injured eight people at a propane plant in Florida during the summer of 2014 and that killed 15 workers in Texas in 2005—which would pose a major threat to both workers and Rodeo residents living along the facility's fenceline. C1-8

"To waste, to destroy, our natural resources, to skin and exhaust the land instead of using it so as to increase its usefulness, will result in undermining in the days of our children the very prosperity which we ought by right to hand down to them amplified..."
-- Theodore Roosevelt

The toxic air emissions resulting from this project pose an unacceptable risk to public health. The Phillips 66 Rodeo refinery project will create unacceptable levels of toxic air emissions that will impact communities throughout the Bay Area. The Phillips 66 Rodeo refinery, though much smaller than the huge Chevron facility, produces twice the emissions. Refining additional oil and tar sands crude would only exacerbate the air pollution problems. This deserves additional study, as the Bay Area Air Quality Management District's Health Risk Assessment was not sufficient to assess the health impacts on this pollution. C1-9

"Then I say the Earth belongs to each generation during its course, fully and in its own right, no generation can contract debts greater than may be paid during the course of its own existence."
-- Thomas Jefferson

And, somewhat most importantly, the final EIR must disclose the full climate impacts of the proposed project, including the likelihood that it will increase the transport and burning of toxic tar sands oil. Phillips 66 must disclose crude quality information in order for decision makers to fully understand the climate impacts of the proposed rail project. It is clear that Phillips 66 wants to bring toxic Canadian tar sands to California. Tar sands oil means more carbon pollution. At every stage of the mining, transportation, and refining process, Canadian tar sands are more carbon intensive than other sources of oil. Bringing tar sands to California will undermine the state's efforts to be a global leader addressing climate disruption. This project is simply incompatible with California's plans to be a climate leader. C1-10

"Do not suffer your good nature, when application is made, to say 'Yes' when you should say 'No'. Remember, it is a public not a private cause that is to be injured or benefited by your choice."
-- George Washington

I believe all of these issues deserve further study to protect the health and safety of our communities from these refinery expansion proposals. Phillips 66's expansion plans for the Rodeo and Santa Maria refineries represents a catastrophic threat to communities and major population centers in the oil train blast zone, will increase toxic air pollution in refinery communities, and will substantially increase global warming pollution, exacerbating the threat of crippling drought and massive wildfires that is already affecting so much of California. In the end, I believe that neither project is worth the risks, and that both should be rejected. Californians are depending on our public officials to stop dangerous fossil fuel expansion that poses so many threats to our health, safety, and future in California. For all the aforementioned reasons, I urge the Contra Costa County Department of Conservation and Development and the Contra Costa to reject the proposed Phillips 66 Rodeo refinery expansion. This project creates significant, unavoidable, and unnecessary risks for our communities and our climate. C1-11

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."
-- Aldo Leopold

C1-11

Thank you for your consideration of my comments. Please do NOT add my name to your mailing list. I will learn about future developments on this issue from other sources.

Sincerely,
Christopher Lish
Olema, CA

3.3.1 Letter C1 – Responses to Comments from Chris Lish

C1-1 The commenter expresses concern over general risks from the proposed Project to climate and communities and states that these are not addressed in the Recirculated Draft Environmental Impact Report (RDEIR). Impacts from the proposed Project are discussed in full in the RDEIR, along with any mitigation that is required under the California Environmental Quality Act (CEQA) to ensure impacts are less than significant. Specific discussion of impacts related to climate is provided in RDEIR Sections 4.1, *Air Quality*, and 4.5, *Greenhouse Gas Emissions*. Specific discussion of risks to communities is provided in RDEIR Section 4.6, *Hazards and Hazardous Materials*. This comment is noted.

C1-2 See Master Response 2.4, which discusses crude feedstocks in relation to the proposed Project.

C1-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. See Response C1-2.

C1-4 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities.

C1-5 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. Emergency responders are discussed in Section 4.15, *Public Services*, in the 2013 Draft Environmental Impact Report (DEIR). See Response B8-7 regarding the adequacy of the data on rail accidents used by the RDEIR. See also Master Responses 2.2, 2.4 and also 2.5, which discusses hazards.

C1-6 See 2013 Final Environmental Impact Report (FEIR) Master Response 2.6 for a discussion of potential issues and accident conditions related to transport of hazardous materials by rail. See also Master Response 2.4.

See Response B9-27 for a discussion of the once through, non-contact saltwater process water cooling system. See RDEIR Section 4.7, *Hydrology and Water Quality*, for a discussion on impacts to water quality and Section 4.2, *Biological Resources,* for a discussion on impacts to biological resources.

C1-7 See Master Response 2.4.

C1-8 See 2013 FEIR Master Response 2.5, regarding liquefaction.

C1-9 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express general concerns over safety and air pollution. Impacts associated with criteria pollutant emissions and health risks were fully evaluated in RDEIR Section 4.1, *Air Quality*. The commenter asserts that the Health

Risk Assessment (HRA) does not analyze potential impacts from the use of tar sands. See Master Response 2.4 and Response B6-23, which discusses the HRA.

C1-10 See RDEIR Section 4.5, *Greenhouse Gas Emissions*, for a discussion on potential impacts of the proposed Project on climate change. See Master Response 2.4.

C1-11 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express opposition to the proposed Project and general concerns over safety and air pollution. This comment is noted. Also see Responses B7-1, C1-1, and C1-9.

Comment Letter C2

To: Contra Costa County Department of Conservation and Development
Attn: Lashun Cross Lashun.cross@dcd.cccounty.us
Re: Proposed Phillips 66 Rodeo Propane Recovery Project Recirculated Draft Environmental Impact Report Comments
County File No.: 2012072046 LP12-2073
Date: Tuesday December 2, 2014
From: James Neu
3334 Ricks Ave.
Martinez, Ca. 94553
Jjneusies2@gmail.com
Martinez Environmental Group
Mrtenvgrp@gmail.com

Dear Ms. Cross,
Thank you for the opportunity to respond to the Phillips 66 RDEIR. Below you will find my/ our comments and concerns and I/ we look forward to your response. Please address any questions or statements marked with an *. Thank you for your time.

3.3.2.13 Wastewater Treatment Plant
After filtering, effluent is pumped through a deep water diffuser located underneath the marine terminal into San Pablo Bay.
* The RDEIR does not state if there is currently a water monitoring system in place at this location to ensure effluent is within acceptable levels according to the Regional Water Quality Control Board. If there is not a water monitoring system in place or water sampling is not performed on a quarterly basis, will a system be installed with the new project?

C2-1

3.3.2.17 Tank Cars
The RDEIR states, "…in1970, the Railway Progress Institute, the predecessor of the Railway Supply Institute (RSI), joined with AAR to create the railroad tank car safety research and test project or tank car safety project. Since 1970, the tank car safety project has resulted in substantive improvements in safety research, modifications to existing tank cars, construction of new tank cars to meet improved specifications and reductions in derailment rates."
* This is a false statement and should be struck from the RDEIR. Nationally, rail incidents rose from several per year prior to 2010 to 155 in 2013 and 90 thus far in 2014. (PHMSA incident reports database research) In California alone, incidents increased from 3 in 2011, 25 in 2013 and as of May 2014, 24 incidents. (Interagency Rail Safety Working Group- 2014)
* California refiners received 1.1 million barrels of crude oil by rail during 2012. During 2013, California refiners received 6.3 million barrels, a six fold increase within one year and projections are for these increases to continue in the coming years. Shipments of Liquid Petroleum Gas and Butane have increased as well during these times./

* As of this writing, there has been no Federal Regulation put in place regarding rail car safety improvements such as classification of mined gas and liquids to enhance safety before shipping and ensure proper classification, positive train control monitoring system (PTC), electronically – controlled pneumatic braking system (ECP), complete phasing out of DOT 111 rail tank cars, increase the number of track inspectors and frequency of track inspections, apply route planning and route selection requirements set forth in 49CFR 172.8 to routing of all tank car trains, establishing a maximum speed of 40 mph through urban areas, install wayside wheel bearing detectors on tracks at 40 mile intervals, install a notification system for crude by rail shipments and ensuring the data can provide accurate projections of future shipments, increase emergency response training and conduct planning for emergency response capabilities.

C2-2

3.3.2.19 Phillips 66 Santa Maria Refinery

The Santa Maria Refinery (SMR), considered by Phillips 66 corporate offices as a "San Francisco Refinery", processes primarily heavy, high sulfur crude oil including Canadian tar sand crude oil into semi- refined liquid products as well as solid pet coke and solid elemental sulfur. Semi refined liquid products are shipped via a 200 mile pipeline to the Phillips 66 Rodeo Refinery for upgrading into finished petroleum products. SMR has applied to San Luis Obispo County for approval of a project to modify an existing rail spur to include a tank car unloading facility to accommodate 80 tank cars per day, five days per week equaling 52,000 to 57,000 barrels of crude oil per train.

* The RDEIR states, "...the proposed Rodeo Propane Recovery Project is independent of and would have no effect on the SMR operations." This is a false statement in that the SMR Rail Spur Extension Project and SMR are intrinsic for the Rodeo Propane Recovery Project to exist. These two refineries operations are dependent upon the other and cannot function without each other. The Phillips 66 Rodeo Propane Recovery Project RDEIR mentions the Phillips 66 SMR as its source of semi refined liquid products. When both facilities have RDEIR's out before the public review, why are one facility mentioned and not the other when each facility is dependent upon the other?

* These two Phillips 66 projects should be considered one project as the refineries are considered one facility by the owner and their functions are dependent on the other, therefore their EIR's should be resubmitted and reviewed as one project.

C2-3

3.4.2.3 Propane Storage

Six - 2500 barrel pressure tanks designed for propane storage would be installed in a tank farm west of San Pablo Avenue. The RDEIR states..." this location has access to key utilities, such as fire water."

* This location also puts an enormous amount of health and safety risk to the northwest Rodeo Community to where the Hazard Zone Map Figure 4.6 -2 shows a blast zone of one mile of the tank farm. A BLEVE would produce a fire that is generally of short duration, the intense thermal radiation (heat) generated can cause severe and possibly fatal burn to exposed people over relatively considerable distances in a matter of seconds (US EPA, 1994) Therefore, fire fighting efforts with water would not be a mitigation in an event such as this.

* From the EPA statement above, the benefits of fighting a fire of this magnitude would be futile and the Contra Costa County Fire Marshall stated that fires of this magnitude are generally left to burn themselves out.

C2-4

4.4 Geology and Soils

* The RDEIR states, "Strong ground shaking from earthquakes generated by active faults in the Bay Area is a notable hazard to the proposed project." Peak ground motion acceleration at the refinery could reach or exceed 0.47g, according to the California Geologic Society. (2013)

* According to the Association of Bay Area Governments (ABAG, 2012) the western shoreline area where the proposed tank farm and rail loading rack are at risk for failure due to liquefaction of the soil. "The propane loading rack component of the proposed Project would be located in this area of high liquefaction susceptibility." These statements should be enough to look for an alternative proposal or to forbid the project in continuing until a seismic mitigation measure can be accepted.

* The proposed propane and butane loading rack area lies on soils of clay and sand which are highly susceptible to liquefaction. The issue of liquefaction should be addressed on recent USGS information of the project site.

The refinery has been operating since 1896 with a history of leaks and spills that have contributed to subsurface contamination.

C2-5

* What agency is monitoring the subsurface contamination, how often is it monitored, and to what capacity?
* What agency will be responsible for this refinery site clean up when this refinery closes?
* Are funds currently being set aside for the clean up costs?

C2-5

4.5 Greenhouse Gas Emissions

The energy sector is the largest contributor of Greenhouse Gas (GHG) emissions; 40% in Contra Costa County in 2012. Executive Order S-3-05 sets target dates to reduce GHG emissions to 2000 levels by 2010, reduce GHG emissions to 1990 levels by 2020 and reduce GHG emissions to 80 % below 1990 levels by 2050.

* Phillips 66 Rodeo is the largest GHG emitting stationary source in unincorporated Contra Costa County (2005) according to County Climate Action Plan data. 1,866,113 metric tons of carbon dioxide in 2005 was emitted from the Phillips 66 Rodeo facility according to Cal EPA. The RDEIR fails to address how the proposed project would achieve these Greenhouse Gas emission reduction goals under the Federal Regulation guidelines.

The proposed project would remove propane and butane from RFG to be sold to retailers and wholesalers. "Propane would be exported to wholesalers but because operations at the refinery has not yet captured or sold propane, Phillips 66 refinery does not have a list of wholesalers that may purchase the product, which retailers may purchase the product, what the end use of the product would be, what existing resource it may replace, whether there would be an overall change in management demand or supply as a result of the propane sold by Phillips 66."

*It is suspect that Phillips 66 is spending millions of dollars on a recovery project that does not know what its product will be used for, if there will be a market for its product, or know if they will have a customer base for their project.

* The RDEIR does not address how an increased impact rail movement associated with the project would have on GHG emissions.

C2-6

4.6.5 Consequence Analysis Methodology

Table 4.6-4 shows the impact distance of 0.4 mile of a butane and propane tank car explosion.

*This table only addresses the impact distance as it relates to potential hazard zones from releases originating inside the existing refinery configuration according to the RDEIR current and proposed project operations.

* The RDEIR fails to address the impact zones outside the project site and along the proposed train routes through urban areas along the Carquinez Straits. The proposed train routes of butane and propane will be to and from the Azol Rail Yard in Martinez, through downtown Martinez, downtown Pittsburg and downtown Antioch on their way to destinations along the California Arizona border. The RDEIR fails to address the impacts to these communities.

C2-7

4.6.6 Discussion of Impacts and Mitigation Measures

Impact 4.6-1: Footnote # 8: "Propane or butane vapor clouds in an open area (not in a building or in congested pipe work, but in a field or area with large but not connected objects) cannot produce an overpressure that can harm people directly. For purposes of this generic analysis along the rail route, it was assumed that most locations would be open."

* The RDEIR does not figure all areas along the proposed rail routes.
* The RDEIR does not address the size of the impact of several cars exploding coupled together.
* The RDEIR bases the frequency of BLEVE accidents on periods from 1990 – 2010; a 20 year period. In the last three years, propane and butane rail traffic has increased thus basing the risk analysis on outdated information.

C2-8

Impact 4.6-3: "The proposed project could create a significant hazard to the public or environment through an upset or accident involving the release of hazardous materials."
*The RDEIR fails to discuss tank car protection on the unsecured tracks within and outside the refinery. These rail sidings and storage locations are susceptible to terrorism through a release or accelerant explosion or a large caliber rifle shot that can penetrate the tank car metal skin.
* The RDEIR does not mention the locations of storage that would not be allowed such as under the Carquinez Bridge in Crockett where documented photographs have been taken of loaded LPG rail cars sided under the bridge cables in front of the block house in Crockett. A BLEVE at this location would melt the bridge cables bringing down the Vallejo- Crockett Carquinez suspension bridge.

C2-9

4.7 Hydrology and Water Quality
Sea Level Rise; "Based on most widely accepted literature, potential sea level rise would result in an increase of 16 inches by 2050 and 55 inches (or higher) by 2100. (BCDC 2011)"
* These estimates would pose a risk of inundation to the project and existing refinery facilities. Considering fossil fuel production projections are estimated to be available for the next thirty years and Phillips 66 and this project would contribute to this sea level rise, mitigation measures should be detailed.
* The RDEIR fails to mention the full life expectancy of the project which may extend into decades that would have a continued effect on the local community and communities up and down rail of the project. The project time frame, beyond the construction phase, is a typical CEQA topic for a project of this magnitude that could result in adverse and significant impacts.

C2-10

5.4 Cumulative Impacts
"Public Resources Code section 21083(b) (2) states that a significant effect on the environment includes the possible effects of a project "that are individually limited but cumulatively considerable." As defined by CEQA, "cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with effects of past projects, the effects of other current projects, and the effects of probable future projects."
* The RDEIR fails to address the cumulative impact the proposed Valero Crude by Rail Project in Benicia, the proposed Phillips 66 Santa Maria Refinery Rail Spur Extension Project, the proposed WESPAC Pittsburg Rail and Marine Terminal Transport Facility and the Stockton Targa Rail and Marine Terminal along with the proposed Phillips 66 Propane Recovery Project would have on the Bay Area and the State of California. All of these projects would increase hazardous materials transfer of explosive crude oil, butane, liquefied petroleum gas along the Carquinez Straits adding to a significant impact of VOC's and GHG emissions.
* Table 5-1 Potential Projects for Cumulative Effects Evaluation: The RDEIR fails to mention the Stockton Targa Marine and Rail Terminal Project that was approved this year or the Phillips 66 Santa Maria Refinery Rail Spur Project that has a direct connection and major influence on the Rodeo Propane Recovery Project.

C2-11

5.4.3.2 Biological Resources
"... the proposed Project and similar projects are unlikely to make a cumulatively considerable impact on nesting and foraging birds because additional refinery construction and operation at the proposed Project scale would not significantly change the baseline level of noise and visual disturbances on or near the refinery complexes."
* The proposed Project and similar projects along the Carquinez Strait would have a significant impact on nesting and foraging birds due to the increased emissions of VOC and GHG emissions along the rail corridor. The increased rail activity from this project, the Stockton Rail Project, the Santa Maria Rail Spur Project, the WESPAC Rail Project and the Valero Crude by Rail Spur Project all involve the increased amount of train activity into and out of the state. Additional

C2-12

refinery construction and operation of the proposed projects and other proposed refinery projects individually may or may not affect the avian species but all of these projects combined and the emissions from them would have an impact on nesting and foraging birds. C2-12

An economic study to the City of Rodeo was not done in the RDEIR that should address the effects of a spill, fire or explosion.
* There was no discussion or legally bound verbiage in the RDEIR that addressed spills, clean up, or liability as to who would be responsible for any of these impacts.
* A financial impact to the City of Rodeo should be done in case of an emergency response and clean up of a hazardous materials amount greater than 100 gallons.
* A financial impact to the City of Rodeo should be done in the event of a spill, fire or explosion.
* A financial impact to the City of Rodeo should be done on how the Propane recovery project will negatively impact current businesses and future businesses. C2-13

Regulatory frameworks are changing that will effect this RDEIR evaluation of impacts.
* This Propane Recovery Project and crude by rail projects in the state pose precedent setting challenges under regulatory uncertainty and complexity under CEQA review. Project operations involve stationary and mobile sources of hazards with a potential of accidents and impacts that could occur anywhere from the crude oil source to the state borders including refinery fuel; gases.

* State agencies should continue to work together to implement the recommendations in the Oil by Rail Safety in California: Preliminary Findings and Recommendation document, they should monitor the status of federal rulemaking and proceedings to ensure they consist of recommendations made by the state, provide additional funding for local emergency response, and acquire the data needed to fill identified information gaps. C2-14

* The specific challenges posed by the project deserve attention and raise precedent settings about the parameters of CEQA to address the total scope and reach of this project which includes interstate rail transport. Currently, there is an outdated US Dept. of Transportation regulatory framework recommended for changes with recently initiated proposed new rule making on rail safety which has not yet been resolved. There are no current protections for communities and the environment for rail hazards and extraordinary risks posed by the transport of dangerous volatile unconventional crude oils with Federal Preemption granted to Union Pacific Railroad denying local, regional or state jurisdictions the means to mitigate rail risks in communities.

* This RDEIR fails to address the distant sources of unconventional domestic and Canadian crude oil supplying the proposed Propane Recovery Project from the Santa Maria Refinery via rail routes crossing at least three states with hazardous crude oil through treacherous mountain passes, across waterways that supply valuable drinking water to millions of people, and the impact on the urban and rural routes and communities. California refineries have shifted to become more dependent on foreign sources as supplies from Alaska and California have declined making hydraulic fractured domestic crude oil the new source of California refinery feed stock. The surge of domestic crude oil is centered on the shale regions of Texas and North Dakota all of which must be brought to California by ship or train as there are no pipelines currently into California. (CAPP, Raymond James LTD) C2-15

* "Refiners inside and outside the state are pursuing crude by rail receiving terminal projects not because they are running out of crude oil supplies from existing sources; rather they are trying to obtain discounted crude oil to reduce their operating costs and improve profitability." (California Energy Audit) Projects at the well head to increase the capability to load crude oil into rail cars at production facilities in Canada, North Dakota, Texas, Colorado, and New Mexico will allow

crude oil price discounts where increase in output has overwhelmed capacity of crude oil pipelines to transport to refineries. Consequently, crude oil prices at the shale oil producing regions have been sufficiently discounted by producers to enable the costlier rail transportation economics to work for refining customers on the coasts.

* Invoking Preemption does not exempt the RDEIR from fully disclosing the numerous potential impacts to public health and safety related to processing unconventional crude oil that will be imported and the rail hazards that would expose both urban and rural populations and surrounding environments in the vicinity of the UPRR tracks to significant and cumulatively considerable levels of harm in case of rail accidents. The RDEIR must discuss those risks relative to their potential severity. C2-15

* The RDEIR fails to address liability issues and insurance coverage for events which are reasonably foreseeable. The transport of crude oil and refinery fuel gases by train raises significant safety risks to not only the project site but to all communities along the route from well head to processing at local refineries. C2-16

* The RDEIR fails to mention how damages might be paid, the potential damages from a small spill, the financial ability of the responsible party to make the damaged parties whole, and to identify all the parties who may not be made whole and left to absorb catastrophic losses such as cities, towns, counties and private individuals.

Contra Costa County should consider the Rodeo Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report as incomplete because of undisclosed information that is essential for this project to function. The proposed San Luis Obispo County Santa Maria Phillips 66 Refinery Rail Spur Extension Project that is currently going through a Recirculated Draft Environmental Impact Report process is the "Front End" of the Rodeo Propane Recovery Project. The Santa Maria Refinery is proposing to receive daily eighty rail tank cars of heavy bitumen laden Canadian tar sand crude oil which is very high in sulfur and other hazardous chemicals needed to dilute it to be shippable. The SMR is proposing a new rail spur unloading facility to accommodate these new feed stocks. Once initially refined, this semi-refined liquid product will be sent via a 200 mile pipeline to the Rodeo Phillips 66 Refinery where it will be upgraded into a finished petroleum product where the excess propane and butane will be recovered for sale. This is the "Back End" of the project

Obviously, these two projects are related and linked by a 200 mile pipeline. Both facilities could not operate without the other. Both Phillip 66 facilities are labeled as a San Francisco Refinery by Conoco –Phillips Corporation yet each facility applied for separate Environmental Impact Reports simultaneously for projects that are reliant upon the other. This piece mealing of projects is an attempt to skirt CEQA requirements. C2-17

The Rodeo Phillips 66 Propane Recovery Project may be a propane recovery project on paper but it is also a Phillips 66 Santa Maria Refinery Rail Spur Extension Project much like the Valero Crude by Rail Project in Benicia and should be treated as such with cumulative impacts on up rail communities.

The Rodeo Phillips 66 Propane Recovery Project RDEIR is an incomplete document because it fails to discuss in detail the link between the Phillips 66 Santa Maria Refinery and its proposed Rail Spur Extension Project, list impacts to the up rail communities that the proposed crude oil and refined fuel gas train routes would effect, does not address the cumulative effect it will have on local communities and the effect it will have on the communities up rail, and it fails to

address the "Front End" of this project which is the connection to the Phillips 66 Santa Maria Refinery. As it is written and submitted, I/ we urge you to deny this project.

Comment Letter C2

C2-17

James Neu
Jjneusies2@gmail.com
Martinez Environmental Group
Mrtenvgrp@gmail.com

3.3.2 Letter C2 – Responses to Comments from James Neu

C2-1 As stated in the RDEIR Section 4.7, *Hydrology and Water Quality*, (pages 4.7-21 and 22), the Refinery includes four different outfalls (i.e., E-001, E-002, E-003, and E-004) where water is discharged to the Bay which are routinely monitored for pollutants in accordance with the National Pollutant Discharge Elimination System (NPDES) permit. The routine monitoring program would continue with the proposed Project.

C2-2 The commenter states that text in RDEIR Section 3.3.2.17, *Tank Cars*, is incorrect as rail incidents rose from several per year prior to 2010 to the present. Pursuant to CEQA Section 15125, Environmental Setting, "(a) An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published". The Notice of Preparation for the proposed Project was published on July 24, 2012 and therefore publically available data at that time and during the preparation of the 2013 DEIR and the RDEIR (published November 2014) was utilized in the document. Data for 2012 and 2013 were not yet available during preparation of the 2013 DEIR and RDEIR. The commenter refers to findings from the Interagency Rail Safety Working Group. Work of this group is focused on the transport of crude oil by rail, not transport of propane and butane, as proposed as part of the proposed Project. Comments regarding federal regulations do not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

C2-3 See Master Response 2.2.

C2-4 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express general concerns over hazards associated with a boiling liquid expanding vapor explosion (BLEVE) and general health and safety concerns. The commenter refers to text in a section of the RDEIR, Section 3.4.2.3, *Propane Storage.* This text is located in the Chapter 3, *Project Description*, of the RDEIR and mitigation measures are not described here. Discussion of the evaluation of hazards and mitigation associated with a potential BLEVE is provided in RDEIR Section 4.6, *Hazards and Hazardous Materials,* specifically on pages 4.6-17 through 4.6-31.

See Master Response 2.5 associated with safety and hazards, Response C5-1, and 2013 DEIR Master Response 2.3 which describe the evaluation of safety associated with propane storage.

C2-5 The commenter expresses concern over potential liquefaction and past subsurface contamination at the proposed Project site. The commenter requests that the analysis of potential liquefaction is undertaken using recent United States Geological Survey (USGS) information. Section 4.7.2.2, *Project Setting,* of the 2013 DEIR describes the existing setting of the Project site with respect to liquefaction potential, referencing Association of Bay Area Governments 2012 data. The commenter does not state which

USGS information they are referring to, however, as stated in the RDEIR, the evaluation of potentially liquefiable soils would be part of the required site specific geotechnical investigation as well as recommendations to reduce the hazard, if present. This approach is very commonly done and site specific data is much more reliable than regional mapping data. See also 2013 FEIR Master Response 2.5, which discusses liquefaction and seismicity.

C2-6 It is not clear what federal regulation guidelines the commenter is referring to. Executive Order S-3-05, which was established by California Governor Arnold Schwarzenegger, set forth a series of target dates by which statewide emissions of greenhouse gas emissions (GHGs) would be progressively reduced. For discussion relative to the proposed Project's consistency with the Executive Order S-3-05 GHG emissions reduction goals, refer to Response B9-39.

In addition, the proposed Project's potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHG is assessed in the RDEIR by examining any potential conflicts with the GHG reduction measures related to implementation of California Assembly Bill 32, including the potential for the proposed Project to conflict with the 39 Recommended Actions identified by the California Air Resources Board in its Climate Change Scoping Plan, and any potential conflicts related to implementation of measures identified in the 2010 Climate Action Plan (see RDEIR Impact 4.5-2 discussion on pages 4.5-15 and 4.5-16).

Examples of the potential uses of the propane and butane that would be recovered by the proposed Project are disclosed on RDEIR page 4.5-13. Although Phillips 66 has not yet identified wholesalers that may purchase the propane and butane, it is assumed that the company would be able to identify such wholesalers if the proposed Project is approved.

For discussion and disclosure of the increased locomotive emissions that would be associated with the proposed Project, refer to the *Mobile Source Emissions* discussion and Table 4.5-3 on RDEIR pages 4.5-12 and 4.5-15, respectively.

C2-7 See Impact 4.6-1 in the RDEIR Section 4.6, *Hazards and Hazardous Materials*, and Master Response 2.5 regarding accidents and hazards. See RDEIR Figures 4.6-1 through 4.6-3 for a visual depiction of hazard zones associated with the existing Refinery and the proposed Project that extend off the Project site.

C2-8 See Master Response 2.5 regarding accidents and hazards. See Figures 4.6-1 through 4.6-3 for a visual depiction of hazard zones associated with the existing Refinery and the proposed Project that extend off the Project Site. See Response B8-7 regarding the adequacy of data used in the hazard analysis. See 2013 FEIR Master Response 2.6 regarding rail safety.

C2-9 This comment expresses concerns relating to terrorism and explosions. The commenter is directed to RDEIR Section 4.6, *Hazards and Hazardous Materials*, which addresses

terrorism under Impact 4.6-3, and Master Response 2.5, which discusses accidents and hazards, including tank explosions and BLEVE.

C2-10 This comment states that future potential sea level rise would pose a risk of inundation to the proposed Project and the Refinery. This comment is noted. The commenter asserts that the proposed Project would contribute to this sea level rise. As detailed in the analysis of GHG emissions provided in RDEIR Section 4.5, *Greenhouse Gas Emissions*, the proposed Project would result in a net decrease in GHG emissions and would not therefore contribute to sea level rise.

The analysis within RDEIR Section 4.5, *Greenhouse Gas Emissions*, assumes a 30-year lifetime for the proposed Project.

C2-11 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities, and Master Response 2.6, which discusses cumulative impacts.

C2-12 The commenter states the cumulative GHG impacts of the proposed Project, together with other completed and proposed projects in the vicinity would have a significant impact on nesting and foraging birds but does not state why or provide data to support the claim. The commenter is directed to RDEIR Section 5.4.3.5, *Greenhouse Gas Emissions*, which states the proposed Project contribution to GHG impacts would not be cumulatively considerable, and there would be no cumulative impact associated with the proposed Project. Cumulative impacts to biological resources are discussed in RDEIR Section 5.4.3.2, *Biological Resources*, which concludes the proposed Project would not have cumulative impacts to biological resources, including foraging and nesting birds.

C2-13 The commenter correctly states that an economic study was not done in the RDEIR, and expresses concerns regarding liability and the economy of the City of Rodeo. This comment is noted. According to the CEQA Guidelines (Section 15358 [b]), impacts to be analyzed in an Environmental Impact Report (EIR) must be "related to physical changes" in the environment. CEQA Guidelines (Section 15131 [a]) do not directly require an analysis of a project's social or economic effects because such impacts are not, in and of themselves, considered significant effects on the environment. The guidelines state:

"Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes caused in turn by economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."

A discussion on spills can be found in RDEIR Section 4.6, *Hazards and Hazardous Materials*. Also see Master Response 2.5. For a discussion on liability see Master Response 2.3.

C2-14 The commenter notes that the existing regulatory setting is changing and asserts that this would affect impacts disclosed in the RDEIR. The commenter notes support for State agencies to work together to ensure rail safety. Clearly, rail safety is a goal supported by the County as well. As is discussed in Master Response 2.4, the proposed Project does not involve any crude by rail component including the specific type of tank cars used to transport crude and the changing regulatory setting mentioned by the commenter is specifically related to those types of projects. Furthermore, as discussed in Master Response 2.3, Federal Preemption of regulation for railroad operations limit the County's ability to mitigate potential effects. The commenters concerns are noted.

C2-15 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other refinery facilities. Also see Master Response 2.4, which discusses the relationship of crude feedstocks to the proposed Project.

C2-16 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express concerns regarding liability and safety. This comment is noted. See Master Response 2.3.

C2-17 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other refinery facilities. See Master Response 2.6 for a discussion on cumulative impacts. The Valero Crude by Rail Project is identified in Table 5-1 as a cumulative project and has been analyzed as such in the RDEIR.

Madelyn Morton
23 Garretson Avenue
Rodeo, CA 94572
Email: madelyncat@yahoo.com

December 1, 2014

Via Federal Express

Department of Conservation and Development
Attn: Ayuma Bhat
30 Muir Road
Martinez, CA 94553

Re: Phillips 66 Proposed Propane Recovery Project – Draft Revised Environmental Impact Report (RDEIR) for Request for Land Use Permit
File #LP12-2073

I attended the hearing on November 17 regarding the above-referenced agenda item. At that meeting, you advised that December 3 was the deadline to submit further comments as to the adequacy of the RDEIR. I have some concerns.

One concern is revolves around the problems Rodeo and Hercules citizens living near the refinery would encounter attempting to evacuate the area in the event of a dangerous incident at the refinery. This was not addressed in the RDEIR, which only addressed the amount of traffic caused by construction work at the refinery during any expansion. (Even that reference was inadequate, as it stated they would "encourage" truckers to use Cummings Skyway instead of driving through Rodeo.) C3-1

Rodeo is a small town on the San Pablo Bay. It has only 4 routes leading out of town: Interstate 80 (via Parker/Willow), San Pablo Blvd. (to the East), San Pablo Blvd. (to the West), and Highway 4 (via Willow or San Pablo westbound). San Pablo Blvd. eastbound would not be an option, as it crosses through the area of the refinery – which leads 3 evacuation routes.

I-80 is well known to be one of the most congested freeways in the country. It does not take much for traffic to be brought to a standstill. When I-80 is not moving, motorists often exit onto San Pablo, which also halts to a standstill. And should any accident be major, it could potentially impact I-80 traffic in both directions. Attached is a small map of the area with local roads highlighted in yellow, and freeways highlighted in pink. C3-2

According to the Rodeo Chamber of Commerce website, Rodeo has over 10,000 citizens. Were even half those citizens to attempt to evacuate the area, we would have immediate gridlock, which would affect the Fire Department's ability to respond to any emergencies, should they be called. Hercules has two large neighborhoods nearby: Hercules By The Bay and Foxboro, both within 2 miles of the refinery. Although they have been rarely addressed in these discussions, they would also be impacted. C3-3

My second concern is about adding high pressure equipment onto a refinery which has some equipment over 100 years old. Some of these parts, as I understand it, are below ground. If this is the case, we have no real way of knowing what the impact is today, much less after any proposed equipment is added. I am not convinced this refinery can handle more high-pressure equipment. C3-4

As it is, the citizens of Rodeo are already negatively impacted by the Phillips 66 refinery. To allow them to expand would be a huge imposition on the quality of our lives, welfare, peace, and health. C3-5 The RDEIR is insufficient and inadequately addresses the true environmental impact of this project. C3-6

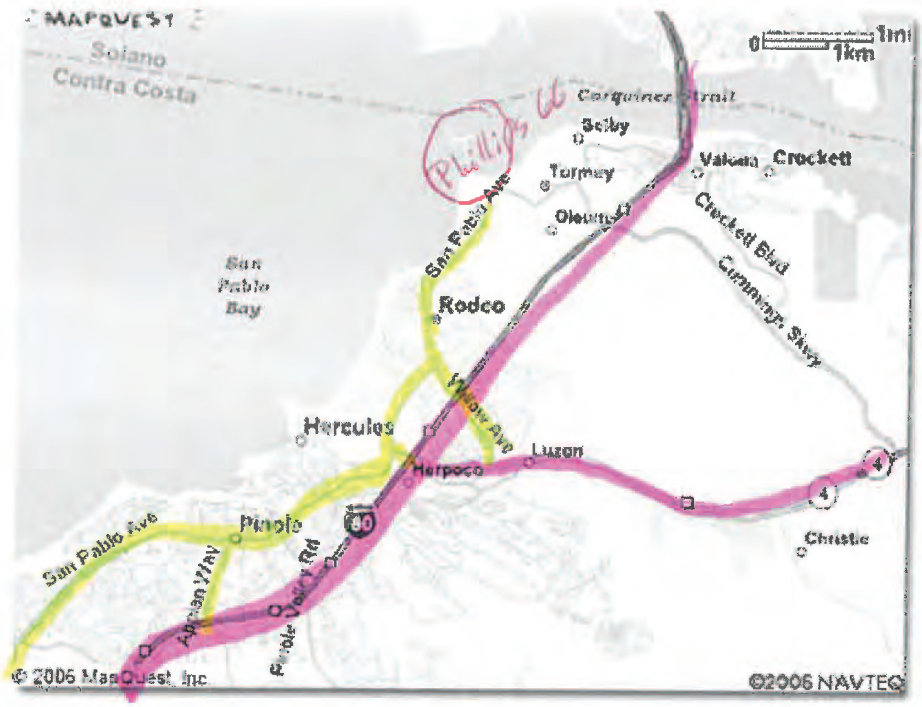
Thank you for your consideration.

Respectfully,

Madelyn Morton

CC: Hercules-Rodeo Fire District
Hercules City Manager
Communities for a Better Environment

Comment Letter C3



3.3.3 Letter C3 – Responses to Comments from Madelyn Morton

C3-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. The commenter raises a concern over traffic congestion that could be encountered during an evacuation of local residents in the event of an emergency at the Refinery. Traffic, including the adequacy of emergency access, was analyzed in the 2013 DEIR in Section 4.17, *Transportation and Traffic*.

RDEIR Section 4.6.2.2, *Regulatory Setting*, describes the regulations and procedures that are in place to ensure safety at the Refinery. These regulations include details of evacuation procedures, emergency response capabilities and emergency response planning.

During operation the proposed Project would have virtually no effect on existing traffic. RDEIR Section 3.4.5, *Operations Phase – Traffic and Transportation*, discusses operational traffic, which would increase the number of commuter vehicle two-way trips by two as the result of the addition of two new employees. Therefore conditions in the event of an emergency would be essentially the same as existing and the response to an emergency incident virtually unchanged with the operation of the proposed Project.

As noted by the commenter, the proposed Project would generate additional temporary traffic in the form of construction vehicles. As noted above, impacts to traffic can be found in the 2013 DEIR in Section 4.17, *Transportation and Traffic*.

As discussed in RDEIR Section 4.6.4, *Discussion of No Hazards and Hazardous Materials Impacts*, the proposed Project would be constructed within the existing Refinery. The Refinery maintains an Emergency Response Plan and prepares and updates a Hazardous Materials Business Plan (HMBP) with the Certified Unified Program Agency which is the Contra Costa County Health Services. The HMBP includes evacuation routes. The proposed Project would tend to interfere with roads, access, and egress within the Refinery, especially during construction. To ensure that construction and operation of the proposed Project would not impair the implementation of any public emergency evacuation plan the proposed Project would be integrated into the Refinery operations and its Emergency Response Plan and evacuation routes. This integration would eliminate interference with an adopted emergency response plan or emergency evacuation plan.

C3-2 See Response C3-1.

C3-3 See Response C3-1. The proposed Project would have virtually no effect on operational traffic, and the temporary increase in local traffic during construction would be addressed via integration of proposed Project construction activities into the Refinery's Emergency Response Plan. As noted above, impacts to traffic can be found in Section 4.17,

Transportation and Traffic, of the 2013 DEIR and a discussion on the provision of fire protection and emergency services can be found in Section 4.15, *Public Services* of the 2013 DEIR.

C3-4 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment notes a concern about potential safety effects from integrating the proposed Project, including high-pressure equipment, into the existing Refinery. Although the commenter is not specific about what high pressure equipment they are referring to, the commenter is directed to the following sections of the RDEIR, which are applicable to Project safety. RDEIR Section 4.6.2.2, *Regulatory Setting*, describes the regulations which are intended to reduce risks associated with potential chemical hazards which the proposed Project would be required to comply with. These include the Contra Costa County Industrial Safety Ordinance, Ordinance No. 98-48 and Amendments, the "Industrial Safety Ordinance." This was adopted as Regulation 450-8 of the County Code of Regulations to "supplement the requirements of California Health and Safety Code… concerning hazardous materials management by enacting measures to prevent and reduce the probability of accidental releases of regulated substances that have the potential to cause significant harm to the public health and to increase participation by industry and the public to improve accident prevention." This regulation requires reviews, inspections, and audits that supplement existing federal and State safety programs and the imposition of additional safety measures to protect public health from accidental releases.

As an industrial facility that handles hazardous chemicals, the Refinery must be constructed and operated in accordance with certain codes and standards, which are enforced via administrative mechanisms such as internal audits, design reviews, and building inspections. Project design details specific to safety are presented in RDEIR Section 4.6.2.3, *Project Baseline and Proposed Changes*.

C3-5 The commenter expresses concern over general negative impacts of the Refinery. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

C3-6 The commenter expresses a general concern over the RDEIR but does not refer to any specific concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Comment Letter C4

Mrs. Catherine T. De Martini
201 3rd St.
Rodeo, CA 94572-1020

CONTRA COSTA
2014 DEC -2 AM 9:20
APPLICATION & PERMIT CENTER

RECEIVED
CONTRA COSTA CO.
DEC -2 2014
Dept of Conservation & Development

RE: LP12-2073
December 2, 2014

Re: LaShaun Cross
Principal Planner
Contra Costa County Department
Of Conservation Development

Dear Ms Cross,

I read through some of the literature about the proposed upgrade to Phillips Rodeo plant to allow propane storage tanks.

It is such dangerous gas, **I strongly advice against this action for the safety of our community**. I believe the propane would be shipped to foreign ports and most likely not used here very much except at the refinery. C4-1

I realize that folks in Washington State use it in their homes with their small tanks away from their bedrooms. C4-2

I do not like this proposal. I feel lives are in danger. Is that the only way Bakkan crude oil can be made profitable ? N. Dakota is having many environmental spills as reported in the (Nov 23) Sunday New York Times and only a fine (minimal) with the eleventh spill. C4-3

Thank you,

Catherine DeMartini

Comment Letter C4

Mrs. Catherine T. De Martini
201 3rd St.
Rodeo, CA 94572-1020

DEC -2 2014
Dept of Conservation & Development

La Shaun Cross
Principal Planner CCC Department
of Conservation & Development
30 Muir Road
Martinez, CA 94553

3.3-25

3.3.4 Letter C4 – Responses to Comments from Catherine DeMartini

C4-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express an opinion over the safety of propane and its likely potential end use. This comment is noted.

C4-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express an opinion over the use of propane. This comment is noted.

C4-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express opposition to the proposed Project and general concerns over crude oil safety. This comment is noted. See also Master Response 2.4, which discussed crude feedstocks in relation to the proposed Project.

December 1, 2014

Re: **LP12-2073**

Ms. LaShaun Cross,
Principle Planner,
Co Co County Department
Of Conservation and Development,
30 Muir Road
Martinez, CA 94553

Dear Ms. Cross:

The proposed propane storage tanks are very concerning to me as I live in Rodeo.

I was wondering if there is a way to put the tanks underground. Would there be the same potential for human fatalities in the event of an explosion? C5-1

Or perhaps there could be a way to surround the tanks with 40 foot thick (or whatever thickness is technically feasible) concrete walls that could channel the explosive gases away from residential areas. I'm thinking of some sort of cone shape with the tanks at the apex. I know that NASA uses a special curved tunnel to channel rocket exhausts away from occupied areas when they do test firings. C5-2

I have also heard that NASA has a pool of water directly underneath its rockets when they launch. I believe the pressure wave from the exhaust is absorbed by the water. Could something like this be used to absorb the energy from a percussive air blast? C5-3

For critical information on salvation be sure to see vaticancatholic.com.

Sincerely,

Tom

Tom

3.3.5 Letter C5 – Responses to Comments from Tom

C5-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. The commenter raises concern over the safety of the propane storage tanks and the potential for explosion and suggests that the tanks are located underground. This comment is noted.

2013 FEIR Master Response 2.3 describes the evaluation of safety associated with propane storage. This issue is further discussed in RDEIR Section 4.6, *Hazards and Hazardous Materials*. Specifically, Section 4.6.2.2, *Regulatory Setting*, discusses the regulations which are applicable to the proposed Project and which are focused on reducing risks associated with chemical hazards. RDEIR Section 4.6.2.3, *Project Baseline and Proposed Changes*, summarizes existing conditions relative to how hazards are used, handled, stored and transported at the Refinery, and how the proposed Project would change those conditions. This section also describes existing safety management systems at the Refinery. Section 4.6.5, *Consequence Analysis Methodology*, presents the results of a worst-case consequence analysis undertaken to evaluate the proposed Refinery changes with respect to production, storage, and transfer of butane and propane. The objective of the analysis was to compute the potential increase or decrease in hazards to the public due to the proposed changes to the facility. This analysis concluded that the potential off-site hazards associated with the proposed Project are smaller than the potential existing off-site hazards associated with the current Refinery operations; that is to say that the proposed Project would not result in any increase in hazards over existing conditions. Based on this, Section 4.6.6, *Discussion of Impacts and Mitigation Measures*, of the RDEIR, concludes that impacts that could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident than significant and mitigation would not be required.

CEQA requires that an EIR includes proposed mitigation measures designed to minimize the project's environmental impacts. An EIR is not required to discuss mitigation for insignificant environmental impacts. As explained above, the proposed Project would not result in any significant impacts associated with the safety of the propane storage tanks and so development of mitigation is not required under CEQA. For this reason, the commenters suggestions for possible project design changes that they consider would offer mitigation to improve safety have not been evaluated further. See also Master Response 2.5, which discusses hazards.

C5-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. The commenter proposes a potential design modification to mitigation safety concerns about the propane storage tanks. As described in Response C5-1 above, the proposed Project would not result in any increase in hazards over existing conditions. Therefore, impacts would be less than significant and no mitigation is required.

C5-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. The commenter proposes a potential design modification to mitigation safety concerns about the propane storage tanks. As described in Response C5-1 above, the proposed Project would not result in any increase in hazards over existing conditions. Therefore, impacts would be less than significant and no mitigation is required. This comment is noted.

December 1, 2014

Re: **LP12-2073**

Ms. LaShaun Cross,
Principle Planner,
Co Co County Department
Of Conservation and Development,
30 Muir Road
Martinez, CA 94553

Dear Ms. Cross:

Shipping crude oil by rail is another big concern for Rodeo residents. The train tracks run right up against Rodeo houses and apartments. C6-1

Is there any way to keep the oil at a safe temperature while moving through the town? San Pablo Bay is also right next to the tracks. Could Bay water be used somehow to provide cheap refrigeration? Is the Bay water cold enough? C6-2

The thought of a heat exchanger comes to mind. Would there be some way to absorb heat from the railcar contents and put it (heat) into the Bay water?

Sincerely,

Tom

Tom

3.3.6 Letter C6– Responses to Comments from Tom

C6-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does note concerns about shipping crude by rail by Rodeo residences and the proximity of the proposed Project to residences. This comment is noted. See Master Response 2.4, which discusses crude feedstocks in relation to the proposed Project.

C6-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does raise questions regarding ways to keep oil at the correct temperature and potentially using Bay water for cooling. This comment is noted. See Master Response 2.4.

Lashun Cross

From: Fred Clerici <ccfwed@sbcglobal.net>
Sent: Thursday, December 04, 2014 11:53 AM
To: Lashun Cross
Subject: Phillips66 project #LP 12-2073

Lashun Cross: The proposed project contains no new "Good Neighbor Agreement" or any local funding agreement for Rodeo, Crockett, Tormey, or Port Costa. These are the communities that always take the highest environmental risk whenever changes are made at the refinery. While financial enhancements to the communities will not alleviate any potential hazards, it is the least that a multi billion dollar operation like Phillips 66 can do to show that they are truly a good neighbor and care about the communities that their operation affects. County officials have been terribly lax in making these conditions part of any new approval process. I've always felt that because our communities are unincorporated we tend to not get the respect from the County that we deserve. Cities such as Benicia, Richmond, Martinez, etc. always receive direct additional funding when refinery plans go forward. For our communities the process has been a major failure. C7-1

Fred Clerici
1514 Flora Street
Crockett, CA 94525
ccfwed@sbcglobal.net

3.3.7 Letter C7 – Responses to Comments from Fred Clerici

C7-1 The commenter describes a desire for a Good Neighbor Agreement (GNA). The comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. A summary of the history and existing status of the GNA is provided in 2013 FEIR Master Response 2.4.

From: Teagan Clive <teaganclive@mac.com>
Subject: **P66 Propane Project/Response to RDEIR**
Date: December 4, 2014 6:36:36 PM PST
To: Stan Berkowitz <stan.berkowitz@roadrunner.com>

Dear Board of Supervisors and Project Planning Staff of Contra Costa County:

Are we throwing good money at bad? Archaic and dangerous, I'm starting to think the P66 Propane Project might also be jinxed. Maybe the Indians are right. Because the P66 refinery was built on sacred Indian burial grounds, it's got bad Spirit. That might explain all the accidents it's suffered, but not why it POLLUTES MORE THAN ANY OTHER REFINERY in California.

Although much smaller than Chevron in Richmond, P66 pollutes nearly twice as much. How can they be compelled to comply with the rules and regulations indicated by federal, state and regional agencies? Must they always be enabled to get BIGGER? Is there any end in sight? C8-1

People are finally recognizing the effects of carbon emissions -- Climate Change. At P66, their top PR man recently quit. To sell solar energy. (How hard it must've been for him to leave an office surrounded by millions of gallons of potentially lethal gases.)

Jokes aside, hundreds of thousands of taxpayer dollars have been spent on the Phillips 66 Propane Recovery Project, State Clearinghouse # 2012072046, County File # LP12 - 2073, and the RDEIR's still inadequate. SIGNIFICANTLY inadequate. As follows:

1. Emissions were measured and calculated using grossly outdated standards. For example, 2.1.3 " Maximum Cancer Risk at residential receptor...1.7 per million... ...calculated by Conoco Phillips in 2003". New Rules & Regulations have been adopted by the USEPA and CalEPA for the measurement and calculation of impacts for Stationary Sources. C8-2

2. The RDEIR fails to discuss the local air quality impacts to the already impacted and overburdened residents of Rodeo, Crockett, Tormey, Pt. Costa, Hercules, Martinez, Pittsburg and Richmond. (Note: Due to tremendous "pollution burden", the State has recently identified Rodeo, Crockett, Tormey, Martinez, Pittsburg and parts of Richmond as "disadvantaged communities", eligible for SB 535 funding.) Nor are CalEPA's Emission Reports for this stationary source discussed. If they were, the C3-3

impact for this Project would be "significant". The childhood asthma rate in Richmond is twice as much as Marin County, which is just across the Bay. Meanwhile, Rodeo's asthma rates are in the upper 5% for the entire State. A failure to discuss these and other relevant health statistics renders this RDEIR inadequate. C8-3

3. Feedstock is unclear. What's the refinery going to burn? As the saying goes, "the dirtier the crude, the more the propane". Will it be tar sands or Bakken? Whatever it is, it must be indicated in the RDEIR. Different crudes can create wildly different impacts. By failing to identify feedstock, the RDEIR necessarily also fails to identify the varied risks associated with transporting, storing, and refining its crude. C8-4

4. Built in 1896, most experts agree that the Rodeo refinery is old and outdated. Relying on re-purposed equipment to produce and store flammable gases can only MULTIPLY THE ODDS of a catastrophe occurring. Aggressive coking of high-sulphur crude oils, using extreme heat and pressure, can quickly bring this refinery to its breaking point. This is major "process weakness" must be factored into all Hazards calculations. C8-5

5. P66 has had many accidents. More than most other refineries, in fact. According to the U.S. Chemical Safety Board, the refinery in Rodeo has one of the worst accident records of ALL chemical plants in northern California! Whether it be another ruptured storage tank as in 2012, another fire in the tower, a snapped hose on the loading dock, a burst pipe, tanker spill or another mishap in the Bay -- or a massive explosion involving multiple air blasts, shockwaves and fireballs -- accidents are HIGHLY LIKELY at this refinery. It's not a matter of IF. With P66, it's a matter of WHEN. By understating the Risk Assessments, the RDEIR inadequate. Liability issues also need to be discussed. C8-6

6. As Greg Karras and Citizens for a Better Environment report, the San Francisco Refinery (SFR) is a two-part unit. Processing starts in the "front end" in Santa Maria, and ends in Rodeo, the "back end". The two parts are conjoined by a 200-mile pipeline that runs underground along the Pacific Coast. Impacts for neither the "front end" or the pipeline aren't provided in the RDEIR. To be considered adequate, CEQA requires these integral parts to discussed. C8-7

7. Near Rodeo, several other refineries are also in the EIR process. As the Attorney General for the State recently remarked on one, "The RDEIR fails to consider the effects to other Bay Area communities." These same words could also C8-8

apply to this RDEIR. According to CEQA, impact calculations must be evaluated "as a whole". C8-8

8. The RDEIR does NOT provide "a reasonable range of feasible alternatives that could reduce the Project's impacts". This is a "core requirement" of an EIR (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553, 564). According to experts at Chevron, a safer storage alternative for propane is freon "chillers", or refrigeration, which eliminates the need for pressurization. Why compress propane -- which is what makes it explosive -- when SAFER options exist? C8-9

9. The impact of increased PETROLEUM COKE production isn't discussed in the RDEIR. For the record, the "Pet Coke Factory" for P66 is next to Highway 4. Around the plant, the notorious black powder covers many acres. Particulate Matter blows freely up into the skies and onto the Highway. It has little hooks. If you breathe it, it never leaves your lungs. C8-10

10. 4.1.2.3 The RDEIR reports that "Chronic Trigger Levels are exceeded" for the following toxic pollutants: ammonia, arsenic, benzene, benzoaprene, cadmium, chromium, diesel particulate mater, formaldehyde, lead, maganese, nickel, B(a)P-equivalent. Where are the impacts of these toxins discussed? C8-11

11. Proposed sources are too close to people -- including a nursery school -- and a massive chemical storage facility (NuStar Energy). Rodeo's sewer treatment plant, a Head Start school, a YMCA, several businesses and hundreds of residents are adjacent to the south fenceline of the source. Distances given in the RDEIR from the proposed sources to these first-receptors are overstated. C8-12

12. The project will require "a substantial change in the demand for municipal services", particularly first-responder, emergency medical and water services. C8-13

13. The project will "substantially increase fossil fuel consumption", especially during the construction phase. C8-14

14. 4.3.1 Total GHG Emissions from the project are 74,110 tons per year (CO_2e) -- just short of requiring a Federal Risk Management Plan (FRMP). (Note: the limit's 75,000 tons.) For the record, it's time for P66 to have an FRMP. After all, safety first. C8-15

Thanks for your consideration.

Teagan Clive
Rodeo
805-559-9521

3.3.8 Letter C8 – Responses to Comments from Teagan Clive

C8-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express opposition to the proposed Project and general concerns over pollution from the Refinery. This comment is noted.

C8-2 The emissions estimated for the proposed Project are summarized in RDEIR Tables 4.1-6, 4.1-7, 4.1-8, 4.1-9 and 4.1-10. The emissions were estimated with the most recent emission factors available using procedures recommended by the Bay Area Air Quality Management District (BAAQMD). The commenter states that new rules and regulations have been adopted by the U.S. Environmental Protection Agency (US EPA) and California Environmental Protection Agency for the measurement and calculation of impacts for stationary sources. As mentioned, the projects' emissions and emission impacts were based on the latest emission factors available at the time this analysis was prepared. Health risks were based on BAAQMD's recommended procedure, which is based on recent guidance issued by the California Office of Environmental Health Hazard Assessment.

C8-3 The commenter states that the existing conditions of the project area are enough to classify the proposed Project as significant. The RDEIR includes a setting section that describes the existing air quality environment within the proposed Project area. Existing air quality concentrations are summarized in RDEIR Tables 4.1-1 and 4.1-2, and are discussed in RDEIR Section 4.1.2.3, *Existing Air Quality*. Although the RDEIR discusses existing air quality conditions, it is the incremental air quality impacts of the proposed Project that the RDEIR focuses on because that is what is required under CEQA. The health risk based cumulative impact analysis includes the proposed Project's contribution plus the contribution of other existing and proposed sources in the Project vicinity. That analysis found that the contribution of the proposed Project to existing and future air quality conditions would be less than significant. See Master Response 2.6 which discusses cumulative impacts.

C8-4 The commenter raises a concern as to changes in feedstock associated with the proposed Project. See Master Response 2.4, which discusses the relationship of crude feedstocks to the proposed Project.

C8-5 The age of equipment at the Refinery does not necessarily affect performance. As described in RDEIR Section 4.6.2.2, *Regulatory Setting*, operation of the Refinery is subject to extensive regulatory controls intended to ensure safety and minimize risk. The Refinery has an on-going maintenance program to ensure that all equipment operates as safely and reliably as possible. Thus, equipment can be maintained and operated safely and reliably regardless of age through proper maintenance and operation. As part of the maintenance and reliability program, equipment that is no longer suitable for continued operation due to age or other factors will be replaced or removed from service.

C8-6 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express general concerns over safety and accidents. This comment is noted. Also see Response C5-1, Master Response 2.3, which discusses liability and Master Response 2.5, which discusses hazards.

C8-7 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other refinery facilities. Also see Master Response 2.4, which discusses the relationship of crude feedstocks to the proposed Project.

C8-8 See Master Response 2.2.

C8-9 CEQA requires that an EIR analyze of a "reasonable range of alternatives that would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives" pursuant to CEQA Section 15126.6. The commenter suggests alternative storage methods for the propane. The RDEIR determined that impacts associated with the potential for the release of a hazardous material or the routine transport of a hazardous material would be less than significant, therefore, no alternative is required to be analyzed that could potentially reduce these impacts. This comment is noted.

C8-10 The proposed Project is a propane recovery project; it does not include the production of petroleum coke. This comment is noted.

C8-11 Commenter states that RDEIR Section 4.1.2.3, *Existing Air Quality*, reports that Chronic Trigger Levels are exceeded for the following toxic pollutants: ammonia, arsenic, benzene, benzoaprene, cadmium, chromium, diesel particulate matter, formaldehyde, lead, manganese, nickel, B(a)P-equivalent and asks where the impacts of these toxins discussed?

The commenter's assertion is incorrect. The RDEIR does not state that chronic trigger levels are exceeded for any of these toxic pollutants.

C8-12 Distances included in the RDEIR are based on measurements conducted using GoogleEarth. The proposed sources for the proposed Project are located on the Phillips 66 property and the distances provided represent the distances from the emission sources, not from the edge of the property.

C8-13 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express an opinion that the proposed Project would require a substantial demand for municipal services. This comment is noted. Demand for municipal services was analyzed in 2013 DEIR Section 4.15, *Public Services*, and 4.18, *Utilities and Service Systems*. No significant impacts were identified.

C8-14 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express an opinion that the proposed Project would substantially increase fossil fuel consumption. Fossil fuel use related to construction of the proposed Project is analyzed in RDEIR Section 4.3, *Energy Conservation*, under Impact 4.3-1. No significant impacts were identified.

C8-15 GHG combustion emissions are not regulated under the US EPA Risk Management Plan (RMP) Rule; however, Phillips 66 currently maintains an RMP for the Refinery associated with other chemicals. For more information on US EPA's RMP Rule, refer to the *Accidental Release Prevention* discussion on RDEIR page 4.6-5, and for information related to the existing Phillips 66 RMP for the Refinery, refer to the *Risk Management Plan* discussion on RDEIR page 4.6-13.

Lashun Cross

From: Elizabeth <egie5@yahoo.com>
Sent: Friday, December 05, 2014 1:18 PM
To: Lashun Cross
Subject: Phillips 66

Dear Ms. Cross,

I am a resident of Rodeo and am concerned about Phillips 66. According to the U.S. Environmental Protection Agency, the Phillips 66 Rodeo refinery is the "#1 Toxic Offender" in the entire Bay Area. Our little refinery puts out more toxic pollutants than the behemoth Chevron refinery in Richmond. C9-1

Within the last few weeks there was the smell of gas in the air (which I reported to BAACMD. I was told there was no incident at P66. So where did the smell come from? There were large, loud booms in the neighbor; it didn't sound like fireworks. I know that sound. C9-2

A friend said she saw a fire at the refinery. I was driving to Crockett a couple of days later, through the refinery, and on the right were four stacks that looked like they had been scorched. Officially, we were told there was no fire. What about the scorching on the towers? C9-3

We have been told by P66 that there are no schools near the refinery. That's totally wrong - unless they don't count the Headstart school at California and San Pablo. El Dorado Hills Elementary is less than 2 miles away. The schools, and I, are in the 'kill' zone. C9-4

I believe there are serious safety issues with the proposed collection of propane and butane gases. They would be stored in a liquefaction zone just twenty-three-hundred feet away from residents. This is not even a football field length away from a school, churches, a public park, hundreds of homes and Rodeo's water treatment plant. C9-5

The previous Phillips 66 EIR was been sent back for further review as there are unresolved issues of air quality and basic public safety.

Please, at least wait until these old, unresolved issues are settled before considering this - the newest proposal from the '#1 Toxic Offender in the entire Bay Area. C9-6

Thank you for your time, Ms. Cross

Sincerely,

Elizabeth Genai
411 Garretson Ave
Rodeo, CA 94572

510-776-7443

3.3.9 Letter C9 – Responses to Comments from Elizabeth Genai

C9-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express opposition to the proposed Project and general concerns over pollution from the Refinery. This comment is noted.

C9-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express a concern over a gas odor in the vicinity of the Refinery in November/December 2014. This comment is noted.

C9-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express a concern over what they consider to be evidence of a fire at the Refinery sometime in the recent past. This comment is noted.

C9-4 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does describe schools in the vicinity of the Refinery. The commenter is directed to 2013 DEIR Section 4.15.2.3, *Public Schools*, which lists schools in close proximity to the Refinery. This comment is noted.

C9-5 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does describe liquefaction hazards in relation to schools and residents in the vicinity of the Refinery. The commenter is directed to RDEIR Section 4.4, *Geology and Soils*, which identifies and evaluates potential impacts related to geology and soils that could result from the proposed Project. Also see Response C2-5, and 2013 FEIR Master Response 2.5, which discusses liquefaction and seismic hazards.

C9-6 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express general concerns over air quality and public safety as evaluated in the 2013 DEIR. This comment is noted.

Lashun Cross

From: Carla Garbis <chgarbis@icloud.com>
Sent: Friday, December 05, 2014 4:14 PM
To: Lashun Cross
Subject: Opposition to Phillips 66 Rodeo Refinery Project (File Number LP12-2073)

Ms. Cross,

As a resident of Crockett I oppose the Phillips 66 Propane Recovery Project. The sulfur dioxide emissions and possible health effects should be considered along with all other proposed refinery projects in the East Bay and North Bay. For Contra County not do so is to shirk the responsibility we have placed in our administrators to ensure our community is safe. C10-1

Thank you.

Carla Garbis

40 Pennington Court
Crockett, CA 94525
chgarbis@icloud.com
(510) 787-6835

3.3.10 Letter C10 – Responses from Carla Garbis

C10-1 The proposed Project would result in a substantial reduction in sulfur dioxide (SO_2) emissions. The SO_2 emission reductions associated with the boiler alternative are shown in RDEIR Tables 4.1-7 and 4.1-8. The SO_2 emission reductions associated with the steam power plant alternative are shown in Tables 4.1-9 and 4.1-10. The boiler alternative would reduce SO_2 emissions by 172 tons per year, while the SPP alternative would reduce SO_2 emissions by 180 tons per year. These SO_2 reductions would result from hydrotreating, which would be used to remove sulfur compounds from the light hydrocarbon gases. Hydrotreating would clean and improve the quality of the propane and butane products and would reduce sulfur in the remaining light hydrocarbon gases that become part of the Refinery's fuel gas system.

Lashun Cross

From: Peter Turner <silverheelsii@me.com>
Sent: Friday, December 05, 2014 4:21 PM
To: Lashun Cross
Subject: Fwd: Response to Phillips 66 EIR File # LP12-2073

See email below.

Sent from my iPad

Begin forwarded message:

From: Peter Turner <silverheelsii@me.com>
Date: December 5, 2014 at 4:17:12 PM PST
To: "lashuan.cross@dcd.cccounty.us" <lashuan.cross@dcd.cccounty.us>
Subject: Response to Phillips 66 EIR

Ms. Cross,

As a resident of Crockett I oppose the Phillips 66 Propane Recovery Project. The sulfur dioxide emissions and possible health effects should be considered along with all other proposed refinery projects in the East Bay and North Bay. For Contra County not do so is to shirk the responsibility we have placed in our administrators to ensure our community is safe. C11-1

Respectfully,

Peter W. Turner

40 Pennington Court
Crockett, CA 94525
chgarbis@icloud.com
(510) 787-6835

Sent from my iPad

3.3.11 Letter C11 – Responses to Comments from Peter Turner

C11-1 See Response C10-1.

Lashun Cross

From: Charles Davidson <charlesdavidson@me.com>
Sent: Friday, December 05, 2014 4:55 PM
To: Lashun Cross
Cc: Charles Davidson; Lashun Cross
Subject: Charles Davidson - Comments on Phillips 66 Rodeo Refinery Propane Recovery Project Recirculated Draft Environmental Impact Report (State Clearinghouse #2012072046, County File #LP12–2073)
Attachments: Propane is extremely flammable GGG.docx

Attached WORD version of my comments:

Pasted email version of WORD attachment above:

VIA ELECTRONIC MAIL

To: LaShun Cross, Principle Planner

Contra Costa County Department of Conservation and Development.

20 Muir Road. Martinez, CA 94553. lashun.cross@dcd.cccounty.us

From: Charles Davidson. 2108 Drake Lane. Hercules CA. charlesdavidson@me.com

Subject: Comments on Phillips 66 Rodeo Refinery Propane Recovery Project Recirculated Draft Environmental Impact Report (State Clearinghouse #2012072046, County File #LP12–2073)

Dear Ms. Cross,

Title: Phillips 66 Rodeo and Santa Maria Refineries Expansion of Combined Production Capacity, Tar Sands Refining Capability and Propane Production

The first major problem with Phillips 66's Santa Maria Railroad Spur Extension Project RDEIR (1), is that it is a *piecemealed* project since the Santa Maria Refinery is connected by a 200-mile pipeline to the San Francisco Refinery in Rodeo. In turn, the Rodeo Refinery accepts heavy gas oil derived from semi-refined Santa Maria heavy crude feedstock and then completes the refining processes in order to make higher-valued products, such as gasoline, diesel and jet fuel. Concurrently, the Rodeo Refinery is proposing the Propane Recovery Project (1). Multi-project EIR piecemealing is illegal in California under CEQA. C12-1

A second major problem with Phillips 66's Santa Maria Refinery *Railroad Spur Extension Project* RDEIR is that it fails to disclose the fact that the refineries' *most* likely source of crude oil would be a type of high-sulfur, extra heavy crude oil derived from Canadian Tar Sands, called bitumen. Specifically, Phillips' RDEIR states that light, low-sulfur "sweet" Bakken North Dakota crude oil would be an "excluded" type of refinery feedstock carried by rail into Santa Maria, leaving Tar Sands bitumen as the only other "crude-by-rail" available in large amounts. (2) The combined Santa Maria-Rodeo Refinery Projects' dependence on energy-intensive bitumen refining would make them, cumulatively, high greenhouse gas-producing projects that are capable of emitting increased amounts of toxic pollutants and a large excess of highly flammable propane. C12-2

When making gasoline, a marked decrease in crude oil quality is no small matter for communities, for refinery workers and for the planet. C12-3

On behalf of the Crocket Community Foundation, Communities for a Better Environment (CBE) senior scientist, presented compelling evidence in his commentary to Phillips' Rodeo Refinery Propane Recovery Project Draft EIR that Phillip's energy-intensive, high temperature *delayed coking* of heavy crudes fractions, produces more propane and butane than can be recovered from simple distillation. This proposed 9,000 barrel increase in combined propane and butane production is several-fold higher compared to simple distillation. C12-4

On behalf of the Rodeo Citizens Association, the refinery engineer and scientist working for Shute, Mihaly and Weinberger, attorneys-at-law, noted that the Rodeo U200 Delayed Coker Unit is central to the Propane Recovery Project. The Rodeo coker will directly receive, via their 200-mile pipeline, semi-refined, heavy crude from Phillips' Santa Maria Refinery for upgrading into product. Coking is a very specific for "cracking" inexpensive extra heavy oils in order to maximize desirable high-octane gasoline production. Coking and Phillips 66's hydrocracking of heavy gas oils in Rodeo generates large excesses of propane as a byproduct. Coking is also performed at the Santa Maria Refinery. C12-5

CBE asserts that the Project's dependence on propane and butane sales revenue would lock the refinery into coking of low-quality crude feeds and foreclose future, cleaner options. In fact, Phillips has already signed a long-term $850 million propane contract with the Chinese-owned hydrocarbon exporter, SinoPec. C12-6

Conoco-Phillips is the largest importer in Canadian Tar Sands bitumen "crude oil" into the U.S., while Phillips' Chairman and CEO Greg Garland notes that within the next few years, 100 percent of their crude will be advantaged crude that "sells at a discount relative to crude oils tied to the global benchmark ... [and] include[s] heavy crude from Canada'.

Furthermore, the Phillips 66 Rodeo Refinery's *Nelson Complexity Factor* of 13.6, is one of the highest in the world, indicating that this refinery is designed to refine the very heaviest crudes in order to maximizing the production of the highest valued products, such as high-octane gasoline. C12-7

In addition to the 10 percent increase in Santa Maria crude throughput, which was not mentioned in the Rodeo Draft EIR, this percent refinery product expansion in Phillips total refinery output is dependent on a marked increase in refinery energy input, i.e., natural gas. C12-8

Specifically, Phillips' nearly complete switching to an external natural gas supply, instead of using propane and butane for primary refinery process gases, would increase natural gas usage by 225%, mostly for generating heat and for producing the 20 percent more refinery hydrogen that would be needed to help liquify heavy bitumen oils and remove the increased volumes of sulfur contained in Tar Sands. The increase in production of propane and butane beyond the refineries current capacity and its substitution with currently inexpensive natural gas as a refinery operating gas could render the current project exorbitantly expensive, should the price of natural gas increase dramatically, as happened in the Summer 2000 Enron affair in California. C12-9

Tar Sands bitumen is mined, not drilled as with traditional oil production. Two of the largest man-made lakes in the world are Tar Sands mine *tailing ponds* in Alberta Canada, which are completely laden with toxic heavy metals. Tar Sands is unusually high in sulfur content and heavy by world crude oil standards, it requires up to three times the energy to refine into gasoline than traditional, average U.S. refinery feed and it produces up to three times the greenhouse gases and co-pollutants that would need to be mitigated. C12-10

As noted in CBE's comment to the RDEIR, on Tar Sands toxicity: C12-11

The U.S. Geological Survey reports that "natural bitumen," the source of all Canadian tar sands-derived oils, contains 102 times more copper, 21 times more vanadium, 11 times more sulfur, six times more nitrogen, 11 times more nickel, and 5 times more lead than conventional heavy crude oil.[1]

When blended with the diluents, tar sands "dilbit" crudes contain even higher concentrations of BTEX compounds, which have a significantly high potential to be released as process related operational emissions that remain unidentified in RDEIR.

C12-11

As identified by the EPA in 2012, Phillips 66 in Rodeo is the most polluting refinery in California. Perhaps on account of the advent of Tar Sands increasingly coming into California since 2010, the EPA noted a 40% increase in water-born refinery pollution, largely due to heavy metals.

C12-12

Semi-solid Tar Sands crude or bitumen is commonly blended with 30 percent light weight diluent to facilitate transporting it by rail or pipeline and is called "DilBit." Much of the DilBit diluent is the lightest weight fractions of light shale oil recovered in Texas from "stabilized" crude and sent to Canada via a special diluent-only pipeline. This diluent in DilBit that would come to the Santa Maria Refinery could or would also be recovered, in part, as propane and butane in Rodeo, as part of the naptha diluent required to pipe heavy semi-refined crude oils to Rodeo.

C12-13

Importantly, propane has an expansive vapor pressure 600 times more than that of gasoline, a boiling point that is 300 degrees F lower than gasoline and a flammability flashpoint 250 degrees F. below that of gasoline, lending itself as an ideal source for a thermobaric explosion, when mixed with air in the case of a breach of containment, such as if caused by an earthquake on the nearby Hayward fault, near Rodeo, that could potentially damage the pipes that connect the propane storage tanks to the rail yard that is on a liquifaction zone.

C12-14

Phillips 66 is planning on installing 4 new pressurized propane storage tanks of 100-thousand gallons each (ie about 2,500 barrels apiece) at the Rodeo Refinery. Should a single barrel be compromised and ignite, the 2nd percussive blast zone would extend from 2,500 foot-to-7,000 foot radius, with a death rate up to 80 percent and would include most of the refinery and half of Rodeo's population. A propane blast is particularly violent and deadly, because all of the propane would become fuel, and as opposed to the non-fuel oxidizer weight in traditional explosives, all of the oxidizer weight in a thermobaric explosion would be the surrounding air itself. Moreover, the very high vapor pressure of propane, that is a gas unless pressurized in a tank, renders an explosion from one of these tanks as capable of producing a fireball of 1000 feet in diameter. The 1st and 2nd blast zones would deprive residents and workers of both oxygen and physiologic breathing capacity. These propane tanks could be a national security risk.

C12-15

DilBit crude-by-rail to California has been proposed to constitute a significant portion of the 25 percent of projected California refinery feedstock by 2020. A DilBit train would generally be a mile-long, and particularly heavy, 80-to-100 car dedicated "unit train" that travels up to 50 miles per hour. Tar Sands DilBit spillage is extremely difficult, if not impossible to clean up, as was the case of Michigan's Kalamazoo Enbridge Pipeline spill in 2010 that, so far, has cost over one billion dollars to only partially remediate and the process is still far from complete. A derailment and spill of a DilBit-loaded railroad tanker car in California could permanently damage sensitive areas and would have a catastrophic impact if spilt on critical water resources. Recently, there have been non-crude cargo train derailments in the Feather River Canyon, a protected watershed and in Richmond, nearby an elementary school.

C12-16

Lastly, DilBit derailment is potentially explosive, though less so than unstabilized, propane-laden light Bakken shale oil, because diluted bitumen has a significant concentration of propane, butane and pentane diluents, constituting seven percent or over 15th of DilBit by weight, but a much larger proportion by volume. The light, even gaseous diluent and very heavy bitumen, might tend to separate during 1,500 miles of railroad transit, while gently vibrating and undergoing potential wide daily temperature swings, rendering the propane and butane in DilBit vulnerable to ignition should their be a derailment.

1) Note: "The refinery feedstock definition (meaning the materials that could be transported by train into the proposed facility) excludes gaseous feeds, natural gas liquids (NGL), liquefied petroleum gas (LPG), finished refined products, and Bakken crude oil. [Ref: Executive Summary; Phillips SMR Rail Project Public Draft EIR. October 2014 ES-5.]

2) Phillips 66 Propane Recovery Project Recirculated Draft Environmental Impact Report (RDEIR) - SCH# 2012072046 and Phillips 66 Santa Maria Refinery Company Rail Spur Extension Project (RDEIR) – SCH# 2013071028

3.3.12 Letter C12 – Responses to Comments from Charles Davidson

C12-1 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other refinery facilities. Also see Master Response 2.4, which discusses the relationship of crude feedstocks to the proposed Project.

C12-2 See Response C12-1.

C12-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express general concerns over crude oil quality. See Master Response 2.4, which discusses the relationship of crude feedstocks to the proposed Project. This comment is noted.

C12-4 See Master Response 2.4, which discusses the relationship of crude feedstocks to the proposed Project and also propane and butane production.

C12-5 See Response C12-1.

C12-6 See Response C12-4.

C12-7 See Response C12-4.

C12-8 See Response C12-1.

C12-9 As explained in the RDEIR Chapter 3, *Project Description*, the proposed Project would recover butane and propane from the feed gas stream. Natural gas would be substituted for the recovered butane and propane in refinery fuel gas (RFG). The economics and availability of natural gas currently favor the proposed Project to recover, treat, and sell butane and propane, and to burn natural gas purchased from Pacific Gas & Electric Company to replace the lost fuel value of the butane and propane removed from the RFG. The purchase of natural gas is not intended to be used to liquefy heavy bitumen oils. See also Master Response 2.4. Commenter is correct that a dramatic increase in the price of natural gas could increase the costs and economics of the proposed Project.

C12-10 See Response C12-4.

C12-11 See Response C12-4.

C12-12 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project but does express general concerns over air quality and pollution from the Refinery. This comment is noted.

C12-13 See Response C12-1.

C12-14 The commenter expresses concern over the risk of an explosion associated with an earthquake. See 2013 FEIR Master Response 2.5, which addresses seismicity and Master Response 2.5, which addresses hazards.

C12-15 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. The commenter notes the inherent dangers associated with propane. This comment is noted. Hazards associated with the proposed Project are analyzed in RDEIR Section 4.6, *Hazards and Hazardous Materials*. See Master Response 2.5 for further discussion on accidents and hazards.

C12-16 See Response C12-1.

3.4 Response to Public Hearing Comments

November 17, 2014, Zoning Administrator Meeting

Public Hearing:

Item #6: Phillips 66 Company (Applicant and Owner) County File #LP12-2073

(Recording marker: 26:48:0)
Aruna Bhat: Good afternoon, and welcome to the November 17th, 3:30 session of the Zoning Administrator's meeting. The first item on the agenda is public comments. Is there anyone here that would wishes to speak on an item that is not on the agenda that is within the purview of the zoning administrator? Ok, I see no one so I'm going to move on to next item of the agenda. Item # 6 - could you please call that out?

(Recording marker: 27:18:6)
Daniel Barrios: Agenda item #6, Phillips 66 Company, applicant and owner. County file #LP 12-2073**.** This is a hearing to accept public comments on the content of the recirculated draft Environmental Impact Report RDEIR that was prepared for the Phillips 66 propane recovery project which proposes refinery processing equipment improvements to recover for sale propane and butane from refinery fuel gas, rfg and other process streams and to decrease sulfur dioxide SO2 emissions from the refinery as a result of moving sulfur compounds from rfg streams that the Phillips 66 Rodeo Refinery in Contra Costa County. The proposed project would add and modify processing and ancillary equipment within the refinery. New equipment includes a hydrotreater, fractionation columns to recover propane and butane and propane storage vessels and treatment facilities as well as two new rails spurs (?). To provide the steam required by the proposed project, either a new 140 million BTU per hour steam boiler would be added or more steam would be provided by the existing steam power plant if the new boiler is not built. There would also be minor modifications to existing processing units and utilities systems for the purpose of tie-ins and to address any changes in operating pressure or temperature at the tie in points. The proposed projects would require hydro treating a portion of the rfg, a process that would reduce the amount of the sulfur and the fuel gas and because fuel gases burn to produce heat for the refinery processes that would ultimately reduce the refinery's SO2 emissions to the atmosphere. The project would be built in two phases. The first phase is "Phase 1" would provide enhanced recovery and increased rail shipments of butane. Phase 1 would include all project components except propane storage and the additional rail loading rack and spurs. During the second phase, "Phase 2," the facilities to store and ship propane would be added along with piping and other ancillary equipment necessary to get the propane from propane butane recovery unit to the storage vessels and loading racks. Startup would occur after the completion of construction which is estimated to take 12 – 15 months. The Zoning Administrator will be accepting public comment on the content of the recirculated draft environmental impact report. The refinery is located at 1380 San Pablo Avenue, an unincorporated community of Rodeo.

(Recording marker: 0:30:00.8)
Aruna Bhat: Thank you. So the recirculated draft EIR prepared for the Phillips 66 project was released by the county on October 21st. The public review period ends on Friday, December 5th. So submit any written comments by 5:00 PM on December 5th. So this hearing is an opportunity for you to provide public comments on the adequacy of the recirculated draft Environment Impact Report. This hearing is not on the merits of the project of whether the project should be approved or not so I would ask that you limit your comments to the adequacy of the environmental document that has been prepared for

the project. Thank you, and I am going to call the speakers and please speak into the microphone and state your name and address. Start with Roger Lin.

(Recording marker: 0:31:06:6)
Roger Lin: Good afternoon Zoning Administrator. My name is Roger Lin, and I am an attorney with Communities with a Better Environment in Oakland. We still have concerns with the documents, and you are right, we are not here to talk about whether it's good or a bad project, but our goal is to make sure that any decision making body has all of the information in front itself so it can make that decision. Unfortunately right now, you do not. At recirculation, two things were required by the Board of Supervisors. First an analysis, a re-analysis of air emissions which we still have issues with. For the second reason which is that the recirculated document has to address a change in feedstock and whether crude feedstock would come from West Pak. The recirculated document doesn't add anything to the quality of feedstock and although the project needs components to remove sulfur compounds, those same components will also enable the refining the lower quality crude which in this case is tar sands that comes in directly to the Santa Maria refinery which is the other half of this project, and in partially refining goes up through Rodeo. So again, our goal is…you're right is not a good/bad project, our goal is to make sure you have all the correct information in front of you. Right now those two issues, the piecemealing and where the crude comes from. Those are still missing, and therefore, you do not have enough information to make an informed decision. We're here to help. Thank you.

Lin-1

Lin-2

Aruna Bhat: Jim Neil

(Recording marker: 0:38:06.6)
Jim Neil: Good afternoon. Thank you. How can the county regard the Phillips 66 Rodeo Propane recovery project as one project and based it on one EIR? This is a two part project connected by a 200 mile pipeline to the Phillips 66 Santa Maria Refinery. Rodeo receives preprocessed crude oil from Santa Maria. Rodeo cannot function without Phillips 66 Santa Maria, so why are they considered two separate projects? Both refineries are labeled San Francisco Bay Area refineries on the corporate website. The county cannot let this piecemealing of projects to exist and review both the Santa Maria and Rodeo project as one. The Santa Maria refinery project are recirculated draft EIR does not mention the Rodeo propane recovery project even though they are considered the same facility by corporate. Why would they leave that information out of the R.D. EIR table 3.1 cumulative methodology and projects list? Are they hiding something? Whether the Phillips 66 Rodeo recirculated draft EIR does mention in section 3.3.2.19, the Santa Maria Refinery as its source of some of refined liquid products via a 200 mile pipeline, it was not mentioned in the draft EIR. When Phillips 66 facilities currently have recirculated draft EIRs out for public review simultaneously, why is one facility mentioned and not the other one? Each facility is dependent on the other. The Rodeo project may be a propane butane recovery project, but it is also crude by rail project just like Valero and should be treated as such. Thank you.
(Recording marker: 0:40:06.7)

Niel-1

Niel-2

(Recording marker: 0:49:29:0)
Aruna Bhat: Thank you. The next speaker that I have is Bill Pinkham.

Bill Pinkham: Good afternoon. I'm Bill Pinkham and I'm from the city of Richmond which is of course subject to its own refinery. Also, would like to talk a little about the feedstock problem. If there's any crude that comes from the Westpak project; if it's approved, the idea there is to bring in ten million gallons per day and store them in those PG&E tanks downtown, 100 car trains around the clock. This

Pinkham-1

crude is going to run along the line that affects all our communities. Last year, we had a derailment in Vallejo I guess it was. It was coke fortunately. You've heard about derailments in North Dakota and Lac-Mégantic (Quebec), and there was another one in North Dakota recently. There was a derailment in West Virginia. The problem is the tracks. They are talk about how the safe the cars are, but the tracks deteriorate. There's nothing in this EIR or any of the others that refineries have submitted about their expansion plans that addresses the fact that the train infrastructure deteriorates. It's not being changed. They are not changing the pipes. They pipe it out from the Westpak project. Just to take a little more of an overview, I have yet to see an EIR for any of these refineries, including this one, talk about the trouble the earth is in – the earth's atmosphere. The fossil fuel companies have approximately 2,800 gigatons of known reserves. Most scientists believe if they burn 20% of it, it's game over. The earth will heat up too much, and we'll be in a self-feeding loop - essentially fry us. They give every indication they are going to do that. This project, along with the other expansion projects, is just another way to generate and burn more fuel. None of the EIRs ever talks about using alternative fuels. Clearly renewables are much more environmentally safe than burning any kind of petroleum projects. Seems to me that the county should be pointing in that direction, and rather than encourage more fossil fuel use, should be encouraging renewable projects. So I hope you'll nix this one. Thank you. (:52:28.1)

Pinkham-1
Pinkham-2
Pinkham-3
Pinkham-4

Aruna Bhat: Thank you for your comments. Next speaker, Tom Griffith.

Tom Griffith: Hello, I'm Tom Griffith of the Martinez Environmental Group and the Bay Area Refinery Corridor Coalition. It seems so clear that these two separate EIRs - one for the Nakoma and one for the Rodeo area parts of the same refinery - are really an attempt to corrupt the meaning of the CEQA, and I would also suggest that there is a third facility which is the petroleum coke facility that is right over the hill that is the Phillips 66 Petroleum Coke Facility. So I think it's clear that they are trying to make money at the expense of all of the people in the area. And my other concern is with the tar sands. As the tar sands are refined, one of its byproducts is the lead released into the air which, of course as you know is… I'm sure that everyone knows, causes birth defects and loss of hearing and all kinds of things like that. So for those two reasons I think that this is a terrible project, and I think the reason the way that they made it into two different EIRs basically shows that the EIR itself can't be trusted. So thank you.

Griffith-1
Griffith-2

Aruna Bhat: Thank you. Our next speaker Nancy Rieser. Ok, thank you. Ok, thank you.
(Appeared that speaker handed documents to Aruna Bhat)
(Recording marker: 0:54:17.3)

Nancy Rieser: My name is Nancy Rieser. I am a resident of Crockett, 444 Alhambra Street. I am also the co-founder of Crude Crockett Rodeo United to Defend the Environment. I would like to say today that this revised EIR is badly flawed. And it's based and draws false conclusions from scant cherry picked data. In this hearing, I'm only going to address two of the major flaws – just two. In this updated EIR, the propane blast stones (sp) and train explosion risks. Now crude is very, very happy to see that a blast zone map was finally for the first time appearing in the DEIR, the revised DEIR. You'll see that in front of you, figures 4.6-2, and it concurs with the blast zone map that the community presented last year to the Board of Sups and that is the map that that lovely gentlemen over there is holding. These zones are based on formulas are based on a well-known engineering consultant, Michael Roberts, who actually does consult for Phillips 66, and in a copy of a simple abstract is in front of you. But there is where the similarity ends. The revised DEIR states that the risk of the hazardous materials were primarily confined "within the limits of the refinery." That can be found on page 6, 4-1. And it ignores the rest of the reality held in that paper you see in front of you. Now a large propane bleve has been likened to a small

Rieser-1
Rieser-2

thermal nuclear bomb. This significant area that would be actually be impacted by a bleve of the 2,500 gallon propane tank would be the entire portion of Northwest Rodeo where the public lives, travels, shops, wine tastes, goes to church, and sends their young children to school. To be more specific. And this where Eduardo is going to come in (*laughs*). The fireball zones, circle 1, encompasses a segment of San Pablo Avenue, one of two non-highway backed roads to the Carquinez Bridge in Crockett. I take it often to go to Safeway and to check for flares. I drive through the "belly of the beast" often. Should a civilian driver be driving on that particular stretch of road when the blast occurs, and Eduardo is pointing to a red tack that would be my little card, that car would be melted instantly in a blast and the driver would to ash. That is a public road. That is zone one. The first percussive air blast zones, circle 2, encompasses about a mile of that same road, San Pablo Avenue. Any civilian driving a car in that area and all Phillips 66 employees in that radius would most likely be dead. According this paper, concrete stretchers will collapse and death will be universal 100%. As the air from that blast, the people will die not necessary because of a concrete building will collapse on them that may occur, but people will die because the air from that blast will be so strong when it's pushed out from the center of the explosion that goes down the windpipe and explodes the lung like a balloon. That is zone two. Again I need to remind you that a public road goes through zone two. Zone 3, the second air blast zone, Circle 3, death will be "wide spread" - approximately 80% due to the same causes. This area covers the entire (:59:59:2) section of northwest Rodeo and included a Head Start school, a water treatment plant, several churches, restaurants, bars, basically 1/3 downtown of the small business district. A school administration building, several thousand homes and even one mile, one mile of the Interstate Hwy. 80. This document basically asserts neither the county nor Phillips 66 believes that a possible explosion that would impact 3,000 people approximately in northwest Rodeo, 80% of them who would be killed instantly, as significant. The EIR further downplays any danger of rolling bomb trains – puncturing, derailing, and turning into bleves by again cherry picking. This time they cherry picked two decades of uneventful train data ending in 2010. Ok, the rolling bomb trains that exploded in Lac de Montique, Quebec, and killed 47 people, Castleton, ND, and western Alabama occurred just in the past two years. Outside of Phillips 66 carefully indexed window, and in fact in 2012, federal agencies a 44% increase in oil trains from previous years. 44%...in 2013 that number continued to rise by another 13%. And just recently, Governor Brown grimly advised us that oil train traffic will increase 10 fold by 2020. That's 6 years from now. Train safety upgrades will not go into effect for 7 years, and the proposed expanded rail spur is located on liquefaction 7 miles as the crow flies away from the Hayward Fault. Well, aren't we lucky and insignificant ducks. The CIR continues to have holes big enough to drive a truck through. It must go back for further revisions and analysis.
(Recording marker: 1:02:47.9)

Rieser-2
Rieser-3
Rieser-4
Rieser-5

Aruna Bhat: Thank you. The next speaker is Shoshana Wechsler.

Shoshana Wechsler: Ms. Rieser is a very hard act to follow, I must say. I'm a resident of Kensington which is an unincorporated community here in Contra Costa County. I'll keep my remarks very brief and just kind of revisit what previous people have said. I feel very strongly that this recirculated draft EIR is deficient in precisely the same ways the first was. And I will just note one main area of deficiency. The planning department will need to revisit a big omission here which is cumulative impacts of Phillips 66 Santa Maria and Rodeo proposals as a single project – not in isolation since the proposed terminal in Santa Maria is directly linked by pipeline to the Phillips 66 Refinery in Rodeo, Phillips 66 is currently proposing to modify both facilities to allow it to refine Canadian tar sands, the most toxic crude oil on earth. The EIRs of this project have been piecemealed in order to evade the required consideration of cumulative impacts which are considerable. Phillips 66 must disclose crude quality information so that

Wechsler-1
Wechsler-2

county decision makers fully understand the climate impacts of the proposed rail project. At every stage of the mining transportation and refining process, Canadian tar sands are more carbon intensive than any other source of oil making this project simply incompatible with California's plans to be a national and planetary climate leader. Thanks.

Wechsler-2

Aruna Bhat: Thank you. Next speaker is Jonathan Garrett
(Recording marker: 1:05:19.1)

Jonathan Garrett: Yes, I am from Rodeo, 23 Garretson Avenue, actually within sight of the refinery itself and have rail tracks that run a short stone's throw from my house. And it has been addressed a little bit here today safety concerns as with the increase in the number of rail lines and storage of an increasingly volatile materials. What I think the EIR fails to address is the adequacy of the existing facilities in the case of an emergency as some people have outlined here - even lesser than that I think would not be adequately addressed by existing facilities and emergency response teams. There actually has been a trend - it seems like recently within government to actually reduce the amount of fire department that we have in these districts and so I just want to voice my concern about that the EIR should more openly address what considered is adequate in case there is an emergency and where would the financing for such facilities would come from. I think, certainly the oil people should take a big piece of that, but I just wanted to go on record as bringing that up as a possible consideration as we continue along in the process. Thank you.
(Recording marker: 1:06:42:8)

Garrett-1

Garrett-2

Aruna Bhat: Thank you. The next speaker is Madelyn Morton.

Madelyn Morton: Thank you. My name is Madelyn Morton. I live at 23 Garretson in Rodeo. I live J. C. Garret. I can see the refinery out the back window; the train tracks out the front. The train, if you've ever stood on the bridge that crosses that crosses over to the Rodeo Beach, you can see the shoreline of our beautiful San Pablo Bay – it's like a snake. There are a lot of curves; a lot of places where things can go wrong with the train. In fact there was a catastrophic derailment in the early part of the 20th century. There are already a lot of trains that go by. Just this morning, a train with I don't know how many oil tankers it had, but it took 10 minutes to go by and it wasn't going that slowly. There is already a lot of activity. I agree with a lot of things my peers before me have said that there is an element of fear that has us concerned and to grant this zoning request is to give value to the refinery at the expense of our value. It devalues our lives and it's almost an insult to the memory of John Muir, this beautiful county that the people of San Francisco ridicule – you know that it is considered a joke. But we know who live here know, it is beautiful. And yet it's blighted, and they are requesting to add more of a blight. This refinery is a very imposing already. It's noisy like this steaming thing out there, and sometimes even disruptive on a nice Sunday afternoon. Why should I want to take a vacation from my house? It's a nice place to live, but sometimes I want to get away from the house because it's an imposing beast. I just ask you to consider to give to them is to take from us. Thank you.

Morton-1

Aruna Bhat: Thank you for your comments. Janet Callaghan.
(Recording marker: 1:09:16:8)

Janet Callaghan: Thank you for hearing me again. I'm Janet Callaghan at 914 Sandy Cove Drive in Rodeo. This is really emotional for us and it is emotional for everybody in the county. We are not only fighting for everyone in Rodeo, we are fighting for all of California and all these rails, all these pipelines,

Callaghan-1

everything that's coming in and going out is not just for the United States and California. California, it is cheaper for them to process here than it is now in Texas. So I feel like you know a duck over pooping on us all – all the time. We have the position the county and everybody think about what is money when we're talking lives. We are scared for our lives. And it's not just Rodeo. It's easy for me to say that I want to pick up and leave, but I love California. California is a rare jewel, and it should be protected by the people who should protect us – our county; not the citizens that come here and tell you that they are out of compliance. I've worked on the fence line. Thank god air quality's coming down with new rules. Kamala Harris there's all sorts of stuff coming down. Step back and take time, because you do not have the money to pay for the deaths and the tragedies that are gonna to occur and that have occurred through the refining process. Thank you so much. I did want to mention that tonight on channel 2 at 10:00 tonight on the news, they are going to have train crude derailment, some actual visual stuff, and I would like you to find out if it's true in California that it only costs like 40 cents a barrel compared to $4 in Texas to process. California as a whole is at a danger because everybody can be able to die from a bleve, which the firemen know about that. And thank god our Rodeo Fire Department is open now, but it's only for a year. And money is not always the thing. Lives and the good correctness of the county watching out for safety is the most important. Thank you.

Callaghan-1

Aruna Bhat: Thank you for your comments. Next speaker is Elsa Monroe.

(Recording marker: 1:11:59.7)
Elsa Monroe: Good evening. Thank you so much for this honor. My name is Elsa Monroe. I am a registered nurse, and I've been a nurse for more than 35 years. I was born in Mexico, and I grew up in Texas, and then migrated to New Orleans. I'm a transplant from Katrina, and we all know about Katrina. I'm here, because I witnessed the explosion that happened in Richmond. I was in Berkeley in the dark part, and I heard the explosion, and I called 911. It couldn't handle my call, because I was out of the district. Then I started taking pictures of the clouds that first started out to be a white little cloud and then that got bigger and then it turned black, and then it almost turned out to be like the clouds that they got from New York City in 9/11. It was just incredible. And then it turned into this black almost like very demonic wildcat that was covering the entire sky and kept on flowing, but at that time, I was living downtown Lake Merritt in Oakland so I was able to drive away. Now, I am at 1538 Santa Clara Street in Richmond. I see the beautiful Bay Bridge and San Francisco and then to my right, I see the rest of Richmond. I have never felt so venerable as I did feel the pains of Katrina. And I feel a sense of entrapment. I feel that all of us here – maybe we don't have a million dollar seat – but you know what we have? We have our souls; we have passion for living; we have a conscience which my mother taught me that is the only thing that we will take back from when we die – is our conscience. Nothing else. I drove all the way from my work. I've been up since 6:30 in the morning working, but I feel so compelled to convince you and to convince the rest of the developers who may be here, to stop it. Enough is enough. I am very proud to live in Richmond, because Richmond may be a little tiny city, it might have a horrible reputation that we all know it has if you go to Marin Bay, you'll hear that, you know, that Richmond is for lowest of the lows. But little Richmond is the one that it has brought down Chevron to pay their duties. (*audience clapping*). Little Richmond is the one that is having Chevron come down here and play the benevolent role. And I'm just going to say here really quick, I don't know how many feet it was radius when I saw the cloud, but I can tell you this, it turned into darkness. I can tell you something else, my friends who work at Doctor's Hospital, they're the ones who have to deal with the 1,700+ people who ended up going over there with respiratory distress. I can also tell you something else, and I can tell everybody else here, if you all haven't seen the documentary, *Crude*, please go see it. It's a two year documentary from 2009. It was filmed in Ecuador. It was about Chevron, the catastrophe that they

Monroe-1

left behind. It follows the progress from 2006 and to 2007 of a $27 billion legal case brought against Chevron Corporation following the drilling of the Lago Agrio oil field. It is a case described by the activists as the Chernobyl of the Amazon. The plaintiffs of the class action lawsuits were only 30,000 Ecuadorians living in the Amazonian rainforest who claimed that their ancestors of their homeland had been polluted by the oil industry. This is what we're dealing with in New Orleans. This is what we're dealing with in the Gulf Coast. If you go to all those Arcadians, they can't do their fishing anymore, because they live with the disasters. BP hasn't given them the money they promised that they were going to give. Now we have our only US senator who is now pleading her case to go ahead and get the Canadians going through, because she wants to be an advocate for the oil people when she loses her position. I am here just to plead to you that we need to take care of our own. We need to take care of our children. We have now the statistics in public health is that our own young ladies are growing up to become sterile. And if you have a culture, you have a country where there is sterility among the youth, then what happens to life? Because that's what life is all about – isn't it? I don't know if you've seen a baby born without a brain, but I have. I don't know if you've seen a baby who has been born premature, and he's fighting for his breath, but I have. When I saw this film, it was just devastating to know that these were the Native Americans, natives of Ecuador. We have already obliterated our Native Americans here. What more are we going to do for us, and I am here only to advocate not for myself, because I'm already in my 60s, but for the children, and the children, and the children that are coming through. And it is our responsibility to stop all of this now. Thank you.

Monroe-1

Aruna Bhat: Thank you for your comments. And I'm going to mispronounce the name, I know that, so I apologize - Ratha Lai. I thought of pronouncing it like that – I said maybe not.

Ratha Lai: You've heard a lot today, a lot of which is really hinting on you know this fossil fuel rush. We've been in the oil industry for centuries now, and this industry has really gotten this world by its grip. Clearly it affects the entire globe, and it affects here especially. Given that we have revisited this, and people here from the community continue to come here and talk about things that continue to be ignored – for example, the crude oil coming here from Santa Maria. That really signifies that there is something is really wrong here. That these corporations are really at their last breath. Like it's their last rush to get as much fossil fuel to make as much profit from fossil fuels as possible. And that's putting our health at risk. It's really putting our health at risk, and this is where we have to take a stand, and we can't allow this to happen. This project is completely awful on so many levels. You can look at it from every angle and it gets worse, and it gets worse. Whether you look at it from getting crude oil from Santa Maria coming in without telling anybody as a way to try to sneak it in. And this crude oil, we already know, is really bad. The government already knows it's bad. So much of it we can't stop it, but we can stop it from developing here in California. And we can continue to reach out to other communities to help stop this at a much more state and national level. You know, this is not separated, Chevron, Phillips 66, all these refineries are all trying to get in on this. So there are so much things that are happening. And that's why it's crucial for our elected leaders and people like you to really listen to us, and really take our words and our comments to heart. We really appreciate that. Thank you.

Lai-1

Aruna Bhat: Thank you for your comments. Ethan Buckner.

Ethan Buckner: Hi there. My name is Ethan Buckner. I work with Forest Ethics. Over the past few weeks, I've been spending time down on the Central Coast meeting with residents in San Luis Obispo County who are actively fighting Phillips 66 concurrent proposal to build an oil by rail terminal there. And as I think other comments have mentioned, the inadequacy in the Environmental Impact Report with

Buckner-1

regards to the piecemealing of the Rodeo project and the Santa Maria project. A lot of folks down there had no idea about how these projects are connected. And I think it is really imperative that people people understand the full intentions and impact of this project. As mentioned before, what we know is that this project – building the Phillips 66 refinery upgrades here in Rodeo – are all about enabling and retooling the refinery to process heavy crude such as tar sands. And we also know is that the intended intake from the oil by rail proposal is tar sands. And communities from Canada all the way along the rail roots to Santa Maria all the way up to Rodeo will be impacted by the changing crude quality which is not explicitly named in either EIR. And so, I think it's imperative that this project be examined as one project looking at the cumulative impact and how that will affect communities along the rail roots, how that would affect folks living in San Luis Obispo county near that refinery, and what that impact would be here in Rodeo. Otherwise, I don't think you can really honestly evaluate the impacts of the project. And just know that there are many many other, hundreds, no actually thousands of people who are going to be taking action on trying to stop that project…that I don't think would be super excited about this project either, knowing the implications for their community. So thanks a lot.

Buckner-1

Buckner-2

Buckner-3

Aruna Bhat: Thank you for your comments. Do you mind filling out your address? That way, you can be on a mailing list.
Andrés Soto.
All I have is two more speaker cards. Is there anyone else that wishes to speak, please fill out one of these green speaker cards. Thank you.

(Recording marker: 1:23:29.4)
Andrés Soto: Good afternoon. My name is Andrés Soto, and I am the Richmond organizer for Communities for a Better Environment. I work with the community in Richmond and lived there most of my life. I stand by the comments that were offered by Roger Lin from Communities for a Better Environment. But a little over a year ago, I moved to Benicia. And once I got there, found out about Valero's crude by rail project. So for the last year and a half, it's been learning about the whole development of tar sands, bakken, Marcellus, all the fracking, and transportation by rail, by truck, and by barges. And so one of the things that we've learned along the way is that when the community finds out the risks that these projects pose to their communities, legal requirements that come into play and the opportunity for the public to comment on this always delay these projects. And that's what industry doesn't want. And it was, I guess about 9 months ago, we were in here in front of the planning commission when they were first entertaining this. And that was one of the most ridiculous public review meetings I've ever seen. Not only Phillips 66 former manager on the planning commission and had to recuse himself, but everybody else on there are a bunch of shills from the building trades unions. And we know that they are in the pocket of industry, and anything that they can build, they will build it. They don't care about the environmental consequences; they don't care the economic consequences. Except for Jeffrey Wright from Wisconsin who represents the realtors. That seemed somewhat contradictory to me because realtors should understand that when you have these kind of projects blowing up in your face, it diminishes property values. That's why Richmond is in a budget deficit right now because the county assessor lowered the property values of only Richmond out of all of Contra Costa County because August 6, 2012, toxic explosion and fire at Chevron. So amongst the many things that we've learned is that, as was alluded to before, the Lac-Mégantic explosion with the Dot-111's, the Casselton**,** ND, explosion with the Dot-111s, the Aliceville explosion, the Alabama explosion, with the Dot-111s, but now we had a few months ago the Lynchburg, VA, derailment and explosion, and that involved the 1232 railcars that are supposed to be the new, safest railcars, and it failed. There was a catastrophic explosion, the James River in Virginia caught on fire, and that was the water source for

Soto-1

Soto-2

cities and towns for cities and towns such as Richmond, VA. So we know that the technology has not been able to keep up with the risks that are now presented by this new material whether it's the bakken crude or the tar sands. Why, because tar sands are so thick so it needs to be diluted with all sorts of volatile chemicals just to turn it into a liquid material just so it can be transported. And of course, we know the bakken crude oil is super light and has a flash point of 73 degrees Fahrenheit. That's why all those explosions have occurred. So one of the questions that you have to ask yourself, as a resident of the Bay Area, as the bureaucrat within the county, is what are you going to do about it? Now, when we look at bureaucrats, it's was bureaucrats that carried out the Holocaust in Germany. And they said, I was just doing my job. What are you going to do when your grandchildren are saying, "Grandma, what did you do to save our climate?" Did you just rubberstamp something that the industry wanted? Or did you critically analyze it, and say, "Wait a minute, this is just too dangerous." And so that's what we're up here asking you for is to not just to be a silent bureaucrat. To uphold your responsibility for public safety, for public health, and for sound development in Contra Costa County. Beyond that, we know that we cannot trust industry. Just a couple months ago over at LaSalle, Colorado, there was another derailment. Fortunately, it didn't blow up. But we know the rail industry waited an hour and a half before they called emergency responders. They called their own people first to come over to control the crime scene, and then they called emergency responders. It took them 3 hours to get there. Now fortunately, we're in an urban area, and there are potentially a lot of emergency responders. But one of the things that we know is when they show up, you know, this material does not go out with water. It's not like putting out a house fire. This stuff just burns, and all that water does is have it run into the waterways whether it's the creeks, ultimately into the Bay. And what is that going to do? It's going to create even more water pollution. But even if they had an airport type phone which can suppress the fire, these things lead to change reaction explosions, and all it does if you put foam on it, is blast away that foam. The form is not going to stop an explosion. It's a fire suppressant. And so the emergency responders are not prepared. They're all out there going and getting training out there, but they don't have the type of material that's going to actually put this stuff out. So you know the technically is about the inadequacies of the EIR that you have to deal with, but that's within a context. The thing is that we cannot trust industry. Industry hires these consultants to write these reports, tell a lie for them. It's like when they hire a house painter. The painter is going to paint whatever color you want on the house whether the neighbors like it or not. They're not going to tell you "no," don't put purple with green. They are going to paint it the way you want it. And that's what the consultants who write these reports do. Because if they don't do it that way, they are never going to get hired again. So we call upon you to do your job to protect the community's health and safety and deny this EIR, and send it back so it can be corrected. Thank you.

Soto-2

Soto-3

Soto-4

Soto-5

Soto-6

Soto-7

Aruna Bhat: Thank you for your comments. The next speaker is Eduardo Martinez.

Eduardo Martinez: My name is Eduardo Martinez. I am from Richmond, CA. I was on the planning commission when we passed the draft EIR from the Chevron modernization project. With the stipulation that they went with alternative 11 which was touted by Kamala Harris. And also with ten other conditions. Those ten conditions were thrown away by the city council unfortunately. But looking at something like this takes a lot of work. You read a lot of things, and you have to throw a lot that is garbage and pay attention to what's not fair, because that's how these things are written. There written to obfuscate the important information so that it can be passed. With the Chevron modernization project, one thing that I noticed was that Praxair was not mentioned anywhere although they were the ones who financing the hydrogen modernization project, and they were the ones who were going to take control of it. Now looking at this, I don't see Praxair anywhere but I understand that they are part

Martinez-1

of the propane recovery projects. So my question, why isn't Praxair part of the conversation on this? I think it would be very telling on their position on what this means to the residents. As Ms. Rieser said this is a very dangerous thing and we have to look at the entire petroleum corridor in which we live all the way from Martinez to Richmond, because all of these refineries actually are working together. The Chevron hydrogen project was wanting to, Praxair was wanting to sell hydrogen to other refineries to help them with their processing, because hydrogen is needed in order to break down the crude, but that's nowhere in the project writing. So, the other thing is it's not just the Bay Area, it's the entire world. When we approve this, we're saying it's ok to destroy the forest in Canada to obtain to obtain the tar sands. Are we really behind that? Does it really matter to us to what happens in Canada, what happens to those forests, what happens to the environment there? I think it should, and I think that's something we need to consider when we look at this EIR. Not just this, but the entire system and how it's put together. So I wish you would consider that when you disapprove of this.

Martinez-1
Martinez-2
Martinez-3

(Recording marker: 1:33:47.8)
Aruna Bhat: Thank you for your comments. Raemona Williams.

Raemona Williams: Good evening. I apologize for being tardy. My name is Raemona Williams, and I am a Hercules resident, and the current chairperson for the Hercules Fire Protection District. The Phillips 66….I just have a short statement I'd like to speak to you and put on the record. The Phillips 66 refinery was annexed into the fire district in 1997 and provides fire and emergency service to the refinery. The fire district has service concerns about the Phillips 66 propane recovery project. The fire district funding comes from the property tax and two local revenue measures. The fire district receives limited funding from the refinery due to a formula based distribution that only allows for a portion of any increases in assessed valuation. The refinery has been continuously been granted reassessment resulting in lower property tax and subsequent dramatically reduced funding to the fire district. The fire district is already struggling in our day to day operations. We rely entirely on mutual aid for fires and serious incidents and participant in a shared service agreement with other partners in West Contra Costa County. We recently closed Fire Station 75 in Rodeo, and were only able to re-staff the station with a federally funded Safer Grant. Within two years, the continual loss of revenue from the refinery will inevitably contribute to the permanent closure of the fire station and the fire district. Without an annual offset of loss tax revenue and a change in the redistribution formula originally established when the Phillips 66 refinery was annexed, the fire district cannot provide adequate fire protection to the refinery and the surrounding community. While we are fully aware that the reduction of greenhouse gases and increased productivity is a worthy goal, this project, the Phillips 66 Propane Recovery Project should not go forward without a viable solution to these ongoing public safety concerns and a permanent remedy to this ongoing revenue problem. Thank you.

Williams-1
Williams-2

Aruna Bhat: Thank you for your comments. (*Clapping*)
Charles Davidson. That's my last speaker card so does anyone else that wishes to speak, please fill one of these green speaker cards. Thank you.

Charles Davidson: Hi, my name is Charles Davidson from Hercules. In addition to a potential catastrophic flammability event, I oppose the piecemealed Phillips 66 project's recirculated Environmental Impact Report, because it does not address the crude feedstock source that is first semi-refined at Phillips Santa Maria refinery, and then delivered to the Rodeo refinery by pipeline. When making gasoline, a market decrease in crude oil quality is no small matter for communities for refinery workers and for the planet. On behalf of the Crockett Community Foundation, Communities for a Better

Davidson-1
Davidson-2

Environment, senior scientist presented compelling evidence in his commentary to Phillips propane recovery project EIR that Phillips' delayed coking of heavy crudes or petroleum bottoms produces more propane and butane than can be recovered from simple distillation. This proposed increase in combined propane and butane production to over 11% of the refinery's crude capacity is several fold higher compared to simple distillation. On behalf of the Rodeo Citizen's Association, the refinery engineers and scientists for working for Shute, Mihaly & Weinberger, Attorneys at Law, noted that the Rodeo U200 delayed coker unit is central to the propane recovery project. The Rodeo coker will directly receive, via a 200 mile pipeline, semi-refined heavy crude from Phillips' Santa Maria refinery for upgrading into product. He asserts that the project's dependence on propane and butane sales revenue would lock the refinery into coking of low quality crude feeds and foreclose future cleaner options. In fact, Phillips has already signed a long-term multi one hundred million dollar propane contract with the Chinese owned hydro-carbon exporter, Sinopec. Conoco Phillips is the largest importer of Canadian tar sands bitumen crude oil into the U. S., while Phillips' Chairman & CEO, Greg Garland, notes that within the next few years, 100% of the crude will advantage crude that quotes, "sells at a discount relative to the crude oils tied to global benchmark," and includes heavy crude from Canada. Furthermore, the Phillips 66 refinery's Nelson Compliance factor of 13.6 is one of the highest in the world that indicates that this refinery is designed to refine the very heaviest crudes in order to maximize the production of the highest valued products such as gasoline. In addition to the planned 10% increase in Santa Maria in crude throughput that was not mentioned in the Rodeo draft EIR, this 11.4% refinery product expansion at Phillips' total refinery output is dependent of a new source of refinery energy. Specifically, Phillips' nearly complete switching to an external natural gas supply instead of using propane and butane for refinery process gases would increase natural gas usage there by 225% mostly for generating heat, and also for the 20% more refinery produced hydrogen now needed to help liquefy and remove the inordinate amounts of sulfur from tar sands. Tar sands bitumen is mined, not drilled as with traditional oil production. Two of the largest man-made lakes in the world are tar sands' tailing ponds in Alberta, Canada, that are completely laden with toxic, heavy metals. Tar sands are usually high in sulfur content and heavy by world crude oil standards. It requires up to 3 times the energy to refine into gasoline than traditional average U. S. refinery feed, and locally it produces up to 3 times the greenhouse gases and other pollutants that would need to be mitigated. As noted by the EPA in 2012, Phillips 66 is the most polluting refinery in California. Moreover, perhaps on the account of the advent tar sands generally coming into California since 2010, recently the EPA noted a 40% increase in water born pollution largely due to heavy metal. Lastly, propane has an expansive vapor pressure, 600 times more than that of gasoline, and a flammability flashpoint that is 210 degrees Fahrenheit less than gasoline lending itself as an idle source for a thermobaric explosion when mixed with air. In case of a breach of containment such as an earthquake on the nearby Hayward fault that could potentially damage the pipes that connect the pipes that connect the propane storage tanks to the rail yard that is on a liquefaction zone. Thank you very much.
(Recording marker: 1:41:42.0)

Davidson-2

Davidson-3

Davidson-4

Davidson-5

Davidson-6

Davidson-7

Aruna Bhat: Thank you for your comments. Anyone else who wished to speak?

Janet Pygeorge – read the following:

Janet Pygeorge
Resident
RCA

RECEIVED 11/17/17

ZONING ADMINISTRATOR HEARING
AGENDA ITEM # 6

RCA Public Testimony
November 17, 2014 County Hearing
Phillips 66 Modification Project

Our legal counsel and technical experts are currently reviewing the recirculated draft EIR. I'll discuss their preliminary conclusions about the legal and factual deficiencies in the EIR and explain that, based on the refinery's existing health and safety record, the County has no business seriously considering approval of this project.

- The recirculated draft EIR does not adequately address the numerous factual and legal deficiencies in the initial EIR. Therefore, the EIR fails to comply with CEQA, and cannot support approval of the Project. — Callaghan-1

- It is bewildering that the County would go to the effort of revising and recirculating the EIR, yet not require a rigorous analysis of the environmental impacts that would accompany the proposed modification. These impacts include for example:

  - A substantial increase in air pollution from the use of the propane and butane that will be removed from the refinery fuel gas system. There is no doubt that this propane and butane will be put to use either when used as fuels or as feedstocks to various chemical processes. These uses will result in a substantial increase in air pollution and greenhouse gas emissions. Despite this fact, the EIR takes the position that an analysis of these impacts is not possible. This is absurd. It is clearly possible to quantify this increase in air pollution. Indeed, our technical expert Phyllis Fox did this exercise and determined that this is a significant and unmitigated impact of the project. — Callaghan-2

  - A substantial increase in air pollution from the additional rail cars needed to transport propane and butane. This project would increase the length of trains by a minimum of 8 cars. This is a significant increase in rail cars that will result in each train emitting more pollution. The Draft EIR for the proposed Valero Benicia Crude by Rail Project found that cancer risks to residents located 160 feet southeast of the rail tracks from that project's locomotive diesel exhaust emissions from only two trains per day) would be 8.0 in one million. The Phillips 66 EIR, on the — Callaghan-3

1

Janet Callaghan
RCA Board Member

other hand, concludes that the cancer risk from the entire refinery would be only 1.7 cancer risk per million. This conclusion defies credibility.

- A substantial threat to our community's safety. There is clear evidence showing that longer trains increase the risk of derailments. Despite repeated requests for the County to study this increased risk, and to disclose what would happen in the event of a train accident, the EIR refuses to conduct the analysis, claiming that the risk of accident is "extremely small." As the train crashes in Casselton, North Dakota and Lac Megantic,Quebec make clear, accidents do in fact occur. And there can be no doubt that the frequency of accidents will increase as more and more trains carrying Bakken and other crude oil, travel through our community. The fact that train accidents may occur infrequently is no excuse for the EIR to not thoroughly address these risks.

- A substantial increase in air pollution and heightened risk to our community's safety from the many crude oil-related projects currently under consideration in the Bay Area. Cumulative impacts analyses are necessary because environmental damage often occurs incrementally from a variety of small sources that appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact." Here, Phillips 66's project is anything but a "small source" and the impacts from this project are anything but "insignificant." The Valero crude by Rail project, the Tesoro Project and the WesPac Pittsburg Energy Infrastructure Project, together with this Project, have the potential to result in a huge increase in air emissions a severe threat to public safety. We are incredulous that this EIR refuses to acknowledge these clear impacts.

- Phillips 66 Rodeo does not exactly have an exemplary record of compliance. It was issued at least 201 Notices of Violation by the Bay Area Air Quality Management District between December 2003 and July 2014. According to the U.S. Environmental Protection Agency, the Refinery ranked as the 7th most toxic polluter of all California facilities with large chemical releases and is ranked 11th on the Toxic 100 Air Polluters index. If this refinery were in an undeveloped area, it would warrant intense scrutiny before an agency would even begin to consider

Callaghan-3

Callaghan-4

Callaghan-5

Callaghan-6

approving new requests. But this refinery is located only 2000 feet from a day care center and the Bayo Vista Community.

Callaghan-6

- Based on the refinery's current inability to protect the environment, the extensive failure of the EIR to disclose or mitigate the impacts from this project, and the fact that this refinery sits in a densely populated community, the County must act to protect its residents. Let us be clear about this. The County has the discretion to deny this project. This bears repeating. The County has discretion to deny this project. Modifications to the refinery cannot come at the expense of the community's health and safety.

Callaghan-7

640282.1

Carmen Gray - read the following:

RECEIVED 11/17/14

ZONING ADMINISTRATOR HEARING
AGENDA ITEM # 6

Department of Conservation and Development
Attention: Ms. Lashun Cross
30 Muir Road
Martinez, CA 94553

I am here because I care about Rodeo's residents and the environment,

Looking at tables 4.6-1 and 4.6-2 of the revised DEIR I can see that Rodeo and surrounding areas including Interstate 80 are in the path of destruction if an explosion were to occur due to an accident or a terrorist attack. Let's face it, with all the attention in the media these projects are getting it would not surprise me if a terrorist group were already plotting an attack. Why else do you think the Railroad Authority does not want to disclose exactly the schedules of these trains? This is because of security. Gray-1

Also interestingly enough is that according to tables 4.6-1 and 4.6-2 the range of destruction rather shrinks than expands when adding propane storage and loading racks. This really doesn't add up. If you add stored propane along side existing stored butane then the magnitude and ratio of destruction should increase rather than decrease, don't you think?

The conclusions on section 4.6.5.8 don't make sense either. If you are adding fuel, the proposed additions should result in a bigger NOT smaller potential hazard zone than those posed by the existing Refinery configuration. Gray-2

Listening to a program on KQED regarding bringing oil to California via railroad to feed the refineries, John Avalos who seats on the Bay Area Air Board was stating that the kind of crude intended for these refinery projects is highly harmful to human health. Also Jess Ackerman from Sierra Club stated that most of this new product the refineries want to produce is intended to be sold in markets around the world, not in the Bay Area. This means the refineries are making money at the expense of the health of the population around them. Gray-3

I wish you would have a moment of clarity and see the implications other than money that such project could have on the land, the environment and people's health.

Thank you

Carmen Gray
212 Sharon Ave.
Rodeo, CA 94572

Janet Pygeorge – read the following:

11/17/2014 · Outlook.com - rodenfamilyopt@hotmail.com

Janet

----- Original Message -----

RECEIVED 11/17/14

ZONING ADMINISTRATOR HEARING
AGENDA ITEM # 6

From: Ed Tannenbaum
To: janetandpaul@comcast.net
Sent: November 17, 2014 at 2:16 PM
Subject: Fwd: Terrorism

Ed Tannenbaum
PO Box 398
Crockett, CA 94525

The original EIR did not consider terrorism or sabotage. After I brought it up as a possibility, it was finally considered and rejected as a non-significant risk that requires no mitigation. There is a plan already in place that deals with these threats. The new EIR includes three paragraphs regarding terrorism and mirrors these sentiments.

Considering the explosive nature of propane in comparison to all other chemicals stored at the Phillips 66 refinery, I can't help but wonder why the threat isn't considered heightened? Without the propane tanks, there isn't a very easy terrorist target at the refinery. With the addition of several large propane tanks, the game is changed.

Tannenbaum-1

In 2005 the California legislature banned .50 Caliber weapons in California. The major reason for the ban was because of the threat to refineries. While new sales are banned, old weapons that were registered by 2006 were grandfathered in. One can be bought in all neighboring states and easily transported.

Would a 50 Caliber bullet breach one of the torpedo tanks proposed? If it could, how hard would it be for a lone wolf or other evil doer to hire a boat and shoot from the bay or highway? What other weapon that is available might be feasible?

Tannenbaum-2

Terrorism

Terrorism resulting in sabotage of Refinery facilities is one of the public safety hazard issues that have been evaluated for the Refinery as part of its normal

https://blu170.mail.live.com/?tid=cmFYt9Yuu5BGW_Gw75a8aA2&id=Inbox 1/3

operating procedures. To minimize sabotage or terrorism, a number of precautionary measures have been adopted. The standard security for the Refinery to minimize these events includes a chain link fence surrounding the entire facility with controlled gate entrances, third party security guards at all entrance locations, roving security guards, identification badges required for entry by all personnel, Refinery personnel authorization prior to visitors entering into the facility, and general awareness training for all employees.

Since the September 11, 2001 terrorist attacks, a Facility Security Plan has been developed and adopted for the Refinery consistent with the Maritime Security levels established by the U.S. Coast Guard. Depending upon the current alert level, additional security measures are activated. These activities may include stationing additional security guards at critical locations, additional sheriff patrols, restricted parking, restricted access, additional vehicle searches, and other sensitive security measures to protect the facility.

Since the components of the proposed Project are all within the existing Refinery; the above
precautionary measures and plan would apply to and for the proposed Project as well. There are no new significant components of the proposed Project which would represent any specific
increase in risk from terrorism than any other part of the Refinery. Furthermore, as discussed in
detail in Section 4.6.3, and Impact 4.6-1, the consequence analysis modeling indicates that a
hazardous event whether from accidental condition or sabotage to a proposed Project component are similar to the consequences of a hazardous event at the existing facilities. Consequently, the impact of terrorism to the proposed Project is considered less than significant.

Mitigation: None required.

Tannenbaum-2

Ed Tannenbaum
Electrons Tamed for the Arts
PO Box 398
Crockett, CA 94525

Rodeo Citizens Association (JLP) - Presented the following:

Sitting Ducks

The Threat to the Chemical and Refinery Industry From 50 Caliber Sniper Rifles

Section One: The Capability of the 50 Caliber Sniper Rifle

"The advantages are obvious when you consider that many of the same targets of rocket and mortar fire can be neutralized with M33 ball, API M8 or Multipurpose ammunition."

—"Heavy Firepower for Light Infantry," Barrett Firearms Manufacturing, Inc. brochure advertising its Model 82A1 50 caliber sniper rifle[15]

The .50 BMG round[b] fired by 50 caliber sniper rifles can knock down hovering helicopters, penetrate armored limousines, and ignite bulk fuel tanks from a distance of 10 football fields.[16] The round's merits were summarized in the authoritative journal *The Small Arms Review*:

> The fifty caliber's ability to be deployed by one individual and give that person the capability of discretely engaging a target at ranges of over one mile away are definitely alluring from a tactical standpoint. While the .50 cal sometimes seems to be exaggerated, it is hard to imagine a round that at ranges of over a mile and a half away, has more kinetic energy than a .44 Magnum, and has unbeatable penetration as well.[17]

Extended Range and Accuracy

Advertising, military manuals, export writing, and civilian owner comments all demonstrate that 50 caliber sniper rifles are accurate at ranges of at least 1,000 yards, and in the hands of a trained marksman nearly 2,000 yards. "With confirmed hits out to 1800 meters, the Barrett model 82A1 is battle proven," Barrett Firearms states in its promotional brochure.[18] In fact, U.S. forces using Barrett M82A1s routinely engaged Iraqi forces out to a range of 1,600 meters (1,750 yards) during the 1991 Gulf War.[19] Another manufacturer, Aurora Tactical, says that its Model 650 Special Light Anti-Materiel Rifle (SLAMR) "enables a skilled marksman to deliver exceptionally accurate fire on targets in excess of 1500 yards."[20]

Destructive Power

The 50 caliber sniper rifle's threat is a blend of long range and massive power. Here is Barrett's description of the power of its Model M82A1, widely available on the civilian market:

> This revolutionary .50 caliber semi-automatic rifle allows sophisticated targets to be destroyed or disabled by a single soldier. Armored personnel carriers, radar dishes, communications vehicles, aircraft and area denial submunitions are all vulnerable to the quick strike capability of the Barrett 82A1. With decisive force and without the need for the manpower and expense of mortar or rocket crews, forces can engage the opposition at

> distances far beyond the range of small arms fire....The 82A1's light weight makes transportation as easy as walking....With night vision equipment, the weapon is even more effective under cover of darkness. The muzzle brake reduces felt recoil to no more than that of a 12 gauge shotgun....The advantages are obvious when you consider that many of the same targets for rocket and mortar fire can be neutralized with M33 ball, API M8 or Multipurpose ammunition.[21]

An excerpt from the U.S. Army's manual on urban combat emphasizes the 50 caliber sniper rifle's ability to destroy materiel targets:

> These heavy sniper rifles were originally intended as anti materiel weapons for stand-off attack against high-value targets, such as radar control vans, missiles, parked aircraft, and bulk fuel and ammunition storage sites....It is their ability to shoot through all but the heaviest shielding material, and their devastating effects, that make them valuable psychological weapons.[22]

50 Caliber Ammunition Available on U.S. Civilian Market

Although originally designed for heavy military use, all types of 50 caliber ammunition are readily available to civilians in the United States—and thus easily available to foreign and domestic terrorists. This, of course, is wholly aside from the fact that military ammunition stocks also can be procured from underground sources.

Arms and ammunition—including such destructive items as M-16 assault rifles, machine guns, TNT, dynamite, plastic explosives, land mines, and hand grenades—are regularly stolen from U.S. military armories.[23] Fifty caliber sniper rifles have proliferated in military forces around the world, and 50 caliber ammunition is made in more than 30 countries. Those foreign forces, including some that are less than friendly to the United States, have stocks of military ammunition that are available to any terrorist with the right connections. Arms and ammunition are also stolen from these foreign forces, friend and foe alike, sometimes on a staggering scale.[24]

The 50 caliber sniper rifle's performance is substantially enhanced by the use of ammunition specially designed to destroy hard targets—ammunition that makes the rifles what expert Mark V. Lonsdale calls "a cost effective way to engage the enemy's high-tech equipment, light skinned vehicles and aircraft, especially when compared to the cost of hitting the same targets with rocket or mortar fire."[25] This ammunition includes armor-piercing, incendiary, and explosive rounds specifically designed to attack targets similar to the bulk tanks, pipes, and other materiel in and around the typical refinery or other chemical industrial site.

Armor-piercing and incendiary ammunition. The U.S. Army says that the basic 50 caliber armor-piercing round is designed for use "against armored aircraft and lightly armored vehicles, concrete shelters, and other bullet-resisting targets."[26] The armor-piercing effect is achieved by the bullet's design, which wraps a hardened core of a substance like manganese-molybdenum steel with a softer metal jacket.[27] Incendiary ammunition is self-descriptive, used for "incendiary effect, especially against aircraft."[28] In other words, it sets things like airplanes, fuel, and other combustible materials on fire.[6] Tracer ammunition, familiar to the public from scenes of night combat, leaves a visible trail of incendiary light. Variant rounds combine armor-piercing, incendiary, and tracer effects.[29]

Saboted Light Armor Penetrator (SLAP) Ammunition. Designers of anti-armor ammunition have long used the idea of replacing a given caliber gun's projectile with a projectile of smaller diameter but more dense material. In order to seat the smaller projectile in the larger ammunition case, and to gain the necessary spin from the gun's rifled barrel, the projectile is wrapped in a "sabot" or "shoe." The shoe rides the length of the gun's barrel, then drops away from the projectile when it exits the barrel. The much higher velocity of a "saboted" round enhances its armor-piercing performance.

The U.S. Marine Corps developed 50 caliber SLAP ammunition in the 1980s, and it was used in 1991 during the Gulf War's Operation Desert Storm. It uses a .30 inch heavy metal (tungsten) penetrator in a

plastic shoe, which is .50 inch in diameter. "Since the mass of the sabotted penetrator is much lighter in weight than normal ball .50 caliber ammunition, SLAP's velocity can be significantly and safely increased," according to the Marine Corps. "This produces a very fast round with a very flat trajectory which enhances hit probability...and extends the light armor capability...significantly."[30]

According to Winchester, the civilian contractor that developed the 50 caliber SLAP round, it delivers "superior and proven performance against lightly armored vehicles and armoured attack helicopters at ranges up to 1500 meters."[31]

A round that has "proven performance" against an armored attack helicopter at 1,600 yards is a clear threat to American industrial sites in the hands of any terrorist group that, like al Qaeda, has acquired the means to deliver it in the form of the 50 caliber sniper rifle.

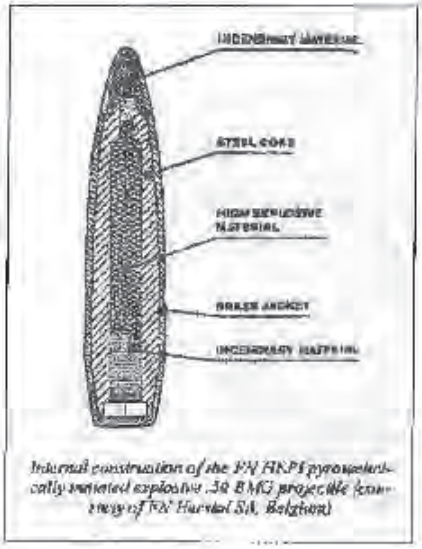
Raufoss Multipurpose (armor-piercing, explosive, incendiary) Ammunition. The crown jewel of 50 caliber sniper rifle ammunition is the Raufoss multi-purpose round, developed by a Norwegian company and manufactured under license by several companies, including Winchester. Said by experts to be the most popular round with U.S. military snipers,[32] it was used to devastating effect by U.S. forces in the 1991 Gulf War.

Designated the MK211 by the U.S. military, the round combines armor-piercing, explosive, and incendiary effects and uses a "highly effective pyrotechnically initiated fuze...[that] delays detonation of the main projectile charge until after initial target penetration—moving projectile fragmentation and damage effect inside the target for maximum anti-personnel and fire start effect."[33] According to its developer, Nordic Ammunition Company (NAMMO), the round can be used in "sniper rifles similar to [the] Barrett M82A1," has "the equivalent firing power of a 20 mm projectile to include such targets as helicopters, aircrafts [sic], light armour vehicles, ships and light fortifications," and can ignite JP4 and JP8 military jet fuel.[34]

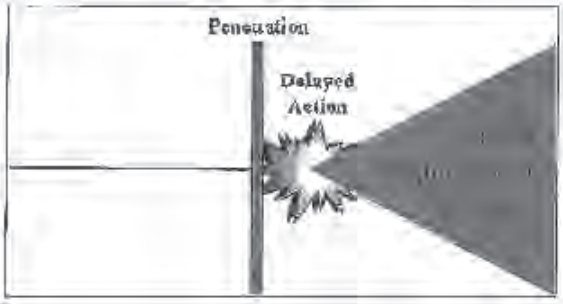
According to the Marine Corps, the Barrett "M82A1A...fires the .50-caliber RAUFOSS ammunition, which contains a tungsten penetrator and a more powerful explosive charge than the API ammunition...it has penetrated an inch of steel at 2000 yards."[35] Jane's *International Defense Review* estimates that the round is "probably capable of disabling a man wearing body armor who is standing behind the wall of a house at 2,000m.... (and) can perforate the foundation of a high-rise building (20cm reinforced concrete) at 400m."[36] Reasonable persons probably would agree that blasting through 20 centimeters (7.87 inches) of reinforced concrete from four football field's distance is an impressive performance.

ILLUSTRATION ONE: 50 CALIBER ARMOR-PIERCING, INCENDIARY, AND EXPLOSIVE AMMUNITION ENHANCES THE THREAT

Fifty caliber sniper rifles are in essence ammunition-delivery systems. Armor-piercing, incendiary, and explosive ammunition is readily available on the U.S. domestic civilian market. The first illustration below shows construction of one type of 50 caliber round. The second figure below illustrates how another, the RAUFOSS round, first penetrates armor, then explodes inside its target. The VPC has documented apparent domestic civilian sales of RAUFOSS over the Internet.



Internal construction of the PM HEPI pyrotechnically initiated explosive .50 BMG projectile (courtesy of Pat Harned SA, Belgium)



Availability of Specialized 50 Caliber Ammunition on U.S. Civilian Market

The implications of the potential uses to which a terrorist might put 50 caliber armor-piercing, incendiary, SLAP, or Raufoss ammunition can only be described as frightening. Yet all of these types of ammunition are available on the U.S. civilian market. SLAP is less frequently offered than ball, armor-piercing, and incendiary variants, and Raufoss is rarely offered publicly. Yet the Violence Policy Center has documented public offerings and apparent sales in the civilian market of all the varieties discussed above.

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b).50 BMG, the technical designation of the caliber, stands for Browning machine gun, one of the earliest weapons designed for this heavy round.

c) Fifty caliber sniper rifles have been banned from some public shooting ranges because of fires set by enthusiasts firing various types of incendiary rounds.

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The Violence Policy Center is a national non-profit educational foundation that conducts research on violence in America and works to develop violence-reduction policies and proposals. The Center examines the role of firearms in America, conducts research on firearms violence, and explores new ways to decrease firearm-related death and injury.

Analysis of Boiling Liquid Expanding Vapor Explosion (BLEVE) Events at DOE Sites

Michael W. Roberts
EQE International, Inc.
(an ABS Group Company)
1000 Technology Drive
Knoxville, TN 37932-3153
(865) 671-5852
mroberts@abs-group.com

Abstract

Several DOE standards and/or orders require the analysis of hypothetical releases of hazardous materials. The consequences of such releases for nonnuclear facilities are reported in safety analysis reports (SARs) (DOE Order 5481.1B), basis for interim operation (BIO) analyses (DOE Standard 3011-94), and/or emergency response planning hazard assessments (DOE Order 151.1). For flammable materials such as liquefied petroleum gas (LPG) or propane stored as pressurized liquefied materials (i.e., stored as liquids in pressurized vessels), a boiling liquid expanding vapor explosion (BLEVE) event may prove to be a credible accident scenario.

A BLEVE occurs when a vessel containing a superheated liquid (e.g., propane) catastrophically fails, usually as a result of external fire exposure (i.e., a pool fire under the vessel or a jet- or torch-type fire impinging on the vessel walls). The fire pressurizes the vessel, causing the relief valve to open, which allows the pressurized vapor to escape. As the liquid level in the vessel decreases, the flames impinge on the vessel wall above the liquid level. The vessel wall rapidly heats up due to the poor heat transfer provided by the vapor on the inner side of the vessel wall. The wall weakens and then tears, resulting in a sudden, catastrophic failure of the vessel.

The consequences of a BLEVE event are (1) the overpressure blast wave that is generated as a result of the rapid expansion of the superheated liquid, (2) the fireball thermal radiation generated as a result of the rapid combustion of the released flammable material, and (3) the potential vessel fragments that may be propelled as missiles. BLEVE events have the potential for causing injury and/or facility damage at significant distances from the source of the BLEVE.

The standard techniques for evaluating the thermal radiation from BLEVE events assume that the radiant heat flux is constant over the duration of the BLEVE fireball. This assumption leads to overly conservative predictions of hazard zones for injuries (i.e., second-degree burns). More recent techniques have been developed that account for the time-dependent nature of thermal radiation generated by a BLEVE fireball, leading to a more realistic assessment of hazard zones associated with burn injuries.

This paper presents the most recent analysis techniques for evaluating the blast (overpressure, impulse, etc.), time-dependent thermal radiation, and missile generation consequences of a BLEVE event. As an illustration of the methodology, a simple case study is presented for a typical size propane storage vessel. The methodology and case study provide analysts with a simple, yet technically defensible, realistic approach for analyzing BLEVE events for SARs, BIOs, hazard assessments, or other analyses.

Figure 4.6-2
Worst Case Hazard Zones for the Proposed Project

P66 Propane Project

THE PHILLIPS 66 PROPANE RECOVERY PROJECT

Phillips 66 is ranked #4 on the Fortune 500 list, but according to the U.S. Environmental Protection Agency, the Phillips 66 Rodeo refinery is the "#1 Toxic Offender" in the entire Bay Area. Our little refinery puts out more toxic pollutants than the behemoth Chevron in Richmond.

P66 is what health and safety officials call a "severe violator."

And now? The Phillips has proposed what it bills as a "refinery modernization project" to collect propane and butane that are currently burned or gassed off at the refinery. It looks good on paper, but there is a problem...a really big problem:

Propane and butane are potentially lethal explosive gases

When a tank explodes, witnesses report it's like a mini-nuclear bomb going off. There's no warning, just sudden death and immense damage. Many people die not due to fire but to do the percussive air blast pressure: the air blast is so strong, it travels down windpipes and burst lungs like balloons.

Phillips 66 proposes to store 630,000 gallons of liquid propane gas in 6 tanks along a

liquefaction zone, just twenty-three-hundred feet away from residents. This is not even a football field length away from a school, churches, a public park, hundreds of homes and Rodeo's water treatment plant.

Look at this map: where do YOU live...work...play....or shop?

The first circle would be the fireball explosion from a bullet tank filled with 2,500 barrels of propane. The second circle is the percussive air blast zone where concrete buildings collapse and death is "universal." The third circle is the zone where death would be "widespread" and most structures would collapse.

Just for a point of reference, that purple polka dot is just a few feet away the Lefty Gomez Recreation Center and the U.S. Post Office.

The environmental justice organization Communities for a Better Environment (CBE) has done analysis of the EIR and has our backs.

Citizens of Rodeo and Crockett deserve to be safe from danger. The EIR was been sent back for further review as there are unresolved issues of air quality and basic public safety. Please see "Calls to Action" section for information about upcoming public hearings and deadline written comments.

We demand that the changed EIR NOT approved until safety considerations and air quality issues have been truthfully addressed and corrected.

3.4.1 Responses to Comments from Roger Lin

Lin-1 This comment does not address any concern or issue specifically related to the adequacy of the Recirculated Draft Environmental Impact Report (RDEIR) or the proposed Project. This comment is noted.

Lin-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted. See also Master Reponses 2.2 and 2.4, which discuss the concept of piecemealing and also crude feedstocks in relation to the proposed Project.

3.4.2 Responses to Comments from Jim Neil

Niel-1 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities.

Niel-2 See Master Response 2.2.

3.4.3 Responses to Comments from Bill Pinkham

Pinkham-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted. See also Master Response 2.4, which discusses crude feedstocks in relation to the proposed Project.

Pinkham-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR. This comment is noted.

Pinkham-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR. This comment is noted.

Pinkham-4 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR. This comment is noted.

3.4.4 Responses to Comments from Tom Griffith

Griffith-1 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities.

Griffith-2 See Master Response 2.2. Also see Master Response 2.4, which discuss crude feedstocks and the proposed Project.

3.4.5 Responses to Comments from Nancy Rieser

Rieser-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Rieser-2 The commenter expresses concern about a sentence in the Introduction of RDEIR Section 4.6, *Hazards and Hazardous Materials*, that states "Hazards associated with the proposed Project primarily are associated with processing to separate propane and additional butane, storage of propane in the new propane storage area, transfer of propane and additional butane at the tank car loading racks, use and handling of other hazardous materials during processing, and the generation of hazardous materials and wastes from construction activities within the limits of the Refinery." This is an introduction summarizing the content of Section 4.6, *Hazards and Hazardous Materials*. The RDEIR contains extensive discussions of hazards extending off-site throughout Section 4.6, *Hazards and Hazardous Materials*. Figures 4.6-1 and 4.6-2 depict the worst-case hazard zones associated with the existing Refinery operations and those associated with changes resulting from the proposed Project and clearly depict the extent of the hazard risk associated with various existing and proposed equipment to off-site points. Section 4.6.5, *Consequence Analysis Methodology*, states "In order to evaluate potential safety issues associated with the proposed Project, a worst-case consequence analysis was undertaken to evaluate the proposed Refinery changes with respect to production, storage, and transfer of butane and propane. The objective of the study was to compute the potential increase or decrease in hazards to the public due to the proposed changes to the facility."

Section 4.6.5.7, *Summary of Maximum Hazard Zones*, clearly indicates that the vulnerability zones associated with existing Refinery operations and the proposed Project would extend off-site and into the neighboring communities. Figures 4.6-1 and 4.6-2 provide maps of the vulnerability zones for the existing Refinery operations and the proposed Project. Section 4.6.5.8, *Conclusions*, and Section 4.6.6, *Discussion of Impacts and Mitigation Measures*, discuss potential impacts off-site. Figure 4.6-3 provides additional visual depictions of off-site hazards associated with the proposed Project. Also see Master Response 2.5 for additional discussion on hazards associated with the proposed Project.

Rieser-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted. See also Master Response 2.5.

Rieser-4 The commenter states that the document downplays the significance of an explosion that would impact 3,000 people approximately in northwest Rodeo. RDEIR Section 4.6.3, *Significance Criteria*, presents the California Environmental Quality Act (CEQA) significance criteria, RDEIR Section 4.6.5

presents the methodology for analyzing consequences, and RDEIR Section 4.6.6 presents the impacts and mitigation measures. The commenters concern regarding the significance of an explosion is noted. See also Master Response 2.5.

Rieser-5 The commenter states that the RDEIR selectively chose data on train accidents and safety to present in the document by using data that was pre-2012. Pursuant to CEQA Section15125 Environmental Setting, an EIR must "include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published". The Notice of Preparation for the Environmental Impact Report (EIR) was published on July 24, 2012, and therefore baseline data used for the EIR was those data available as of this date. This comment is noted. See also Response B8-7.

3.4.6 Responses to Comments from Shoshana Wechsler

Wechsler-1 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities.

Wechsler-2 See Master Response 2.4, which discusses crude feedstocks and the proposed Project.

3.4.7 Responses to Comments from Jonathan Garrett

Garrett-1 The emergency response process and facilities at the Refinery are discussed in the RDEIR in Chapter 3, *Project Description*, (Section 3.3.2.18, *Overview of The Phillips 66 Rodeo Refinery Emergency Response Process*), and in Section 4.6, *Hazards and Hazardous Materials*, beginning on page 4.6-10 under *Existing Safety Management Systems.* See also Master Response 2.6, which discusses cumulative impacts.

Garrett-2 See Response Garrett-1.

3.4.8 Responses to Comments from Madelyn Morton

Morton-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

3.4.9 Responses to Comments from Janet Callaghan

Callaghan-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

3.4.10 Responses to Comments from Elsa Monroe

Monroe-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

3.4.11 Responses to Comments from Ratha Lai

Lai-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted. See also Master Response 2.2, which discuss the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities, and Master Response 2.4, which discusses crude feedstocks and the proposed Project.

3.4.12 Responses to Comments from Ethan Buckner

Buckner-1 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities.

Buckner-2 See Master Response 2.2. See also Master Response 2.4, which discusses crude feedstocks and the proposed Project.

Buckner-3 See Master Response 2.2.

3.4.13 Responses to Comments from Andres Soto

Soto-1 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Soto-2 See Master Response 2.4, which discusses crude feedstocks and the proposed Project.

Soto-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Soto-4 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Soto-5 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Soto-6 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Soto-7 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

3.4.14 Responses to Comments from Eduardo Martinez

Martinez-1 The commenter questions why Praxair is not mentioned in the RDEIR. Phillips 66 is responsible for the proposed Project and all proposed Project components would be located at the Refinery. The Praxair Contra Costa Pipeline Project was considered in the cumulative project scenario in Section 5.4, *Cumulative Impacts*.

Martinez-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted. Also see Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities.

Martinez-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted. See also Master Response 2.4, which discusses crude feedstocks and the proposed Project.

3.4.15 Responses to Comments from Raemona Williams

Williams-1 The commenter expresses a general concern about fire protection services with respect to the proposed Project. The emergency response process and facilities at the Refinery are discussed in RDEIR Section 3.3.2.18, *Overview of The Phillips 66 Rodeo Refinery Emergency Response Process*, and in Section 4.6, *Hazards and Hazardous Materials*, beginning on page 4.6-10 under *Existing Safety Management Systems*. As noted in Section 3.7, *Permits and Approvals Required*, the proposed Project would also require review by the Contra Costa County Fire Protection District.

Williams-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted. See also Response Williams-1.

3.4.16 Responses to Comments from Charles Davidson

Davidson-1 See Master Response 2.2, which discusses the concept of 'piecemealing' and potential connections between the proposed Project and other Phillips 66 refinery facilities. See Master Response 2.4 for discussion of crude feedstocks and the relationship to production of butane and propane.

Davidson-2 See Response Davidson-1.

Davidson-3 See Response Davidson-1.

Davidson-4 See Response Davidson-1.

Davidson-5 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Davidson-6 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Davidson-7 The commenter expresses concern over the risk of damage to the Refinery and associated impacts on the proposed Project as the result of an earthquake. Hazards associated with the proposed Project are analyzed in RDEIR Section 4.6, *Hazards and Hazardous Materials*. See Master Response 2.5 for further discussion on accidents and hazards.

3.4.17 Responses to Comment Letter from Rodeo Citizens Association

Callaghan-1 This comment expresses general concerns with the RDEIR but does not provide details. This comment is noted.

Callaghan-2 As disclosed on RDEIR page 4.5-13, the propane and butane that would be recovered by the proposed Project could be used for fuel or for non-fuel applications. Neither Phillips 66 nor the County can be certain how or where the propane and butane manufactured and sold into the marketplace would ultimately be used due to the dynamic nature of the propane and butane marketplace. The use of these fuels as chemical feedstocks would not necessarily result in combustion-related air emissions of criteria pollutants. Also, it is unclear where the propane and butane would be used. These products could potentially be used inside or outside of the Bay Area Air Quality Management District (BAAQMD), and those uses could be for combustion or for chemical feedstocks. In addition, it would also be necessary to know whether combustion would displace the combustion of other fuels such as coal, oil, or natural gas where that displacement could result in lower emissions of criteria pollutants and/or greenhouse gases. For these reasons, it is not possible to estimate the net emissions change associated with the ultimate use of the recovered propane and butane, or to make a CEQA significance conclusion regarding those emissions.

Callaghan-3 RDEIR Tables 4.1-7 through 4.1-10 show the emission increases from increased locomotive load that would be associated with hauling additional rail cars. The commenter is correct that the Health Risk Assessment (HRA) found that the cancer risk from locomotives would contribute to the majority of the health risk from the proposed Project. This results because diesel particulate matter emitted by trains has a higher cancer potency factor as compared to toxic air contaminants – arsenic and benzo(a)pyrene - emitted by the boiler or steam

power plant. In addition, sensitive receptors are located closer to the train track as compared to the locations of proposed boiler or existing steam power plant.

Callaghan-4 As noted on RDEIR page 4.6-28, the risk results for proposed rail transport of butane and propane illustrated in Figure 4.6-4 do not include any contribution of risk associated with any other tank cars on the existing rail line route. However, if contributions were included, the overall relative cumulative increase in risk associated with the proposed Project would be even less. See also Master Response 2.6, which discusses cumulative impacts.

Callaghan-5 The cumulative air quality and health risk impacts used procedures and data recommended by the BAAQMD. BAAQMD's procedures typically limit the HRA to emission sources located within 1,000 feet of the maximum exposed individual receptor (MEIR). However, based on County consultations with the BAAQMD and the complex nature of sources at the Refinery, the sources included in the cumulative assessment for the proposed Project include all existing and proposed Refinery emission sources plus other stationary and mobile sources within 2,500 feet of the MEIR. The Valero Project, the Tesoro Project, and the WesPac Pittsburg Project are not located within 2,500 feet of the Phillips 66 Project and therefore direct emissions from those projects were not included in the cumulative health risk impact analysis.

With regard to regional air quality, the BAAQMD has set its project specific air quality mass emissions significance thresholds at levels that, if exceeded, would be considered significant at a project level and that would also be considered to have a significant contribution to cumulative criteria pollutant impacts. However, as discussed in the RDEIR, the proposed Project would not have a significant air quality impact at the project level of analysis and therefore it would not make a significant contribution to cumulative criteria pollutant impacts. See also Master Response 2.6, which addressed comments associated with cumulative impacts and analysis.

Callaghan-6 This comment expresses general concerns about air quality compliance and pollution generated by the Refinery. This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

Callaghan-7 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

3.4.18 Responses to Comments from Carmen Gray

Gray-1 As listed in Table 4.6-4 on RDEIR page 4.6-20, the largest impact distance resulting from an explosion at an existing butane tank would be greater than the impact distance at a proposed propane tank. The largest hazard zone from an

existing butane tank (302) would be 1.2 miles, which is shown on Figure 4.6-1. In comparison, the largest hazard zone from a proposed propane tank would be 0.6 mile, as shown on Figure 4.6-2. Also see Master Response 2.5 for discussion of the impact areas resulting from explosion of multiple storage tanks.

Gray-2 See Master Response 2.5.

Gray-3 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

3.4.19 Responses to Comments from Ed Tannenbaum read by Janet Pygeorge

Tannenbaum-1 As noted on RDEIR page 4.6-32, the consequence analysis modeling indicates that a hazardous event resulting from sabotage would be similar to the consequences of an event at the existing facilities. Therefore, regardless of the type of action that could result in a hazardous event, the impact would be the same.

Tannenbaum-2 This comment does not address any concern or issue specifically related to the adequacy of the RDEIR or the proposed Project. This comment is noted.

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CHAPTER 4
RDEIR Text Revisions

4.1 Introduction

The following changes have been made to the previously published text of the Recirculated Draft Environmental Impact Report (RDEIR). These changes include: minor corrections made by the section authors to improve writing clarity, grammar, and consistency; clarifications, additions, or deletions resulting from specific responses to comments; or staff-initiated text changes to update information in the RDEIR.

These text revisions are organized by the chapter and page number that appear in the RDEIR. These text revisions use the following conventions:

- Text deleted from the RDEIR is shown in ~~strike out text~~.
- Text added to the RDEIR is shown in <u>underline text</u>.

4.2 Text Revisions

Chapter 4, Environmental Setting, Impacts, and Mitigation Measures

4.1 Air Quality

In response to Comment B11-10, Tables 4.1-9, 4.1-10, 4.1-11, and 4.1-12 have been revised to include the proposed Project's CO emissions.

TABLE 4.1-7 REVISED
TOTAL PROJECT DAILY OPERATIONAL EMISSIONS WITH BOILER (POUNDS PER DAY)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
LPG Recovery Unit Boiler	20.4	41.7	25.0	25.0	18.1	24.8
Fugitive Organic (Tanks & Piping)	0	0	0	0	25.1	0
Locomotive Sources	79.0	0.1	2.0	1.9	3.8	14.0
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Refinery Fuel Gas Hydrotreating	--	-986	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-62.3	--	--	--	--	--
Proposed Project Net Emissions	**37.1**	**-944.1**	**27.1**	**27.0**	**47.0**	**39.0**
Significance Threshold	54	-	82	54	54	-
Exceeds Threshold?	No	--	No	No	No	--

SOURCE: ERM, 2012a; NO_x reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. For CO, BAAQMD has an ambient threshold equivalent to the California Ambient Air Quality Standards but does not have a mass emissions threshold. All calculations reviewed and confirmed by ESA.

TABLE 4.1-8 REVISED
TOTAL PROJECT ANNUAL OPERATIONAL EMISSIONS WITH BOILER (tons per year)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
LPG Recovery Unit Boiler	3.7	7.6	4.6	4.6	3.3	4.5
Fugitive Organic (Tanks & Piping)	0	0	0	0	4.6	--
Locomotive Sources	10.2	<0.1	0.3	0.3	0.5	1.8
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.27
Refinery Fuel Gas Hydrotreating	--	-180	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-10.8	--	--	--	--	--
Proposed Project Net Emissions	**3.1**	**-172.4**	**4.8**	**4.8**	**8.4**	**6.4**
Significance Threshold	10	-	15	10	10	--
Exceeds Threshold?	No	--	No	No	No	--

SOURCES: ERM, 2012a; NO_x Reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. For CO, BAAQMD has an ambient threshold equivalent to the California Ambient Air Quality Standards but does not have a mass emissions threshold. All calculations reviewed and confirmed by ESA.

TABLE 4.1-9 REVISED
TOTAL PROJECT DAILY OPERATIONAL EMISSIONS WITH INCREASED USE OF SPP
(pounds per day)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
Increased Use of Steam Power Plant	18.4	0.63	8.0	8.0	8.6	93.7
Fugitive Organic (Tanks & Piping)*	0	0	0	0	25.1	0
Locomotive Sources	79.0	0.1	2.0	1.9	3.8	14.0
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Refinery Fuel Gas Hydrotreating	--	-986	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-62.3**	-	-	-	-	--
Proposed Project Net Emissions	**35.1**	**-985.3**	**10.0**	**9.9**	**37.5**	**107.8**
Significance Threshold	**54**	**-**	**82**	**54**	**54**	**-**
Exceeds Threshold?	No	--	No	No	No	

* Fugitive organic emissions include boiler-related emissions; therefore, the estimate is considered to be conservative for the increased use of the SPP option.
** In addition to this NO_x reduction, decommissioning of the B-401 Process Heater also results in offsets of SO_2, PM_{10}, $PM_{2.5}$, ROG, & CO; however, APM-1 only commits Phillips 66 to using the remaining unused NO_x emissions reductions; therefore, this analysis does not account for the reductions that would be associated with the other pollutants.
SOURCES: ERM, 2012a; increased use of the SPP obtained from Phillips 66, 2014a; and NO_x reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. All calculations reviewed and confirmed by ESA.

TABLE 4.1-10 REVISED
TOTAL PROJECT ANNUAL OPERATIONAL EMISSIONS WITH INCREASED USE OF SPP
(tons per year)

Source	NO_x	SO_2	PM_{10}	PM25	ROG	CO
Increased Use of Steam Power Plant	3.4	0.12	1.5	1.5	1.6	17.1
Fugitive Organic (Tanks & Piping)*	0	0	0	0	4.6	--
Locomotive Sources	10.2	<0.1	0.3	0.3	0.5	1.8
Truck and Commuter Auto Trips	<0.1	<0.1	<0.1	<0.1	<0.1	0.27
Refinery Fuel Gas Hydrotreating	--	-180	--	--	--	--
NO_x Reductions from Decommissioning of the B-401 Process Heater (Applicant Proposed Measure APM-1)	-10.8**	--	--	--	--	--
Proposed Project Net Emissions	**2.8**	**-179.9**	**1.8**	**1.8**	**6.7**	**19.2**
Significance Threshold	10	-	15	10	10	-
Exceeds Threshold?	No	--	No	No	No	--

* Fugitive organic emissions include boiler-related emissions; therefore, the estimate is considered to be conservative for the increased use of the SPP option.
** In addition to this NO_x reduction, decommissioning of the B-401 Process Heater also results in offsets of SO_2, PM_{10}, $PM_{2.5}$, ROG, & CO; however, APM-1 only commits Phillips 66 to using the remaining unused NO_x emissions reductions; therefore, this analysis does not account for the reductions that would be associated with the other pollutants.
SOURCES: ERM, 2012a; emissions from increased use of the SPP obtained from Phillips 66, 2014a; and NO_x reductions from decommissioning of the B-401 process heater are based on BAAQMD, 2012b. All calculations reviewed and confirmed by ESA.

4.2 Biological Resources

In response to Comment A2-1, RDEIR page 4.2-22, is revised as follows:

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) is authorized by the McAteer Petris Act to analyze, plan, and regulate San Francisco Bay and its shoreline. It implements the San Francisco Bay Plan, and regulates filling and dredging in the Bay, its sloughs and marshes, and certain creeks and tributaries. San Francisco BCDC jurisdiction includes San Pablo Bay and a shoreline band that extends inland 100 feet from the high tide line. San Francisco BCDC permits would be required for any work within either the Bay or the shoreline band. The proposed Project would be located entirely within the Refinery and separated from urban or wetland habitats (including the mean high tide line) by at least 300 feet, and usually by more than 800 feet, of extensive Refinery operational structures and features. Therefore, the proposed Project is located outside BCDC jurisdiction.

4.5 Greenhouse Gas Emissions

In response to Comment B9-21, the following sentence has been added to the first full paragraph on RDEIR page 4.5-2:

In fact, the United Nations' International Panel on Climate Change (IPCC) recently released a report that indicates that human influence on the climate system is clear and growing and that if left unchecked, climate change would increase the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems (IPCC, 2014).

In response to Comment B9-21, the following has been added after the SPP Emissions paragraph on RDEIR page 4.5-11:

Fugitive Methane Emission Components

New process equipment associated with the proposed Project may emit fugitive methane emissions (due to leaks and other unintended or irregular releases of gases) from various components including valves, flanges, connectors, pumps, and compressors. The number of new fugitive components for the proposed Project is estimated based on pre-design drawing hand-count, comparison to existing units, Phillips 66 experience in construction of similar units, and standard emission estimation techniques. For a conservative estimate, it is assumed that all leaked gas would be methane.

In response to Comment B9-21, the following edits have been made to RDEIR Table 4.5-3 on page 4.5-15 to reflect the new fugitive methane emissions estimate:

TABLE 4.5-3
TOTAL NET ANNUAL PROJECT OPERATIONAL GHG EMISSIONS

Emission Scenario	CO_2e (metric tons per year)
Stationary Source Emissions	
Boiler Emissions	65,091
Net Fuel Source Transfer Combustion Emissions	-116,066
Existing Emissions from Propane/butane Combustion	-708,858
Project Emissions from Natural Gas Combustion	+592,792
Total Stationary Source Combustion Emissions	**-50,975**
Fugitive Emissions	
Fugitive Methane (tanks and piping)	104
Mobile Source Emissions	
Locomotive Emissions	5,366
Commuter Vehicle Emissions	4.3
Indirect Emissions	
Electrical Demand	2,002
Total Fugitive, Mobile, and Indirect Emissions	~~**7,372**~~ **7,476**
Project Decrease relative to Baseline	~~**-43,603**~~ **-43,499**

SOURCES: ERM, 2012, ERM, 2013, and ESA, 2014.

In response to Comment B6-10, the following revision has been incorporated to the last sentence of the third paragraph on RDEIR page 4.5-14:

> The proposed Project would result in a net decrease in quantifiable GHG emissions.

In response to Comment B9-21, the third sentence in the Impact Conclusion discussion on RDEIR page 4.5-15 has been revised as follows to reflect the new fugitive methane emissions estimate:

> **Impact Conclusion**
> Adding 74 metric tons of CO_2e to the net operational emissions of ~~-43,603~~ -43,499 metric tons CO_2e per year (see Table 4.5-3) equals a total net Project annual GHG emissions rate of approximately ~~-43,529~~ -43,425 metric tons CO_2e per year, which would be substantially less than the significance threshold of 10,000 metric tons CO_2e per year and would represent a less than significant impact with regard to generation of GHG emissions generated directly and indirectly by the proposed Project.

The following staff initiated revisions have been made to RDEIR Section 4.5.2.3, Project Baseline, in the first full paragraph page 4.5-8:

> The GHG emissions analysis accounts for increased production of the steam power plant. Therefore, baseline GHG emissions were established based on the average heat energy usage at the steam power plant during the 3-year baseline period from

July 25, 2009 through July 24, 2012, the date of the publication of the Notice of Preparation. The Refinery currently emits GHG emissions from combustion of refinery fuel gas (RFG), which includes propane and butane. Baseline GHG emissions associated with propane and butane combustion at the Refinery are ~~759,244~~ 708,858 metric tons CO_2e (~~ERM, 2012~~ ESA, 2014). In addition, the Unit B-401 process heater that Phillips 66 recently decommissioned, generated GHG emissions during the 3-year baseline period. In order to present a conservative analysis, those baseline GHG emissions have not been factored into the overall net GHG emissions that would be associated with the Project.

Chapter 9, References

In response to Comment B9-21, the following citation has been added:

Intergovernmental Panel on Climate Change (IPCC), 2014. Climate Change 2014 Synthesis Report, released November 2, 2014, available online at http://www.ipcc.ch/report/ar5/syr/.

Appendix D, References

The following staff initiated change has been made. Appendix B of the Recirculated Draft EIR is modified by inclusion at the end of the appendix, by the following two documents provided in full below. Note: these documents were included in the Administrative Record for the RDEIR and are included here for completeness.

Rodeo Refinery
Rodeo, California

Rodeo Propane Recovery Project

Greenhouse Gas Supplement

November 2012

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1.0 INTRODUCTION

Greenhouse gases (GHG) emissions are generally quantified in terms of carbon dioxide equivalent (CO_{2e}) and include gases such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). The impact on global warming on a per mass basis differs among these gases. For example, while methane and nitrous oxide have a larger potential for heating the earth's atmosphere, because CO_2 is emitted in larger quantities globally, CO_2 is the largest contributor to global warming.

The proposed project will increase GHG emissions through increase combustion of fuels during construction and operation. During construction, operation of equipment, trucks, and vehicles will generate GHG emissions. After construction, the combustion of fuels in a new boiler and increased use of locomotives, and commuter vehicles will result in GHG emissions. In addition, electricity will be used during construction and operations resulting in indirect emissions of GHG from power plants supplying the electricity.

This GHG Supplement document discusses the change in GHG emissions associated with the Propane Recovery Project proposed by Phillips 66 Company ("Phillips 66") at its Rodeo Refinery in Rodeo, California. This document first presents baseline GHG emissions and then discusses potential changes in GHG emission from construction and operation of the proposed project, addressing the GHG portion of ESA data request #16 dated 26 July 2012.

2.0 CURRENT SITEWIDE GHG EMISSIONS

The refinery currently emits GHG from various combustion equipment and processes. The refinery reports GHG emissions from non-mobile sources under the California Air Resources Board (CARB) Mandatory GHG Reporting Rule (CARB, 2012a). The emissions reported to CARB are summarized in Table 1 below.

Table 1 Reported GHG Emissions 2008 through 2010

Inventory Year	Reported CO_{2e} (metric tons)
2008	1,888,895
2009	1,873,464
2010	1,638,946

Source: CARB, 2012b

3.0 GHG EMISSION CHANGES

GHG emissions from operations and construction of the proposed project are discussed below.

3.1 OPERATIONS

As part of the proposed project, new equipment will be installed and existing equipment will be modified. In addition, the proposed project will increase railcar use and worker vehicle trips during operations. Electricity use will also increase. As will be discussed below, all these activities will result in GHG emissions.

3.1.1 New Boiler

A new steam boiler that will burn refinery fuel gas and natural gas will be installed to generate additional steam needed to recover propane and butane from the refinery fuel gas. The boiler is expected to be designed with a maximum heat input rating of 140 million British thermal units per hour (MMBtu/hr). No other fuel burning equipment will be installed or otherwise modified that would directly increase GHG from fuel combustion (Section 3.1.3 will address GHG emissions from increased electricity use). The estimated annual GHG emissions associated with running the new boiler at a full capacity is 67,133 metric tons of CO_{2e}[1] assuming a worse-case scenario of burning refinery fuel gas at maximum capacity throughout the year. This emission estimate is based on burning 1,226,000 MMBtu of refinery fuel gas in one year. In reality, the boiler is not expected to run at full capacity all year. In fact, the expectation is that conservation measures will eventually be implemented that would reduce the amount of steam the boiler needs to produce for the proposed project. The CO_{2e} estimate from the boiler provides part of the information requested in ESA Data Request #16.

3.1.2 Natural Gas Added to Refinery Fuel Gas

The refinery will add natural gas to the refinery fuel gas to make up for the lost heat content resulting from the removal of propane and butane and thereby meet the heat load demands of other process unit operations.

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[1] Emissions are based on emission factors from AP-42 Chapter 1.4, Table 1.4-2 (USEPA, 1998)

As part of the proposed project, the refinery expects to purchase an additional 1275 MMBtu per hour of natural gas to supplement the refinery fuel gas. Assuming, on average, 1275 MMBtu per hour is added 24 hours a day, 365 days a year, the total natural gas added would be 11,169,000 MMBtu per year. Since this addition of natural gas makes up for the propane and butane being removed, the overall heat load demands at the refinery met by refinery fuel gas is not expected to increase. In fact, by having the flexibility to adjust the amount of supplemental natural gas added to the refinery fuel gas during periods of lower than normal refinery fuel gas consumption, Phillips 66 will be able to better balance refinery fuel gas production versus consumption at the refinery. As a result, the proposed project will result in less flaring.

In addition, on a unit energy basis (per MMBtu), propane and butane generate more CO_2 than natural gas. In particular, on average in the United States, natural gas has a CO_2 emission rate of about 53.02 kg CO_2 per MMBtu. In contrast, on average, propane and butane have a CO_2 emission rate of about 61.46 kg CO_2 per MMBtu and 65.15 kg CO_2 per MMBtu[2], respectively. So if the same amount of energy in the form of natural gas is added to the refinery fuel gas as is removed in the form of propane and butane, less GHG will eventually be emitted when the refinery fuel gas is burned. This will result in a net reduction of approximately 166,483MT per year of CO_{2e}.

3.1.3 Mobile Sources

The existing butane loading rack facility will be modified so that the facility can accommodate loading of propane. As a result of this modification, the loading capacity for butane and propane will be increased from 16 rail cars per day to 24 rail cars per day. On an average basis, up to 12 new rail cars will be used per day over the current baseline use. This will result in an increase in GHG emissions associated with the combustion of diesel in the locomotives pulling the rail cars.

In addition, two new workers are expected to be hired (out of the existing 600 workers at the refinery) which will slightly increase the number of commuter trips to and from the refinery.

The key parameters used to develop GHG emissions are summarized below.

[2] Emission factors from CARB GHG Mandatory Reporting Rule (CARB, 2012a)

- The train travels from the California and Arizona border to the Richmond Yard with empty rail cars following a Union Pacific route (659 miles).
- The train travels from the Richmond Yard to the refinery (12 miles) with empty rail cars.
- The train then travels back to the Richmond Yard (12 miles) and then the Arizona border (659 miles) with full rail cars.
- The train spends one hour in rail car switching activities at the refinery.
- Two new commuters with a round trip commute of 19 miles per day.

The estimated increase in GHG emissions associated with these mobile sources is summarized in Table 2 below. This table provides part of the information requested in ESA Data Request #16.

Additional details regarding the basis for the emission estimates can be found in Attachment 1 to the *Rodeo Propane Recovery Project Air Quality Supplement*, August 2012.

Table 2 ***Mobile Source GHG Emissions***

	CO_{2e} (metric tons per year)
Locomotives	5,366
Commuter Vehicles	4.3
Total	5,370

For vehicles, CO_2 emission factors from CARB EMFAC2011 (CARB, 2011) based on calendar year 2015, and CH_4 and N_2O emission factors from Table 13.4 of The Climate Registry GHG reporting guidance(TCR, 2012). For vehicle CO_2 factors, accounting for light duty auto driven in Contra Costa. Emission factor for Locomotives from EPA-420-F-09-025 (USEPA, 2009)

3.1.4 Indirect

As part of the proposed project, Phillips 66 will install new equipment and modify existing processes that will increase electricity use. On the other hand, some existing processes will be changed such that less electricity is consumed. As described in the Energy Supplement, the net impact is an estimated increase in average power demand of about 1.28 MW. Assuming this demand is constant all year round, 11,213 MWh of

additional electricity would be consumed during the operation of the proposed project.

GHG emissions associated with electricity consumption occur at power plants. Based on a PG&E specific GHG emission factor of 391 lb CO_2 per MWh projected for 2015 (PG&E, 2011), and CH_4 and N_2O emission factors of 0.02839 lb/MWh and 0.00623 lb/MWh, respectively, from a Climate Registry GHG reporting guidance[3], GHG emissions from electricity consumption are estimated to be 2,002 metric tons CO_{2e}[4].

3.1.5 Total Operational GHG

Based on the above analysis, the total annual GHG emission increases and reductions from the project are summarized in Table 3. The net impact of the proposed project is to reduce overall GHG emissions. This table provides part of the information requested in ESA Data Request #16.

[3] Data is based on 2007 Emissions & Generation Resource Integrated Database (eGRID) data for the California region (TCR, 2012)

[4] Value does not include transmission losses which is consistent with the TCR reporting protocol (TCR, 2008) for reporters who do no own or operate the transmission lines.

Table 3 Total Annual GHG Emissions During Operations

	CO_{2e} (metric tons per year)
New Boiler	67,133
Combustion of Natural Gas in Lieu of Recovered Propane and Butane	-166,620
Indirect Mobile Sources	5,370
Indirect Electricity	2,002
Total	-91,968

3.2 CONSTRUCTION

The construction of the proposed project will require the use of construction equipment and trucks to deliver material and haul away debris. In addition, construction workers will travel by car to and from the site in their vehicles. During these activities, electricity will be used to power some equipment, resulting in indirect GHG emissions at power plants generating the electricity.

The following key parameters were used to estimate GHG emissions associated with these construction activities:

- 22 construction work days per month.
- 20 material delivery truck trips (diesel fueled) per day traveling 14.6 miles per round trip[5].
- 11 debris trucks trips (diesel fueled) per day traveling 40 miles per round trip[5].
- 366 worker commuter trips (gasoline fueled) per day traveling 19 miles per round trip[5] with the trip rate based on a vehicle occupancy of 1.1.
- Average electricity consumption of 44 megawatt-hours (MWh) per month.

[5] Trip lengths based on defaults contained in the California Emissions Estimator Model (CalEEMod) v2011.11 , Appendix A (under Section 4.5) and Appendix D (Table 4.2 for Contra Costa County) (SCAQMD, 2011).

Based on these parameters, the estimated GHG emissions during construction are summarized in Table 4 below. Table 4 provides the information requested in ESA Data Request #23.

For the truck and vehicle emissions, the monthly emissions are assumed to be constant each month except for the debris truck hauling, which is assumed to occur over the first three months of construction. The presented monthly and annual emissions for construction equipment represent peak emissions.

Additional details regarding the type of equipment assumed operating during construction and on the construction emissions calculations can be found in Attachment 1 to the *Rodeo Propane Recovery Project Air Quality Supplement*.

Table 4 ***Estimated GHG Emissions During Construction***

Sources	Monthly CO_{2e} (metric tons)	Annual CO_{2e} (metric tons)	Over 18 Months CO_{2e} (metric tons)
Construction Equipment	58 (peak)	683 (peak)	963
Material Delivery Trucks	11.2	134	201
Debris Hauling Trucks	17.0	51.1	51.1
Commuter Vehicles	48.5	582	873
Electricity	8	94	141
Total	143	1544	2229

Notes:
For trucks and vehicles, CO_2 emission factors from CARB EMFAC2011 (CARB, 2011) based on calendar year 2014, and CH_4 and N_2O emission factors from Table 13.4 of The Climate Registry GHG reporting guidance(TCR, 2012). For construction equipment CO_{2e} emission factors from OFFROAD2007. For the truck and vehicle CO_2 factors, accounting for trucks treated as "heavy-heavy duty trucks" (gross vehicle weight greater than 33,000 pounds) and for light duty auto driven in Contra Costa.

4.0 REFERENCES

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County's Supplemental GHG Emission Estimates (ESA, 2014)

Baseline Propane and Butune Combustion Emissions

Combustion Emissions	MMBtu/yr[1]	Emission Factors (kg/MMBtu)[2]			Metric tons/year			
		CO_2	CH_4	N_20	CO_2	CH_4	N_20	CO_2e
Propane	5863725	61.46	0.003	0.0006	360384.54	17.591175	3.518235	361,872.8
Butane	5305275	65.15	0.003	0.0006	345638.67	15.915825	3.183165	346,985.1
Baseline Total					706023.2	33.507	6.7014	708,857.9

Project Natural Gas Combustion Emissions that would Replace Baseline Propane and Butane Combustion Emissions

Combustion Emissions	MMBtu/yr	Emission Factors (kg/MMBtu)[2]			Metric tons/year			
		CO_2	CH_4	N_20	CO_2	CH_4	N_20	CO_2e
Natural Gas	11169000	53.02	0.001	0.0001	592180.38	11.169	1.1169	592,792.4
Project-related Net Total								-116,065.5

Steam Power Plant Natural Gas Combustion

Combustion Emissions	MMBtu/hr	MMBtu/yr	Emission Factors (kg/MMBtu)[2]			Metric tons/year			
			CO_2	CH_4	N_20	CO_2	CH_4	N_20	CO_2e
Baseline	763.54	6,688,610	53.02	0.001	0.0001	354630.12	6.6886104	0.66886104	354,996.7
Future with Project	808.54	7,082,810	53.02	0.001	0.0001	375530.61	7.0828104	0.70828104	375,918.7
Project-Related Net Increase	45.00	394,200	53.02	0.001	0.0001	20900.484	0.3942	0.03942	20,922.1

Proposed Boiler Natural Gas Combustion

Combustion Emissions	MMBtu/hr	MMBtu/yr	Emission Factors (kg/MMBtu)[2]			Metric tons/year			
			CO_2	CH_4	N_20	CO_2	CH_4	N_20	CO_2e
Boiler	140	1,226,400	53.02	0.001	0.0001	65023.728	1.2264	0.12264	65,090.9

[1] Propane and Butane Baseline MMBtu/yr rates are based on the assumption that increased butane recovery would be 3,800 barrels per day, new propane recovery would be 4,200 barrels per day, and an average of 1,275 MMBtu/hr of natural gas would displace the same amount of heat from propane and butane combustion.

[2]Source: The Climate Registry, 2014, Table 12.1, U.S. Default Factors for Calculating CO2 Emissions from Fossil Fuel and Biomass Combustion and Table 12.9, Default CH4 and N2O Emission Factors By Fuel Type Industrial and Energy Sectors.

[3]Source: The Climate Registry, 2014, Table 12.1, U.S. Default Factors for Calculating CO2 Emissions from Fossil Fuel and Biomass Combustion and Table 12.9, Default CH4 and N2O Emission Factors By Fuel Type Industrial and Energy Sectors.