



Rodeo Renewed Project

Final Environmental Impact Report

County File No.
CDLP20-02040

State Clearinghouse No.
2020120330

March 2022

VOLUME I of II

Contra Costa County



Prepared by [CARDNO, INC.]

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Acronyms

µg/m ³	microgram per cubic meter
AAS	Allision Avoidance Systems
AB	Assembly Bill
ABAG	Association of Bay Area Governments
APCD	Air Pollution Control District
API	American Petroleum Institute
AQMD	Air Quality Management District
ATB	articulated tug barges
ATS	automated information system
BCAQM	Butte County Air Quality Management District
BAAQMD	Bay Area Air Quality Management District
BACT	best available control technology
BART	Bay Area Rapid Transit
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin
BCDC	San Francisco Bay Conservation and Development Commission
BMPs	best management practices
BP	before present
bpd	barrels per day
BTC	Biodiesel Tax Credit
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CadnaA	Computer Aided Noise Abatement
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CalEPA	California Environmental Protection Agency
CALVEG	Classification and Assessment with Landsat of Visible Ecological Groupings
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CBE	California Board of Equalization
CCR	California Code of Regulations

CCTA	Contra Costa Transportation Authority
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey (formerly California Division of Mines and Geology)
CH ₄	methane
CI	carbon intensity
CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
CSLC	California State Lands Commission
CUPA	Certified Unified Program Agencies
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
CZLUO	Coastal Zone Land Use Ordinance
db	decibel
dBA	A-weighted decibels
DNL	day-night noise level
DPM	diesel particulate matter
DPS	distinct population segment
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EMFAC2021	Emission Factor Model version 2021
EO	Executive Order
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FEMA	Federal Emergency Management Agency
FOG	fats, oils, and grease
GHG	greenhouse gas
GIS	geographic information system
GWP	Global Warming Potential
H ₂	hydrogen gas

H ₂ S	hydrogen sulfide
HMBP	Hazardous Materials Business Plan
HRA	health risk assessment
I-80	Interstate 80
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
ISO	Industrial Safety Ordinance
LCFS	Low-Carbon Fuel Standard
LCP	Local Coastal Program
LUP	Land Use Permit
MBPD	thousand barrels per day
MDAQMD	Mojave Desert Air Quality Management District
MEIR	maximally exposed individual residents
MEIW	maximum worker net cancer risk
mgd	million gallons per day
MHHW	mean higher water mark
MLD	Most Likely Descendent
MLLW	Mean lower low water
MMBtu	million British thermal units
MMT	million metric tons
MOC	Management of Change
MOTEMS	Marine Oil Terminal Engineering and Maintenance Standards Program
mph	mile per hour
MS4	Municipal Separate Storm Sewer System
MSRC	Marine Spill Response Corporation
MT	metric ton(s)
MTC	Metropolitan Transportation Commission
MW	megawatt
MWh	megawatt-hour
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NEHRP	National Earthquake Hazards Reduction Program
NFPA	National Fire Protection Association
NH ₃	ammonia
NHTSA	National Highway Traffic Safety Administration

NIS	nonindigenous species
NM Plan	NOx Mitigation Plan
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRP	Nipomo-Regional Park
NSAQMD	Northern Sierra Air Quality Management District
NWI	National Wetlands Inventory
NWIC	Northwest Information Center
OCIMF	Oil Companies International Marine Forum
ODSVRA	Oceano Dunes State Vehicular Recreation Area
OEHHA	Office of Environmental Health Hazard Assessment
OMP	Odor Management Plan
OPA	Oil Pollution Act
OPC	Ocean Protection Council
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSPR	Office of Spill Prevention and Response
OSRO	Oil Spill Response Organization
OSRP	oil spill response plan
PAWSA	Ports and Waterways Safety Assessment
PCAPCD	Placer County Air Pollution Control District
PG&E	Pacific Gas and Electric
PGA	Peak Ground Acceleration
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIG	pipeline inspection gage
PM ₁₀	particulate matter with a diameter of 10 microns or less
PM _{2.5}	particulate matter with a diameter of 2.5 microns or less
POC	precursor organic compounds
PORTS	Physical Oceanographic Real Time System
PPV	peak particle velocity
PRC	Public Resources Code
Project or proposed Project	Rodeo Renewed Project

PSD	Prevention of Significant Deterioration
PSM	Process Safety Management
PTU	Pre-treatment Unit
RCRA	Resource Conservation and Recovery Act of 1976
RFG	refinery fuel gas
RFS	Renewable Fuel Standard
RMP	Risk Management Plan
RMS	root mean square
RNA	Regulated Navigation Areas
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel Efficient
SB	Senate Bill
SCCAB	South Central Coast Air Basin
Section 106	Section 106 of the National Historic Preservation Act of 1966
SEL	sound exposure levels
SF ₆	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFEI	San Francisco Estuary Institute
SHAQMD	Shasta County Air Quality Management District
SIGTTO	Society of International Gas Tanker and Terminal Operators
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SPCC	Spill Prevention, Control, and Countermeasure
STU	Sulfur Treatment Unit
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCAPCD	Tehama County Air Pollution Control District
TCR	Tribal Cultural Resources
Trihydro	Trihydro Corporation
TSS	traffic separation scheme
UCO	used cooking oil
US	United States
USACE	US Army Corps of Engineers

USCG	US Coast Guard
USDOT	US Department of Transportation
USEIA	US Energy Information Administration
USEPA	US Environmental Protection Agency
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VdB	vibration decibels
VOC	volatile organic compounds
VSR	vessel speed reduction
VTs	vessel traffic service
WestCAT	Western Contra Costa County Transit Authority
ZEV	zero emission vehicle

1 Introduction

1.1 Purpose and Intended Use of the Final EIR

The California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Sections 21000 et seq.) and the CEQA Guidelines (California Code of Regulations Title 14, Section 15000) require a public agency with discretionary authority to issue a permit or other approval to evaluate the environmental impacts of its action. Phillips 66 submitted a Land Use Permit (LUP) application for its proposed Rodeo Renewed Project (Project) with the Contra Costa County Department of Conservation and Development in 2020. Approval or denial of the LUP is a discretionary action requiring review under CEQA (PRC Section 21080). As such, Contra Costa County has the principal responsibility for approving the proposed Project and is therefore the Lead Agency under CEQA (PRC Section 21067; California Code of Regulations Title 14, Section 15367).

As described in CEQA Guidelines Section 15089, the Lead Agency must evaluate comments received on the Draft EIR and prepare written responses and consider the information contained in a Final EIR before approving a project. The purpose of a Final EIR is to provide an opportunity for the lead agency to respond to comments made by the public and agencies regarding the Rodeo Renewed Project Draft EIR. Pursuant to CEQA Guidelines Section 15132, a final EIR consists of:

- (a) the Draft EIR or a revision of the Draft EIR; (b) comments and recommendations received on the Draft EIR either verbatim or in summary; (c) a list of persons, organizations, and public agencies commenting on the Draft EIR; (d) the responses of the Lead Agency to significant environmental points raised in the review and consultation process; and (e) any other information added by the Lead Agency.

This Final EIR constitutes the second part of the EIR for the Project and is intended to be a companion to the Draft EIR. The Draft EIR for the Project, which was circulated for public review and comment from October 18, 2021, through December 17, 2021, constitutes the first part of the EIR and is incorporated by reference and bound separately (refer to www.contracosta.ca.gov/7945/Phillips-66-Rodeo-Renewed-Project). Accordingly, the EIR for the Project comprises the following:

- Draft EIR and Appendices
- Final EIR
 - Volume I: Introduction through Comment Letter 36
 - Volume II: Comment Letter 36 (continued) through Chapter 4, and Appendices

1.2 Organization of the Final EIR

The Final EIR is organized into the following chapters:

- **Chapter 1: Introduction.** This chapter describes the purpose of the Final EIR, provides a summary of the proposed project, provides an overview of the CEQA process, summarizes the Final EIR public review process, and identifies the contents of each section.
- **Chapter 2: List of Commenters.** Lists the names of agencies, organizations, and individuals who commented on the Draft EIR.
- **Chapter 3: Responses to Comments.** This chapter first presents Master Responses to address topics that apply to numerous comments received on the Draft EIR. This chapter then presents copies of the written comments received. Specific responses to the individual coded comments in each correspondence are provided following each commenting letter/email.

- **Chapter 4: County-Initiated Updates and Errata to the Draft EIR.** This chapter includes revisions to the Draft EIR that represent minor changes or additions in response to some of the comments received on the Draft EIR, and additional edits to provide clarification of Draft EIR text. New text is indicated in double underline and text to be deleted is reflected by ~~double strike through~~. Text changes are presented in the page order in which they appear in the Draft EIR.
- **Appendix A: Mitigation Monitoring and Reporting Program.** This appendix includes the final Mitigation Monitoring and Reporting Program (MMRP) for the Rodeo Renewed Project EIR. The MMRP is the document that will be used by the enforcement and monitoring agencies responsible for the implementation of the Project's mitigation measures, and are listed by environmental topic. The MMRP identifies each mitigation measure, the applicable enforcement agency, monitoring agency, monitoring phase, monitoring frequency, and action indicating compliance.

1.3 Mitigation Monitoring and Reporting Program

Public Resources Code section 21081.6 and State CEQA Guidelines Section 15097 (Mitigation Monitoring or Reporting) require public agencies to establish monitoring or reporting programs for projects approved by a public agency whenever approval involves the adoption of specified environmental findings related to an EIR (also mitigated negative declarations). Accordingly, as Lead Agency, the County has prepared an MMRP for the proposed Project; the MMRP is included in Appendix A to this this document.

2 List of Commenters

2.1 List of Commenters

The County received 86 comment letters, and over 1,600 form letters both for and against the Project, during the comment period on the Draft EIR for the proposed Project. The table below indicates the numerical designation for each of the 86 comment letters, and the author of the comment letter, received by the County. Letters are grouped by agencies, organizations, and individuals, but are otherwise presented in alphabetical order. Following these letters is a listing of individuals who submitted form letters.¹

Table 2-1 Commenters on the Draft EIR

Commenter	Comment Letter Number
State, Regional, and Local Agencies	
Bay Area Air Quality Management District (BAAQMD)	1
California State Lands Commission (CSLC)	2
Central Coast RWQCB (CCRWQCB)	3
City of Richmond	4
Contra Costa County Health Services	5
East Bay Municipal Utilities District (EBMUD)	6
John Swett Unified School District	7
San Francisco Bay Conservation and Development Commission (BCDC)	8
San Luis Obispo County APCD	9
Santa Barbara County APCD	10
Santa Barbara County Fire Department	11
Santa Barbara County Planning	12
Stanislaus County Dept. of Environmental Resource	13
Stanislaus County Environmental Review Committee	14
Stanislaus County, Community and Economic Development	15
Stanislaus County, Dept. of Environmental Resources	16
Rodeo-Hercules Fire Protection	17
Organizations	
Apache Industrial United	18
Bay Front Chamber of Commerce	19
Chevron	20
Bay Planning Coalition	21
Carpenters Local No. 152	22
Center for Biological Diversity	23

¹ Phillips 66 submitted over 1,500 form letters that are not listed in this document, but are available for review at the County Conservation & Development Department. All letters received are in favor of the Project and no response is necessary.

Commenter	Comment Letter Number
Contra Costa Building and Construction Trades Council	24
Contra Costa County Building & Trade Council	25
Contra Costa Electric	26
Council of Industries	27
East Bay Leadership Council	28
Industrial Association of Contra Costa County	29
International Association of Heat and Frost Insulators & Allied Workers	30
International Brotherhood of Electrical Workers, Local Union 302	31
Iron Workers Local 378	32
Kiewit Energy Group	33
Laborers' Union Local 324	34
Mass. Electric Construction Company	35
Natural Resources Defense Council	36
New Horizons Career Development Center	37
Pacific Gas & Electric Co.	38
Phillips 66 Community Advisory Panel	39
Plumbers & Steamfitters Local Union 342	40
PSC Primoris 12/16	41
PSC Primoris Industrial Group 12/14	42
PTS Advance	43
Redwood Painting Company, Inc.	44
Southwest Airlines	45
Sprinkler Fitters and Apprentices Local 483	46
State Building and Construction Trades Council of California	47
The Climate Center	48
United Association Local Union 159	49
United Steel Workers	50
Individuals	
Andrews, Floy	51
Bardet, Marilyn	52
Brennan, Maureen	53A
Brennan, Maureen	53B
Callaghan, Janet	54
Carmichael, Cynthia	55
Clifford, Deborah	56
Conhagen	57
Datnow, Lilly	58

Commenter	Comment Letter Number
Davidson, Charles	59A
Davidson, Charles	59B
DeMartini, Catherine	60
Dietzman, John	61
Domagalaski, Michael	62
Granett, Ariella	63
Pygeorge, Janet [two letters, treat as one]	64
Gray, Richard	65
Gunkelman, Jay	66
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Kirschling, Karen	69
Lawrence, Jocelyn	70
Leclaire, Elaine	71
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Masci, Alexandra	73
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Rieser, Nancy	76
Rippee, Kevin (Schultz)	77
Roach, Marti	78
Rosenblum, Stephen	79
Ryan, Victoria	80
Saxe, Madeline	81
Shaia, Tehallisy	82
Tepperman, Jean	83
Walker, Pat (late)	84
Warren, Jan	85

FORM LETTERS—For and Against Project

Adam Aitchison	Artero Tones	Branden Bell	Carolyn Burrows
Alpha Ford	Arturo Duenas	Brendan Nalbone	Carrolle Mendez
Anastasia Gay	Ashley Hedqes	Brian Cunan	Cesar Castaueor
Andrew Graham	Audiel Vazquez	Brian Mitchell	Chance Neihouse
Ann Green	Beverly Marks	Brianna Hibdon	Charles Phillips
Anthony Lawrence	Beverly T Johnson	Brittney Cooper	Charles Scott
Antonio Alvarez	Billy Sullivan	Bryant Cisneros	Chris DeMott
Antonio Dorar	Blake McCaffery	Carissa Gingerich	Chris Williams
Antonio Gonzalez	Brad Bowlin	Carlos Carraras	Christopher Lade

Christopher Ramirez	Glenn W Hubbsco	Jonathan Mayorga	Max Pacheco
Christopher Robinson	Grant Rose	Jorge Cendejas	Meghan Plessis
Claudia Sosa	Graylon Williams	Jorge Curiel	Meredith Peters
Clyde E Wingo Sr.	Greg Jeffus	Jorge Salgado	Michael Krupnik
Colt Braden	Gregg Donovan	Jose A Castaneela	Michael Miller Jr.
Craig Schmitz	Gregory Fragok	Jose Emilio Solis- Hernandez	Michael Northrup
Craig Tally	Gregory Hale	Jose Luis Torres	Michelle Moore
Dallen Prince	Gregory Jones	Jose Ramirez	Miguel Vazquez
Dan Hickenbotham	Gregory Peck	Joseph Fomban	Minju Guo
Dan Hickenbotham	Hal P. Bus II	Joseph Pucci	Monica May
Dana Veatch	Harvey Wallace	Josh Combs	Montana Meyerhoffer
Dana Walton	Heath Nolte	Juan Contreras	Natalie Rodriquez
Daniel Zachary	Hector F Ayon	Juan Hernandez	Natasha Smith
Carpenhursa	Hector Maciel	Julie Waters	Nathan Freeman
Daniela Haro	Hector Rivera	Julieta Culebro	Neil Gordon
David Cecchini	Hector Rivera	Justin Garner	Nelson Fuentes
David Higbee	Holly Waits	Juwan Blakeley	Nicholas Ladder
David Martinez	Isaac Guerrero	Kathleen Dely	Nicholas Lopez
David Orantes	Isaac Guerrero Andrade	Ken Hoover	Nick Negron
David Topete	Isaiah Roberts	Kevin Hendryx	Oscar Diaz
David Turner	Israel Chavez	Kevin Karl	Paige Townsley
Deborah Maples	Jaboz Beltran	Kory Chase	Pat Walker
Deby Feliciano	Jackie Kuo	Kyle Lesley	Paul Cruz
Dennis Drury	Jacod Walker	Kyle Wright	Pavindra Kymar
Derek Formalejo	Jamal Perry	Larry Ward	Pedro Sanchez
Derrick M Major Juarez	James Cross	Lee Riseling	Pete Bodoh
Derrick Turney	James Meurer	Leo Cid	Phil Torres
Derryle Jackson	James Parsley	Linda Stormont	Phillip Bjuqstad
Dewey Vines	James Polley	Lori Rodriguez	Phillips 66 1500+ Letters
Dolores Flanders	Jane Gasdaska	Luis M Bordon	Quinton Bell
Dominic Wilson	Jared Coppedqe	Lupe Mariscal	Rafael Mendez
Don Rolfson	Jared Whitrey	M.G. Peyaucaen	Rafael Ramos
Donald Poquette	Jason Donohue	Madhavi Surve	Randy Wetter
Eduardo Guerra	Jeff Hall	Madison Laidiq	Ray Torres
Eduardo Santillan	Jeff Malott	Magdaleno Duenas	Reymundo Torres
Edward Charles Bodoh	Jeffrey D Wilson	Majlino Simixhi	Rhonda O'Rourker
Edward Ferguson	Jennete Thornton	Mandeep Kaur	Ricardo Hernandez
Elena Platon	Jennifer Colon	Manny Malaora	Richard Mann
Elnurag Kumar	Jennifer Ewanich	Marilyn Peacock	Ricky Abraham
Eowin B FizikHeine	Jeremy Guiley	Mark Ivy	Robert J Salsbery
Eric Reimann Nehrbas	Jerry Legaspi	Marlon Soriano	Robert Minter
Erik Tejada	Jesus Gutierrez	Martin Naverro	Robert Minter
Estaban Royales	Jesus Ibarra	Martin R Llamas	Robert Roman
Ezekiel Wallace	Jesus Villalobos	Martin Solano	Robert Walston
Finis Jordan	John C Igleheart	Martin Yepez/Sodexo	Roberto Maldonado
Frank Greer	John Wenzel	Marty Joyce	Robery Michael Russey Jr.
Garett Fanning	Jon McCoy	Matt Young	Rodrigo Valdez
Gary Matthews	Jonathan Gregory		Rogers Vaushin II

Romeo Alorro Jr.	Scott Bethel	Steve Kukonen	Ulysses Rotana
Rozita Aghakhan	Scott Nash	Steve Lusk	Victo E Diaz
Ryan Gutzin	Scott Wright	Stinnis Thomas	Victoria Caston
Ryan McCormick	Sean Querio	Susan Rudolph	Vincent Fernando
Ryan Smith	Sephen Kelly	Sutton Sprout	Vinod Nair
Ryon Clay	Shawn Anthony Price	Tarik M Eid	Vlentin Amaral
Sally Baldwin	Shawn Opitz	Taylor Nelson	Webster Reynolds
Salvador Macias	Sheila Banks	Terry Copeland	Wendy Thompson
Samantha Traylor	Smauel Camacho	Terry M Brown	William Taylor
Schawanna Jones	Sonya Pitcaithly	Thomas J Thompson	Yerbolat Yeskaliyev
Scott Andelin	Stefan Curuia	Tracy Kuan	Zaira Alvarez

2.2 Comments Received After Close of the Comment Period

The County received comments after the close of the 60-day public comment period, ending December 17, 2021. The County, as Lead Agency, “need not consider certain comments filed after the close of the public comment period, if any, for the draft environmental impact report” unless those comments pertain to any of the following matters occurring after the close of the public comment period: (a) new issues raised by the lead agency, (b) new information released by the public agency, (c) project changes, (d) proposed conditions for approval, mitigation measures, or proposed findings or a proposed reporting and monitoring program, or (e) new information that was not reasonably known and could not have been reasonably known during the public comment period (Public Resources Code Section 21168.6.7(f)(6)). Therefore, the County elected to only respond to comments received through December 17, 2021.

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3 Responses to Comments

3.1 Introduction

This chapter includes copies of the written comments received electronically via gary.kupp@dcd.cccounty.us by email, or by mail during the public review and comment period on the Draft EIR. This chapter also presents consolidated Master Responses that address recurring comments or topics raised throughout individual comment letters.

As required by CEQA Guidelines Section 15088(c), the focus of the responses to comments is “the disposition of significant environmental issues raised.” Therefore, detailed responses are not provided to comments that do not relate to environmental issues. However, in some cases, additional information has been added for reference and clarity.

3.2 Master Responses

Because several of the comment letters received had similar concerns relating to the Draft EIR, a set of consolidated responses, or “Master Responses”, were developed to address common concerns and avoid repetition within this chapter. References back to these Master Responses are made throughout the individual responses presented in this chapter:

- Master Response No. 1 CEQA Baseline
- Master Response No. 2 CEQA Alternatives
- Master Response No. 3 Cumulative Impacts
- Master Response No. 4 Land Use and Feedstocks
- Master Response No. 5 Renewable Fuels Processing
- Master Response No. 6 Purpose of the Project
- Master Response No. 7 Project Description – Piecemealing
- Master Response No. 8 Non-CEQA Topics and Project Merits

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MASTER RESPONSE NO. 1 CEQA BASELINE

Comments received state that if the Rodeo Renewed Project does not obtain applicable agency approvals, or otherwise does not become operational, Phillips 66 would decrease and eventually cease petroleum refining at the San Francisco Refinery, which consists of the Rodeo Refinery facilities (i.e., the Rodeo Site and the Carbon Plant) and the Santa Maria Refinery. Based on this, these comments assert that the Draft EIR's baseline methodology is flawed.

Section 3.13 of the Draft EIR describes the CEQA baseline used in the analysis. In summary, calendar year 2019 is the appropriate baseline year for all project impacts other than marine vessel emissions for, in large part, the following reasons:

- calendar year 2019 is the most recent full calendar year prior to the EIR Notice of Preparation release date (December 21, 2020);
- market conditions during 2020 were unusual due to the Covid-19 pandemic;
- emissions of the criteria pollutants nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), precursor organic compounds (POC), and GHGs were lower in 2019 than in 2018 and, therefore, more conservative for the Draft EIR analysis due, in part, to lower annual throughput; and
- further reduction in SO₂ from 2018 to 2019 reflects the installation of sulfur oxides control equipment at the Carbon Plant to comply with lower SO₂ emission limits in BAAQMD Regulation 9 Rule 14 that went into effect January 1, 2019.

Also, the most recent 3-year (2018-2020) average for facility emissions is higher or similar to the baseline of 2019. Although they are similar, 2019 was chosen as the baseline year for the facility emissions due to the modifications implemented at the Carbon Plant as a result of BAAQMD Regulation 9, Rule 14. In addition, neither a 5-year nor 3-year average baseline was selected because neither would be representative of the emissions under this regulation. Further, a 2019 baseline year requires analysis of greater project emissions impacts relative to an average baseline period and also reduces the amount of emissions reduction credits that can be claimed when the Carbon Plant is shut down. Thus, for all Project emissions other than marine vessel emissions, 2019 is a more conservative baseline than is a 3-year or 5-year average.

The facts surrounding marine vessel emissions require that a different baseline be used. As explained in Section 3.13.3 of the Draft EIR, vessel activity has a different operational cycle than facility emissions and vessel activity varied as much as 50 percent year-to-year when comparing the years between 2016 and 2020. For the reasons set forth in the Draft EIR, the 3-year average from 2017 to 2019 was chosen as the appropriate baseline for marine vessel emissions.

Comments state, however, that these baselines are inappropriate, and instead suggest that the appropriate baseline is a future scenario under which neither the Rodeo Refinery nor the Santa Maria Refinery exist. The County considers this an inappropriate baseline since it relies on a hypothetical future scenario and would be inconsistent with the requirements of CEQA.

The general premise of comments is that the petroleum refining industry is economically and operationally challenged and, therefore, any particular refinery would be pressured and/or will shut down in the near term. From this general premise, comments state that the Rodeo Refinery and Santa Maria Refinery, are geographically- and design-challenged, such that these negative national refining pressures will be magnified at these facilities. However, this is not accurately based on how the Rodeo Refinery operates. The comments state that the baseline should be based on a hypothetical scenario of no future refinery operations, rather than actual facility emissions. As discussed below, the County has determined that this suggested approach would result in an inadequate EIR that misinforms the public and agency decision-makers.

CEQA Guidelines and Baseline Requirements

CEQA Guidelines require that the baseline is the point in time or the set of conditions against which expected future environmental conditions associated with the Project are compared. Changes in the baseline environmental conditions resulting from a project represent the project impacts that must be disclosed under CEQA. Therefore, definition of an appropriate baseline is an integral part of the CEQA process.

Section 15125 of the CEQA Guidelines provides the following direction for establishing the baseline:

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*, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

The baseline year is typically selected as the year in which the Notice of Preparation ("NOP") is released for a proposed project. However, the lead agency has the discretion to select a more appropriate baseline year for purposes of the environmental analysis conducted in the EIR if conditions warrant such a selection. *Neighbors for Smart Rail v. Exposition Metro. Line Constr. Auth.*, 57 Cal.4th 439, 449 (2013) (agency has discretion to decide how existing physical conditions are to be realistically measured, subject to support by substantial evidence). The NOP for the Project was released in 2020 but, as described in the Draft EIR and above, 2020 was not an appropriate year for the Project baseline because of the Covid-19 pandemic and compliance with BAAQMD Regulation 9 Rule 14.

The California Supreme Court in *Neighbors for Smart Rail* made clear that the "default" or "norm" for an EIR analysis is "existing conditions." 57 Cal.App.4th at 454 (quoting CEQA Guidelines Section 15125(a) that an EIR "should normally limit its examination to changes in the *existing* physical conditions in the affected area"). The existing conditions "default" or "'norm" applies even if a project is predicted to operate many years or decades into the future:

The CEQA Guidelines establish the default of an existing conditions baseline even for projects expected to be in operation for many years or decades. That a project will have a long operational life, by itself, does not justify an agency's failing to assess its impacts on existing environmental conditions. For such projects as for others, existing conditions constitute the norm from which a departure must be justified—not only because the CEQA Guidelines so state, but because using existing conditions serves CEQA's goals in important ways. *Neighbors for Smart Rail*, 57 Cal.4th at 455.

The court in *Communities for a Better Environment v. South Coast Air Quality Management District*, 48 Cal. 4th 310, 322 (2010) ("*CBE*") determined that the actual existing physical conditions, not maximum permitted capacities, were to be used as the baseline. The court expressly rejected the maximum permitted capacities as a hypothetical operational scenario, stating: "An approach using hypothetical allowable conditions as the baseline results in 'illusory' comparisons that 'can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts,' a result at odds with CEQA's intent."

The future hypothetical operational scenario as baseline was addressed by the court in the *Neighbors for Smart Rail* decision and expressly stated that the *CBE* decision "did not, however, decide either the propriety of using solely a future conditions baseline or the standard of review by which such a choice is to be judged."

Comments received do not support the request to use a future conditions baseline scenario or where existing permitted operations were to be presumed not to exist for an adequate baseline. Other cases

indicate that recent historic levels of operations were appropriate for permitted operations, even where operations had ceased for several years.²

The court in *Cherry Valley Pass Acres & Neighbors v. City of Beaumont*, 190 Cal.App.4th 316 (2010) explained the flexible process afforded an agency in selecting an existing conditions baseline:

Though the baseline conditions are generally described as the "existing physical conditions in the affected area," or the "real conditions on the ground" (*CBE, supra*, 48 Cal.4th at page 321), "the date for establishing baseline cannot be a rigid one. Environmental conditions may vary from year to year and in some cases it is necessary to consider conditions over a range of time periods" (*id. at pages. 327–328*, quoting *Save Our Peninsula, supra*, 87 Cal.App.4th at page 125). Environmental conditions may also change during the period of environmental review, and temporary lulls or spikes in operations that happen to occur during the period of review should not depress or elevate the baseline. (*CBE, supra, at page 328.*) Accordingly, "[n]either CEQA nor the CEQA Guidelines mandates a uniform, inflexible rule for determination of the existing conditions baseline. Rather, an agency enjoys the discretion to decide, in the first instance, exactly how the existing physical conditions without the project can most realistically be measured, subject to review, as with all CEQA factual determinations, for support by substantial evidence. [Citation.]" (*CBE, supra, at page 328.*) *Cherry Valley Pass Acres & Neighbors v. City of Beaumont*, 190 Cal.App.4th at 336-337.

For the Rodeo Renewed Project, the County used actual existing operating conditions for a fully-permitted facility in determining baseline conditions, consistent with these court decisions. The comments assert that a hypothetical, future scenario constitutes the "inevitable near-term future conditions" and, therefore, the baseline assumed in the Draft EIR is inappropriate resulting in a deficient EIR.

Comments state that the appropriateness of a future baseline is based on evaluation of "[a]ll available information" that point to, or predict, that the Rodeo Refinery nor the Santa Maria Refinery would exist in the near-term future since there would be a reduced demand for crude oil production. The County determined that this prediction is not appropriate based on actual data for existing operations, and substantial information regarding the industry as a whole, particularly in California. Furthermore, the comments do not consider data regarding US crude oil production (EIA predictions for increases in 2022 and 2023 [EIA 2022a]), OPEC production and the price of crude, the capacity of US refineries, the impact of COVID-19, status of pipelines (OCS Plains pipeline [County of Santa Barbara 2022]) (EIA 2022b), and many other market components, all of which affect continued oil and gas operations. These numerous market variables demonstrate that the future cannot easily be predicted, and comments urging utilization of a baseline based on this speculative future scenario is not required by CEQA. Accordingly, the County properly relied on actual data for existing operations.

Comment: Closure of the Santa Maria Refinery is not identified as part of the Rodeo Renewed Project.

Comments state that the Rodeo Renewed Project Application "does not identify closure of the Santa Maria refinery as a component of the Project," implying closure of the Santa Maria Refinery as a reason why Rodeo Renewed Project is necessary. The Project Description section of the Draft EIR clearly lists the closure and demolition of the Santa Maria Refinery as part of the Project. (Section 3.9 describes "Project Components" and Section 3.9.3 is "Discontinue Use of Santa Maria Facility."). Because Phillips 66 proposes to convert its Rodeo Refinery from the refining of petroleum feedstocks to the manufacture of renewable feedstocks, its Santa Maria Refinery operation would become obsolete (the Rodeo Refinery is the sole outlet for petroleum feedstocks generated at the Santa Maria Refinery). In other words, because the Rodeo Refinery would no longer refine petroleum feedstocks, it would no longer need the Santa Maria

² *N. Cnty. Advocates v. City of Carlsbad*, 241 Cal.App.4th 94 (2015) (court upheld baseline determined by historic occupancy levels for permitted but vacant shopping center); *Cherry Valley Pass Acres & Neighbors v. City of Beaumont*, 190 Cal.App.4th 316 (2010) (court upheld baseline determined by historic water usage under entitlements although egg farm had ceased operating years earlier).

Refinery to ship petroleum feedstocks to the Rodeo Refinery. The project description accurately states that the Santa Maria Refinery would be idled and demolished as part of the Project.

Comment: Infeasibility of an alternative indicates oil refining at the Rodeo Refinery is infeasible.

The comment refers to the Draft EIR's evaluation of an alternative dismissed from further consideration (Draft EIR, page 5-3). Comments incorrectly state that all "continued crude refining" would be infeasible at the Rodeo Refinery without the Santa Maria Refinery. (NRDC, page 16.) The alternative – Continued Operation of Rodeo Refinery and Shut-Down of Santa Maria and Pipeline Sites – was rejected from further consideration as not meeting most of the Project objectives and as being infeasible. The Draft EIR explains that this alternative is infeasible because it would reduce operational capacity to 42 percent, underutilize existing facilities, and fail to provide transportation fuels to meet regional demand.

The assumptions used to define an alternative – particularly an alternative that is rejected from further consideration – do not necessarily reflect existing or anticipated future conditions for purposes of baseline. For example, this alternative assumes that the Santa Maria Refinery has been shut down and that no further action would be taken by Phillips 66 to increase deliveries of crude oil by other means, e.g., rail, truck, and marine terminal. It is unlikely that Phillips 66 would do nothing if the Santa Maria Refinery was required to shut down. Instead, as discussed below, Phillips 66, would assess the marketplace and pursue other operational opportunities to maintain asset viability. Accordingly, the Draft EIR properly determines that this alternative is infeasible, but that determination cannot be extrapolated to conclude that continued crude oil processing is impossible, as crude oil feedstocks could be delivered by other means to the Rodeo Refinery.

Comment: Infrastructure constraints limit crude oil feedstocks.

Comments state that infrastructure constraints limit the sources of crude for the Santa Maria Refinery, relying in large part on data from 2014-2020, which shows a decline in crude oil processing at the Santa Maria Refinery during that time period. However, the decline resulted primarily from shutdown of the Plains All American Pipeline ("Plains") pipeline segment in Central California that experienced a pipeline release near Gaviota, California in 2015. That segment of the pipeline, in part, allowed the Santa Maria Refinery to access California's offshore oil production via pipeline. In addition, Plains is progressing its plan to restart the pipeline, which would again allow transport of crude oil produced offshore of California to inland processing facilities, including the Santa Maria Refinery (County of Santa Barbara 2022). Restart of this pipeline would allow additional sources of crude oil in Central California to become available for processing in Central California.

Comments also state that infrastructure constraints limit the Rodeo Refinery to such a degree that if the Santa Maria Refinery is shut down, the Rodeo Refinery will not be able to sustain a historical level of operations (see e.g., NRDC page 18, concluding that the "only potential source of crude is the limited volume of crude it can bring in over the wharf at currently permitted volumes."). The baseline conditions used in the Draft EIR reflect actual production numbers from 2019 using existing infrastructure. Any existing constraints inherent in the infrastructure are taken into account as a part of actual operations.

If the Santa Maria Refinery were to shut down because of future economic, operational, or other reasons, the Rodeo Refinery can use its current infrastructure to obtain alternative sources and volumes of crude oil to replace crude oil historically obtained from the Santa Maria Refinery. In addition to receiving petroleum feedstock from the Santa Maria Refinery via pipeline, the Rodeo Refinery could obtain crude oil from Central California using the currently-configured Pipeline Sites (e.g., crude oil is currently gathered from Central California via Line 100's connection with Line 200 at a location that does not involve the Santa Maria Refinery), from tanker and barge vessels, and from trucks. Refer to Draft EIR, page 3-4 and

Figure 3-5: Pipeline Sites.³ Although the quantity of feedstock delivered to the Rodeo Refinery via pipeline from the Santa Maria Refinery has been relatively low since 2015 because of the Plains pipeline release and shutdown, Rodeo Refinery petroleum refining has continued. The following table shows that the total processed inputs at the Rodeo Refinery has remained relatively steady from 2014 through 2020 (accounting for major turnarounds and the Covid-19 pandemic).

	2014	2015	2016	2017	2018	2019	2020
Crude Oil Processed at the Santa Maria Refinery (bbl/d)	40.4	31.1	30.6	30.1	28.9	26.7	25.7
Total Feedstocks Processed at the Rodeo Refinery (bbl/d)	126.3	126.2	117.3 ^a	124.3	125.4	119.9 ^b	103.9 ^c

^a A major turnaround at the Rodeo Refinery in calendar year 2016 resulted in less feedstocks processed.

^b A major turnaround at the Rodeo Refinery in calendar year 2019 resulted in less feedstocks processed.

^c Total feedstocks processed at the Rodeo Refinery in 2020 were affected by the Covid-19 pandemic. This is consistent with what refineries throughout the United States experienced as well. The U.S. Energy Information Administration ("U.S. EIA") reported that "[r]efinery crude oil inputs and overall operations have been lower since the early 2020 start of the COVID-19 pandemic because of less demand for higher-value refined products such as gasoline and distillate." (The U.S. Energy Information Administration, *Petroleum & Other Liquids, This Week in Petroleum* (February 2, 2022); <https://www.eia.gov/petroleum/weekly>).

As explained further below, Phillips 66 and prior owners and operators of both the Rodeo Refinery and Santa Maria Refinery have consistently and appropriately adjusted operations to what is a volatile and dynamic marketplace and industry.

Comment: The Draft EIR does not disclose the relationship between existing facilities and the Rodeo Renewed Project.

Comments state that the Draft EIR fails to disclose the various components of the existing facilities and how they are related. The Draft EIR Chapter 3, Section 3.4, Project Sites is presented in part below. This section describes the existing facilities that would be affected by the Rodeo Renewed Project, including the Rodeo Site, the Carbon Plant, the Santa Maria Refinery and the Pipeline Sites.

3.4 Project Sites

3.4.1 Terminology

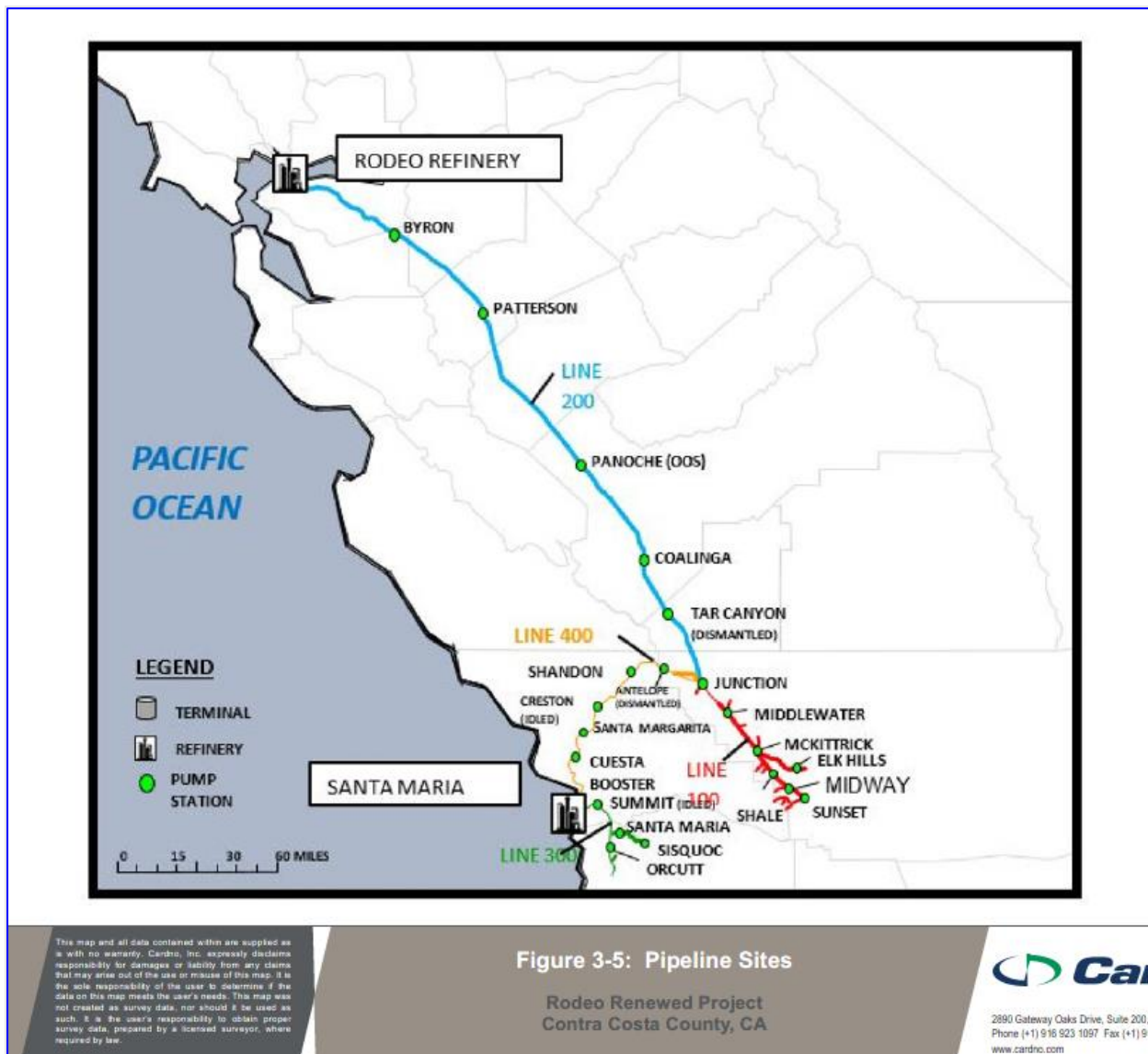
The Project consists of activities at several sites owned and operated by Phillips 66 located throughout the state. These sites include the Rodeo Site (Figure 3-2), Carbon Plant Site in nearby Franklin Canyon (Figure 3-3), Santa Maria Site in San Luis Obispo County (Figure 3-4), and Pipeline Sites locations (Figure 3-5). The following terminology is used in this document:

- **Rodeo Refinery** is used to describe the approximately 1,100 acres composing the current Rodeo Refinery, including the Carbon Plant, located approximately 1.5 miles east of the Rodeo Site;
- **Rodeo Site** refers to the 495 developed acres within the Rodeo Refinery where the main Project activities would occur;

³ Crude oil from Central California fields and elsewhere is currently transported from source locations via Line 100 to Phillips 66's Junction Station, where it is mixed with a diluent for further transport on Line 200 northward to the Rodeo Refinery. One source of current diluent used for the Line 200 transportation leg is petroleum distillate provided by the Santa Maria Refinery. If the Santa Maria refinery were to cease operations, Phillips 66 could obtain alternative sources of diluent for the Line 200 transportation segment, including Elk Hills 18G, which is available in the marketplace, third-party naphtha, or alternatively, reduce the rate at which Line 200 operates, which proportionally requires that less diluent be added to the crude oil shipped northward.

- **Carbon Plant Site** refers to the current location of the Carbon Plant in Franklin Canyon (within the 1,100-acre Rodeo Refinery);
- **Santa Maria Site** refers to the Santa Maria Refinery, including the applicant-owned buffer land, located near Nipomo, San Luis Obispo County; and
- **Pipeline Sites** refers to the four pipelines (i.e., Lines 100, 200, 300, and 400) that transport crude oil and/or pressure petroleum distillate from the Santa Maria Site to the Rodeo Refinery.

As noted in the excerpt provided above, these are depicted in four figures, including Draft EIR Figure 3-5, Pipeline Sites, which depicts the locations of Lines 100, 200, 300 and 400.



Comments identify a discrepancy in the description of the lines on page 3-21, but this discrepancy does not alter the actual production numbers from existing operations that determined baseline conditions from 2019.

Section 3.4.4 of the Draft EIR is revised as follows:

3.4.4 Existing Pipeline Sites

The Project includes the Pipeline Sites—four regional pipelines serving the Santa Maria Site and the Rodeo Refinery. The Santa Maria Site is connected to the Rodeo Refinery by approximately 200 miles of subterranean pipeline (Figure 3-5), designated Line 400 and Line 200. Line 400 runs north and east from the Santa Maria Site through the Coastal Range of central California in San Luis Obispo and Kern Counties, a region of dry grassland, pasture, and open live oak woodland, to connect with Line 200 north of McKittrick. Line 200 runs northwest up the west side of the San Joaquin Valley, through a mixture of Coastal Range grasslands and pasture and San Joaquin Valley agricultural land, and then west to the Rodeo Refinery. Line 200 runs through Kern, Kings, Fresno, Merced, Stanislaus, San Joaquin, Alameda, and Contra Costa Counties. ~~Two other pipelines—Line 100 and Line 300—connect the Santa Maria Site to crude oil collection facilities elsewhere in California (Figure 3-5). Line 100 runs underneath San Joaquin Valley agricultural land and Coastal Range grasslands and pasture lands in Kern County, and Line 300 runs beneath agricultural land and grasslands in the Santa Maria Valley area in San Luis Obispo and Santa Barbara Counties.~~ Line 100 is used to transport crude oil from several collection facilities in Central California to Line 200 at the Junction Pump Station. Line 100 runs underneath San Joaquin Valley agricultural land and Coastal Range grasslands and pasture lands in Kern County (Figure 3-5). Line 300 connects crude oil collection facilities elsewhere in California to the Santa Maria Site and runs beneath agricultural land and grasslands in the Santa Maria Valley area in San Luis Obispo and Santa Barbara counties (Figure 3-5).

Comments state that additional analysis is required of historical feedstocks for the Santa Maria Refinery, and how future market trends may impact the types and locations of feedstocks for the Santa Maria Refinery in years to come. However, Phillips 66 has proposed to close the Santa Maria Refinery as part of the Rodeo Renewed Project, and as such further analysis of the Santa Maria Refinery is not related to or associated with any potential environmental impacts resulting from the Project.

Comment: The Draft EIR improperly considered California's crude oil production in the baseline.

Comments state, based on data cited in the comments, that California petroleum supplies are declining and therefore, Phillips 66 will discontinue operations at the Santa Maria Refinery. For example, the graphs provided show relatively steep declines beginning in 2015 in "Outer Continental Shelf oil resources accessible to the Phillips 66 Santa Maria Facility through pipelines" and "Decline in total economically accessible crude oil resources for the Santa Maria Facility." However, these graphs and other cited information do not explain that the declines beginning in 2015 are almost solely attributable to the shutdown of the Plains pipeline as a result of the Gaviota spill. Plains recently announced its intention to restart the pipeline. Refer to the previous discussion.

The comments also did not correctly account for the variability of future market forces. California production is heavily influenced by economic factors. The most important factor is, perhaps, the price of oil. If oil prices increase, which economics principles indicate will happen, assuming the scenario predicted in the comment that future supplies shrink, oil wells and techniques not employed currently (because the break-even point of oil prices is too low) will sequentially come online, increasing the supply of California crude oil. Therefore, a rise in crude oil prices will likely lead to technological advancements that, in turn, increase the supply of California crude oil.

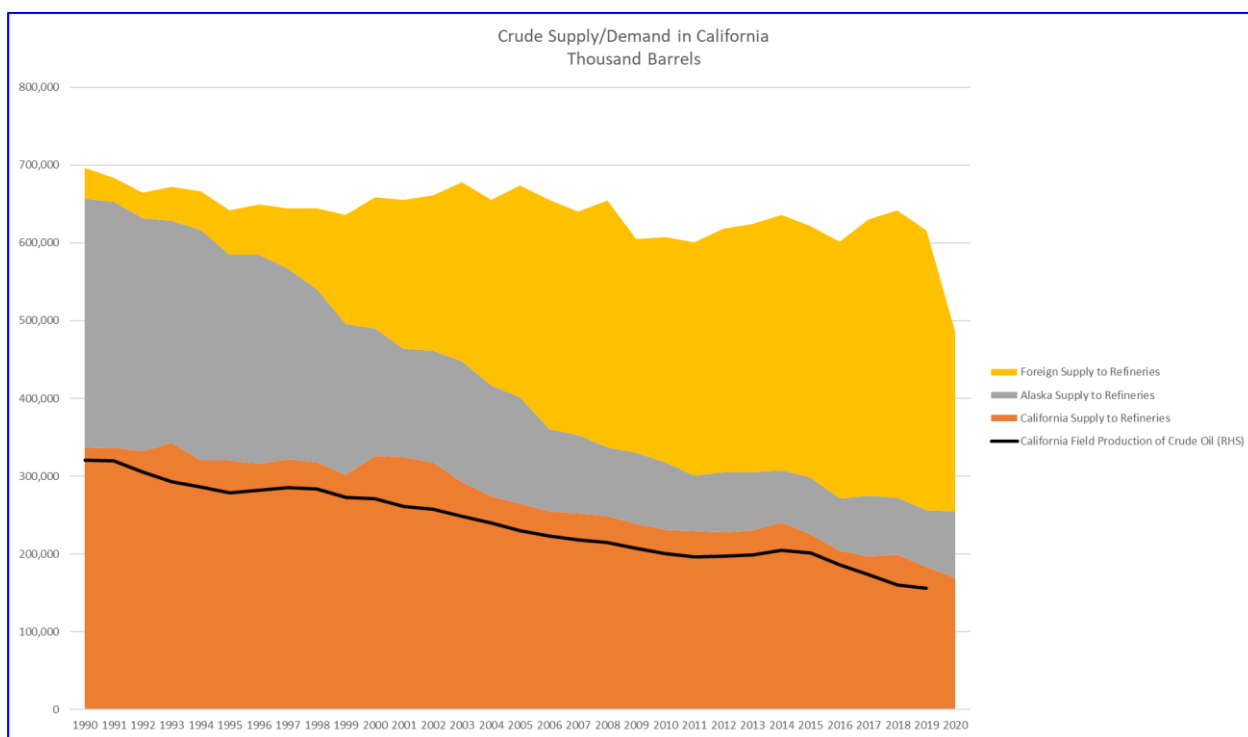
Comment: Correspondence between Phillips 66 and the BAAQMD contradict actual baseline production numbers.

Comments point to the September 6, 2019 letter from Carl Perkins (Phillips 66) to Jack Broadbent (BAAQMD) as evidence that expected crude constraints will necessarily lead to "processing rate curtailments at the Refinery" or a hypothetical baseline of no San Francisco Refinery. However, the letter also offers substantial evidence to the contrary. The letter begins with the following:

The viability of any manufacturing business depends upon the reliable availability of process inputs. The thoughtful advancement of the Marine Terminal permit application will greatly enhance the continued viability of the Rodeo Refinery if and when California-produced crude oil becomes restricted in quantity or generally unavailable as a refinery process input.

Comments characterize the request for increased throughput at the Marine Terminal as an indication that the Santa Maria Refinery and the pipelined petroleum feedstocks it supplies to the Rodeo Refinery are in imminent danger of abandonment. This Marine Terminal throughput project, however, was proposed in 2013, more than eight years ago. The Santa Maria Refinery continues in service today, and the baseline conditions in the Draft EIR are based on actual production numbers from 2019.

California refineries have been supplied over 600,000,000 barrels of petroleum feedstocks on an annual basis for the past 30 years (prior to the pandemic), with the sources from California, Alaska, and foreign markets (CEC 2020). In the past several years, the percentage of California sources has declined to approximately 30 percent, and foreign sources have increased. Contrary to assertions made in the comments, the decrease in California production has not reduced overall supply of petroleum feedstocks to California for refining. Based on data from the California Energy Commission (CEC), imports of petroleum feedstocks to California for refining have increased, as the chart below demonstrates.



The Rodeo Refinery is one of many refineries in California and increased imports to California may require new or modified permits, including air permits and the Marine Terminal project referenced by comments.

Further, the concessions referred to in comments were voluntarily proposed supply restrictions by Phillips 66 as a part of the permit processing at BAAQMD. Phillips 66 voluntarily proposed these restrictions on the types of crude oil that could be transported across the Marine Terminal because the supply of available petroleum feedstocks was sufficient to account for these restrictions, not because they were decreasing overall refining capacity or shutting down the Rodeo Refinery.

Comment: Other permit proceedings contradict the EIR baseline numbers and reflect imminent closure of the Santa Maria Refinery.

Comments point to three specific projects being considered in southern California, as evidence there are declining sources of crude indicating an acute operational need at the Santa Maria Refinery. These projects include the Santa Maria Refinery rail car project, ExxonMobil's temporary trucking project, and the Santa Maria pipeline replacement project. As discussed below, the three projects do not reflect the imminent closure of the Santa Maria Refinery.

The Santa Maria Refinery rail car project was proposed at a time when crude oil supply and demand economics, and transportation logistics and costs favored rail transportation of crude oil loaded elsewhere in the United States and shipped to the Santa Maria Refinery. The rail project is typical for the petroleum refining industry – as economics, markets, and logistics change, companies search for ways to optimize operations, particularly with respect to a petroleum refiner's main cost (i.e., crude oil inputs, including at the Santa Maria Refinery).

Since the rail car project was considered, rail imports of crude into California have been increasing steadily over the past five years prior to the pandemic from 1.7 million barrels in 2016 to 8.2 million barrels in 2019 (CEC 2019). Comments regarding the Santa Maria rail car project are not indicative of rail imports into California in general or whether other future rail projects will be considered by Phillips 66 (or others) for the Santa Maria facility or, alternatively, for locations that could receive crude-by-rail and then transport the crude oil via truck, pipeline (or other means from such a location to the Santa Maria Refinery).

The third project referenced in comments is ExxonMobil's 2017 proposal to temporarily truck crude oil to the Santa Maria Refinery. This is not a proposal put forth by Phillips 66. It is unclear how this proposal supports the premise that Phillips 66 intends to shut down the Santa Maria Refinery, when in reality an additional source of crude oil to refine at the Santa Maria Refinery would be beneficial to Phillips 66 operations, further indicating that Phillips 66 did not need to shut down the Santa Maria Refinery. Although comments state that Santa Barbara County voted to deny the project, it should be noted the denial was a recommendation to the Board of Supervisors, who is scheduled to hear the item sometime in 2022 (County of Santa Barbara 2021).

Lastly, comments note that Phillips 66 abandoned its "Santa Maria facility pipeline replacement project in August 2020" and that "[t]his fact strongly indicates that the company's plan to decommission the Santa Maria facility was developed independently from the Project, and was already underway before Phillips 66 filed its Application with the County". The County believes that the "Santa Maria facility pipeline replacement project" referenced in the comments refers to Phillips 66's Line 300 Project, which was a pipeline maintenance project spanning pipeline segments in Santa Barbara County, San Luis Obispo County, and the City of Santa Maria. The Line 300 Project had two purposes: (1) to proactively perform maintenance on the pipeline in advance of when required to do so by industry-standard and regulatory requirements; and (2) to relocate portions of the pipeline away from residential areas. Phillips 66 discontinued work on the Line 300 Project because of its pursuit of the Rodeo Renewed Project (e.g., given that Line 300 would be idled and no longer used, there was no need to relocate segments of the pipeline).

Comment: If the Santa Maria Refinery shuts down, the Rodeo Refinery will necessarily be required to shut down.

Comments make this conclusion assuming that if economic, operational, logistical, or other factors result in Phillips 66 deciding to idle or permanently shut down the Santa Maria Refinery, the company would not take any actions to obtain alternative crude supplies for the Rodeo Refinery. For example, comments state the following at page 18 of NRDC comment letter:

Thus, in baseline conditions – without the 'transitional' marine terminal throughput increase – the Refinery's only potential source of crude is the limited volume of crude it can bring in over the wharf at currently permitted volumes. Those permitted volumes are enough to supply only 47 percent of the Refinery's throughput capacity, as explained in the DEIR analysis of the alternative of shutting down the Santa Maria facility but keeping the Refinery open. DEIR at 5-3. Processing only these limited volumes brought in over the wharf over current limits would result in the refinery operating at a far lower throughput rate than described in the DEIR's baseline scenario. The DEIR functionally already recognizes that this scenario is not realistic, having acknowledged that continued crude refining would be infeasible at the Refinery if and when the Refinery loses access to crude and semi-refined crude from the Santa Maria facility and pipeline system.

This analysis and conclusion are not correct. Comments appear to interpret language from a hypothetical project being evaluated as part of the CEQA-required alternatives analysis, as an admission about current operating scenarios (see above discussion regarding hypothetical assumptions used in the alternatives analysis). The comments assume that if Santa Maria were to become "crude-constrained" and, therefore, economically unviable, Phillips 66 would not undertake any actions to obtain additional sources of crude oil for the Rodeo Refinery. Such an assumption does not consider the nature of petroleum refining and the manner in which operational, economic, logistic, and other adjustments are made on a constant basis.

With respect to how Phillips 66 might react to further constraints of the historically-available crude oil supply resources for the Santa Maria Refinery, some potential future adjustments include, but are not limited to, the following:

- obtaining additional petroleum feedstocks for the Santa Maria Refinery, such as via rail, truck, or constructing additional pipelines (by way of example, Phillips 66 has constructed approximately 1,100 miles of new pipelines in the past five years);
- obtaining additional petroleum feedstocks for the Rodeo Refinery via new pipeline systems;
- obtaining additional petroleum feedstocks for the Rodeo Refinery via its Marine Terminal (in 2013, Phillips 66 submitted an application to the BAAQMD to increase the daily petroleum feedstock throughput at the Marine Terminal from 51,182 barrels per day to ultimately 130,000 barrels per day; that permitting effort was abandoned once Phillips 66 decided to pursue the Rodeo Renewed Project to convert the Rodeo Refinery from a petroleum refinery to a renewable feedstocks manufacturing facility);
- modifying the existing rail rack infrastructure at the Rodeo Refinery to allow offloading of petroleum feedstocks other than butane;
- modifying Rodeo Refinery infrastructure to allow offloading of trucked-in petroleum feedstocks from nearby company-owned and third-party marine and rail terminals; and/or
- processing pre-treated renewable feedstocks in other existing units.

There is no evidence to suggest that Phillips 66 would, in light of a Santa Maria Refinery shutdown, retain the status quo and not attempt to obtain other petroleum feedstock supplies for the Rodeo Refinery, or pursue other economic, operational, or logistical options. Several projects and changes have been pursued or occurred at both the Rodeo and Santa Maria Refineries since the 1990s. Refer to Table 1, Phillips 66 Projects Implemented to Respond to Changed Conditions, at the end of this Master Response. Each of these projects was undertaken to adjust and adapt to different market, regulatory, economic, operational, and/or logistical changes. Such adjustments and adaptations have been the norm and there is no evidence to suggest that Phillips 66 would not continue to adjust and adapt in the same manner going

forward. Suggesting otherwise assumes a hypothetical baseline of zero, based on an unrealistic assumption that the project proponent will "close up shop" and cease to exist if the project is not pursued.

Comment: The Draft EIR did not properly evaluate the No Project Alternative.

CEQA requires the consideration and discussion of alternatives to the proposed project, including the evaluation of a "no project" alternative. The purpose of the "no project" alternative "is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." CEQA Guidelines, § 15126.6(e)(1). As further explained in the CEQA Guidelines, if the "project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed." CEQA Guidelines, § 15126.6(e)(3)(B). The "no project" alternative analysis "is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline." CEQA Guidelines, § 15126.6(e)(1).

Based on the CEQA Guidelines, the "no project" alternative for the proposed Project is the continued operation of the Rodeo Refinery (including the Carbon Plant), the Santa Maria Site and the Pipeline Sites, since this would be the "circumstance" if the proposed Project did not proceed. The propriety of utilizing the continued operation of an existing facility for the "no project" alternative was explained in *Ctr. for Biological Diversity v. Dep't of Fish & Wildlife*, 234 Cal. App. 4th 214, 253-254, 183 Cal. Rptr. 3d 736 (2015):

Discussing a no project alternative in an EIR provides the decision makers and the public with specific information about the environment if the project is not approved. It is a factually based forecast of the environmental impacts of preserving the status quo. It thus provides the decision makers with a base line against which they can measure the environmental advantages and disadvantages of the project and alternatives to the project.⁴

The continued operation of the Rodeo Refinery (including the Carbon Plant), the Santa Maria Site, and the Pipelines Sites as set forth in the "no project" alternative reflects 2019 conditions – the status quo – and the 2019 conditions also constitute the baseline conditions for the proposed project.

Comments suggest that the "proper no project" alternative should be based on the assumptions that the Santa Maria Refinery would close and that an increase in imports over the Marine Terminal would not be allowed, resulting in decreased production at the Rodeo Refinery. This suggestion for the "no project" alternative is based on speculation as to future conditions, and such speculation does not provide the basis for a "no project" alternative under CEQA. CEQA cautions against speculating on some future event in defining the "no project" alternative. The court in *Planning & Conservation League v. Castaic Lake Water Agency*, 180 Cal. App. 4th 210, 246 (2009) rejected demands to evaluate a "no project" alternative based on speculative assumption:

Under CEQA, '[t]he purpose of describing and analyzing a 'no project' alternative is to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.' (Guidelines, § 15126.6, subd. (e)(1)) In addressing the 'no project' alternative, the EIR must 'discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the

⁴ *Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 917–918 (100 Cal. Rptr. 2d 173). When a project involves a proposed change to an ongoing operation, or even the continuation of an ongoing operation, a decision to reject the project would leave the operation in place. In such a situation, CEQA defines the no project alternative as a continuation of the existing operation. See also *Saltonstall v. City of Sacramento*, 234 Cal. App. 4th 549, 573-574, 183 Cal. Rptr. 3d 898 (2015) ("no project" alternative consists of continued operation of arena at its current location).

project were not approved, based on current plans and consistent with available infrastructure and community services.' (Guidelines, § 15126.6 subd. (e)(2)) As an EIR need not consider 'an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative' (Guidelines, § 15126.6, subd. (f)(3)), an EIR is not obliged to examine 'every conceivable variation' of the 'no project' alternative).⁵

Comments claim that the Santa Maria Refinery would close whether or not the proposed Project is approved, using as evidence statements from prior applications from Phillips 66 for a pipeline replacement project, for a Santa Maria Refinery rail project, and for a project to increase crude oil delivery over the Marine Terminal. These application materials include statements regarding the potential for local production of crude oil to decline.

However, declining production is not equivalent to no production. California crude oil production has been declining since 1985, but based on current reserve estimates, these oil fields could be productive for decades or longer. Accordingly, the Rodeo Refinery and the Santa Maria Refinery have continued to operate at consistent production levels through 2019 (with 2020 affected marginally by COVID-related reduction in demand). The "no project" alternative is appropriately based on 2019 actual production, which is "what would be reasonably expected to occur in the foreseeable future if the project were not approved."

Comments also state that the Santa Maria Refinery is not operating at capacity, and that this also shows that the Santa Maria Refinery would close. As previously stated, the "no project" alternative is based on actual operations at the Rodeo Refinery and the Santa Maria Refinery, not capacity, and this reflects reasonable expectations if the Project is not approved. Further, one of the reasons that Santa Maria Refinery has not been operating at full capacity stems from the 2015 closure of the Plains pipeline in Central California. Plains, however, has begun the process to restart the pipeline, which could move up to nearly 1.7 million gallons of crude oil a day. Restart of that pipeline would enable the Santa Maria Refinery to access additional sources of crude oil for processing and increase its viability well into the future.

Comments also cite various industry articles regarding an overall decline in crude oil refining, speculating that the Rodeo Refinery and/or the Santa Maria Refinery could be "forced by current circumstances to limit or cease crude oil production." This seems to imply that the "no project" alternative should be no production at all, which negates the required "no project" alternative of existing conditions or the status quo. Actual 2019 operations form the basis for the "no project" alternative for the proposed Project, and speculation regarding the future of the refining industry and further speculation regarding these particular facilities is not appropriate under CEQA. CEQA does not require the "no project" alternative to reflect conditions that did not precede the project. *County of Inyo v. City of L.A.*, 124 Cal. App. 3d 1, 12-13 (1981) (court rejected "synthetic" "no project" alternative that did not reflect conditions that preceded the project).

Table 1. Phillips 66 Projects Implemented to Respond to Changed Conditions (refer to discussion on page 3-12)

Phillips 66 Projects	
1995	A long-term lease for use of the Marine Terminal was entered into with the California State Lands Commission, which ensured long-term marine access for refinery operations.
2005	Refinery equipment was modified to allow for the production of ultra-low sulfur diesel.
2007	A new hydrotreater and hydrocracking facilities were constructed to increase gasoline and diesel production, particularly from heavier feedstocks and boost the overall clean product yield from the refinery; in addition, the refinery incorporated facilities needed to obtain hydrogen produced from an adjacent third-party hydrogen plant.

⁵ *Residents Ad Hoc Stadium Com. v. Board of Trustees* (1979) 89 Cal.App.3d 274, 286-288 (152 Cal. Rptr. 585).

Phillips 66 Projects	
2012	The maximum daily throughput for offloading crude oil and gas oil at the Marine Terminal was increased by 20,500 barrels per day ("bbl/d"), from 30,682 bbl/d to 51,182 bbl/d on a 12-month rolling average, which allowed the refinery to obtain increased amounts of feedstocks via the marine terminal as opposed to other routes, such as by pipeline.
2012	Phillips 66 initiated a project to recover propane and additional amounts of butane from the refinery fuel gas stream, thereby reducing refinery stationary source emissions and helping to ensure increased economic returns (this application was abandoned and has not been pursued further once the decision to pursue Rodeo Renewed was implemented).
2012	Phillips 66 obtained a permit modification allowing an increase in the maximum allowable crude oil throughput at its Santa Maria Refinery from 44,500 bbl/d to 48,950 bbl/d.
2013	Phillips 66 submitted an application to increase the maximum daily throughput for offloading crude oil and gas oil at the Marine Terminal even further (up to 100,182 bbl/d), which would allow the refinery to obtain increased amounts of feedstocks via the marine terminal as opposed to other routes, such as by pipeline.
2013	Phillips 66 initiated a project and submitted an application to San Luis Obispo County to receive crude oil at its Santa Maria Refinery by rail – the County ultimately denied the application.
2016	Phillips 66 amended its application for a Marine Terminal increase to 130,000 bbl/d (this application was abandoned and has not been pursued further once the decision to pursue Rodeo Renewed was implemented).
2016	Phillips 66 undertook modifications to its Santa Maria Pump Station, which feeds the Santa Maria Refinery, allowing for the additional offloading of crude oil delivered by truck in response to the Plains All American Pipeline shutdown.
2017	Phillips 66 applied for and received a permit to offload additional crude oil via truck at its Santa Maria Refinery in response to the Plains Pipeline shutdown.
2021	Phillips 66 began using renewable feedstocks to produce renewable diesel at the Rodeo Refinery's Unit 250.

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MASTER RESPONSE NO. 2: CEQA ALTERNATIVES

Comments assert that the Draft EIR's alternatives analysis did not comply with the provisions of CEQA, stating that the No Project Alternative was not evaluated properly, that the Draft EIR improperly evaluated regional demand for transportation fuels, and that the Hydrogen Generation Technology Alternative should not have been dismissed from further consideration. For a discussion of the Draft EIR's No Project Alternative, refer to Master Response No. 1, Baseline. The remaining comments are addressed below.

Alternatives Rejected

Comments state that the Draft EIR improperly rejected three alternatives because the County wrongly assumed that "the Refinery is essential to meet regional refined product demand." (NRDC, page 64.) Each of the three alternatives were dismissed from further consideration for several reasons:

- Failure to meet the fundamental purpose of the Project to transition the facility to a renewable transportation fuels production facility. (Draft EIR, pages 5-3, 5-9.)
- Failure to meet Project objectives. (Draft EIR, pages 5-3, 5-4, 5-9.)
- Infeasibility. (Draft EIR, pages 5-3, 5-4, 5-9.)

The inability to meet regional demand was one consideration in these analyses, and it was based on a presentation prepared by the CEC for the BAAQMD Board of Directors and on the CEC's 2021 report entitled California's Petroleum Market (see Draft EIR, page 5-33). The comments express disagreement with the analysis of the CEC, but disagreement among experts is not a basis to invalidate an EIR. See CEQA Guidelines, Section 15151.

Comment: The Marathon Draft EIR considered the Hydrogen Generation Technology Alternative, so the Rodeo Refinery Project Draft EIR should also consider this alternative.

Comments also express disagreement with the Draft EIR's analysis regarding the Hydrogen Generation Technology Alternative. This alternative was dismissed from further consideration because "it would be infeasible for technical and financial reasons, it would not substantially reduce environmental impacts, and it could result in new environmental impacts, particularly regarding the use of energy." (Draft EIR, page 5-9.) Comments suggest that the analysis is not supported by substantial evidence.

Comments first note that "this same alternative was treated as feasible" in the Marathon Draft EIR, and argues therefore, that the hydrogen alternative should be feasible for the Rodeo Renewed Project. (NRDC, page 68.) The existence of two different EIRs for two different projects, both of which address a hydrogen alternative, does not mean that the Martinez Refinery Renewable Fuels Project (Marathon Project) Draft EIR's characterization of the alternative applies to the Rodeo Renewed Project. Conversely, using similar reasoning, the hydrogen alternative in the Marathon EIR could be determined to be infeasible based on the Rodeo Renewed Project Draft EIR's analysis of the Hydrogen Generation Technology Alternative. Neither approach is dispositive. The question is whether the evaluation of alternatives satisfied CEQA's requirements, and the County has determined it did.

CEQA intends that each project's evaluation of alternatives is to be judged on its own merits:

CEQA establishes no categorical legal imperative as to the scope of alternatives to be analyzed in an EIR. Each case must be evaluated on its facts, which in turn must be reviewed in light of the statutory purpose.⁶

Thus, it is not a violation of CEQA for two different projects to evaluate a potential alternative in a different manner. As discussed below, there are differences in approach to the analysis of an electrolysis alternative between the two EIRs.

⁶ *Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 566 (1990).

CEQA requires an evaluation of “potentially” feasible alternatives. CEQA Guidelines Section 15126.6(a) (“An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of *potentially* feasible alternatives . . .”). “An EIR is not required to consider alternatives which are infeasible.” CEQA Guidelines Section 15126.6(a). In *Mira Mar Mobile Cmty. v. City of Oceanside*, 119 Cal. App. 4th 477, 489 (2004), the court upheld the City’s decision to reject as infeasible alternatives that had been included for discussion in the EIR:

Although the City ultimately rejected these alternatives as “infeasible,” this conclusion does not imply these alternatives were improperly included for discussion. Alternatives included in an EIR need only be “potentially feasible” (CEQA Guidelines, § 15126.6, subd. (a)), meaning they are “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors”.

One of the primary differences between the two EIRs is that the Marathon Draft EIR did not consider the same factors as the Rodeo Renewed Project Draft EIR regarding the technical and economic feasibility of a large scale electrolysis operation. Comments criticize the Rodeo Renewed Project Draft EIR’s determination of infeasibility, referring to the analysis as “a statement of arithmetic that is both obvious and meaningless” and asserting that the Draft EIR failed to consider a “facility-specific evaluation of feasibility. . . .” (NRDC, pages 68-69.) Neither are true.

Infeasibility for the Hydrogen Generation Technology Alternative is based on the actual current capacity of the Air Liquide Hydrogen Production Plant, which is 120 million standard cubic feet per day (MM scf/day)⁷. As stated on Draft EIR page 5-8, using an estimated hydrogen usage of 120 MM scf/day of hydrogen (production capacity of the Air Liquide facility), the Draft EIR estimated that the facility would “require approximately 750 MW of electrical generating capacity to power enough electrolyzers to meet the Project’s hydrogen demand.”

This estimate is based on published information from the U.S. Department of Energy and other sources. Specifically, the theoretical minimum energy to produce a normal cubic meter (Nm³) of hydrogen is 3.54 kWh (DOE 2020; IEEE 2004). Current electrolyzer system efficiency of 65 percent (DOE 2020) yields an actual energy requirement of 5.45 kWh/Nm³. Converting “scf” to “Nm³,” 120 MM scf/day of hydrogen equals 3.4 MM Nm³/day of hydrogen. Multiplying 3.4 MM Nm³ of hydrogen by 5.45 kWh equals 18.5 MM kWh/day. Converting kWh/day to MW provides 772 MW. The Draft EIR explains that “existing equipment would not have the capacity to power both the renewable processing and the electrolyzers” and that “a new source or sources of electricity would need to be developed.” (Draft EIR, page 5-8.) Therefore, this analysis is facility specific.

The Draft EIR explains the technical infeasibility of such a large-scale electrolysis operation. Although comments challenge this conclusion, comments do not provide an example of a large scale electrolysis project in operation for comparison. Instead, comments refer to “plans” to scale up a hydrogen electrolysis plant in Germany, from 20 to 100 MW, which is a fraction of the 750 MW that the Rodeo Renewed Project would require. Further, the Draft EIR estimated capital costs using estimates from the U.S. Department of Energy, concluding that such a large scale electrolysis facility would be between \$0.75 billion and \$1.1 billion. If the electricity required were sourced from a third party, that cost would be \$788 million, or ten times the Rodeo Refinery’s current utility bill (see Draft EIR, page 5-8).

Comments challenge these estimates. Using the estimates provided in comments, the costs could be “\$0.37 billion to \$0.48 billion” which supports the Draft EIR’s conclusion that this alternative is economically infeasible. Comments claim that Phillips 66 could achieve cost savings in various ways, but

⁷ Major Facility Review Permit (Title V) issued by Bay Area Air Quality Management District to Air Liquide Large Industries, US LP, Facility No. B7419, page 7. “Air Liquide is not increasing its hydrogen production capacity as a result of the Project.” (Draft EIR, page 4.3-49.)

those claims are an opinion and based on speculation, neither of which constitute substantial evidence under CEQA.

Comments also overlooked the Draft EIR's analysis of infeasibility that is based on the lack of sufficient space to site a renewable energy-based dedicated facility to power the electrolyzers. Based on National Renewable Energy Laboratory (NREL) estimates, a 750 MW installation would require at least 3,000 acres and possibly as much as 30,000 acres, which is not available at the 1,100-acre Rodeo Refinery site. Comments also overlook the potentially significant environmental effects of constructing a dedicated electrical generation facility, including air quality impacts and terrestrial habitat loss, and with an offsite renewable energy facility, these impacts could be greater as stated on Draft EIR, page 5-8. Further, because this technology would use substantially more electricity to produce hydrogen than the current technology at the refinery, it "could result in an inefficient, wasteful, and unnecessary use of energy." (Draft EIR, page 5-8.)

The Rodeo Renewed Draft EIR estimates between 4 to 9 acres of land per megawatt of solar capacity based on the Technical Report prepared by the NREL – "Land-Use Requirements for Solar Power Plants in the United States" (June 2013), which reviewed numerous solar projects. It should be noted, more recent news confirms the overall acreage estimate of 4 or more acres per megawatt and the costs for large solar projects.⁸

The Solar Star project at 579 MW is considered to be the largest solar project in the U.S. until the Indiana or Texas projects are constructed. Thus, the development of a 750 MW solar project would be a substantial project in the solar industry and not an ancillary energy source for a renewable fuels project, further supporting a determination that this hydrogen alternative is infeasible.

Comments also claim that greater attention should have been afforded the Hydrogen Generation Technology Alternative because it helps to mitigate significant impacts that comments state exist. (NRDC, page 69.) However, as explained in Master Response No. 4, Land Use and Feedstocks and Master Response No. 5, Renewable Fuels Processing, the Rodeo Renewed Project does not result in any significant impacts with respect to GHG emissions or in other environmental areas where comments suggest significant impacts will occur.

Combining Alternatives

Comments state that some of the alternatives should be combined, but do not explain why the alternatives as presented are not in compliance with CEQA. CEQA Guidelines, Section 15126.6(a) requires the evaluation of a range of reasonable alternatives, and the Draft EIR has evaluated four alternatives including the No Project Alternative, and considered (but dismissed) another six alternatives. As discussed above, an EIR need not consider every conceivable alternative to a project. The analysis of alternatives in the Draft EIR is more than sufficient to allow informed decision-making.

Comments also state that the Project objectives are too narrowly drawn by referring to the repurposing of Refinery infrastructure twice, which preclude alternatives such as the hydrogen alternative. (NRDC, page 72.) However, the Draft EIR's analysis of the hydrogen alternative recognizes that it would meet "several key project objectives to increasing the availability of renewable fuels and meeting federal and state goals for renewable fuels and GHG reduction" (Draft EIR, page 5-9.) While the Draft EIR also noted that the Hydrogen Generation Technology Alternative "would introduce a new stand-alone electrolyzer and

⁸ Doral Solar Project, with 1.3 gigawatts on 13,000 acres for investment of \$1.5 billion
<https://www.businesswire.com/news/home/20220114005072/en/Indiana-Governor-Acknowledges-Doral-LLC%E2%80%99s-1.5-Billion-Mammoth-Solar-Project-During-the-2022-State-of-the-State-Address>
Solar Energy Center in Texas with 1,310 MW and 18,000 acres at \$1.6 billion
<https://digitalmag.altenerg.com/?shareKey=I3xY8t>)
Solar Star in Kern and Los Angeles Counties has 579 MW on over 3,000 acres and others cited therein
(<https://constructionreviewonline.com/biggest-projects/top-5-biggest-solar-farms-in-the-us/No.-:text=1..Solar%20Star%2C%20California&text=Completed%20in%20June%202015%2C%20Solar.and%20Los%20Angeles%20Counties%2C%20California>.)

electricity project component not contemplated by the objectives,” this alternative was dismissed from further consideration due its technical and economic infeasibility and due to the evaluation of this alternative’s potential environmental effects. (Draft EIR, pages 5-8, 5-9.)

In addition, the Project has eleven objectives, two of which relate to repurposing the Rodeo Refinery’s existing equipment, and those two objectives did not preclude the evaluation of the hydrogen alternative or any other alternative. As stated in the Draft EIR:

3.6 Project Objectives

The Project has the following objectives:

- Convert the Rodeo Refinery to a renewable transportation fuels production facility;
- Provide/maximize production of renewable fuels to assist California in meeting its goals for renewable energy, GHG emission reductions, and reduced CI for transportation fuels;
- Convert existing equipment and infrastructure to produce transportation fuels from non-hazardous renewable feedstocks and discontinue the processing of crude oil at the Rodeo Refinery;
- Preserve and protect existing family-wage jobs in Contra Costa County during and after the transition to a renewable transportation fuels production facility;
- Repurpose and reuse the facility’s existing equipment capacity, including the Marine Terminal and Rail Butane Loading Rack;
- Preserve marine, rail, and truck offloading facilities to access national/international renewable feedstocks to provide renewable transportation fuels and conventional fuels and conventional fuel components;
- Provide the ability to process a comprehensive range of renewable feedstocks, including treated and untreated feedstocks;
- Maintain the facility’s current capacity to supply regional market demand for transportation fuels, including renewable and conventional fuels;
- Ensure California transportation fuel supply needs are met during the transition to a renewable fuels facility by temporarily (approximately 7 months) increasing gas oil and crude deliveries at the Marine Terminal to maintain current transportation fuel production at the Rodeo Refinery;
- Provide a beneficial use for recyclable fats, oils, and grease (FOG) within the state of California; and
- Provide a mechanism for compliance with the federal RFS and the state LCFS through processing facilities in California.

Comments cite the decision in *N. Coast Rivers All. v. Kawamura*, 243 Cal. App. 4th 647 (2015) to support this argument, but in that case the California Department of Food and Agriculture approved a control program for an invasive pest based on an EIR for a “narrowly drawn” eradication program for the pest – the EIR had not even evaluated the program that was actually approved. Those circumstances are not present for this EIR.

Instead, comments request that the County eliminate the objectives to repurpose the Rodeo Refinery facility, but CEQA does not require this. See *Sierra Club v. Cnty. of Napa*, 121 Cal. App. 4th 1490, 1508-9 (2004) (County’s reliance on winery applicant’s objectives to minimize costs and reduce highway usage were valid considerations for determining alternatives were infeasible). The court in *Sierra Club* stated: “The EIR was not required to analyze the effects of a project that Beringer did not propose, or to

analyze the effects of an alternative that would not feasibly attain most of the basic objectives of the project.” *Sierra Club*, 121 Cal. App. 4th at 1509. Similarly, CEQA does not require that the Draft EIR evaluate inclusion of the electrolyzer and a 750 MW solar project. Therefore, the Project objectives are not narrowly drawn.

CEQA requires the evaluation of alternatives to the project as a whole, not to its various parts or components. The Hydrogen Generation Technology Alternative is an alternative for a component of the Project – hydrogen production – not to the Project as a whole, and thus, does not satisfy CEQA’s fundamental requirements for an alternative. Even if the hydrogen alternative were combined with another alternative such as the Reduced Project Alternative, the technological and economic infeasibility of the green hydrogen component remains; a 500-550 MW solar facility would still require at least 2,000 acres (4 acres x 500 MW), would be as cost-prohibitive and would result in additional environmental effects. Further, with a Reduced Project Alternative, the ability to absorb these significant costs would be more limited as compared to the proposed Project that fully utilizes existing facilities.

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MASTER RESPONSE NO. 3: CUMULATIVE IMPACTS

Several comments were received regarding the extent of the geographic area of projects considered within the cumulative impact analysis. Specific comments expressed that the area should include local and statewide projects and include a “*universe of projects*” beyond the “*3-mile geographic scope*” to cover “upstream”, “downstream” and indirect environmental and market impacts at the global scale. For the Rodeo Renewed Project, cumulative projects were more defined for issue areas with greater potential for significant impacts, such as air quality, GHG, water quality, marine and aquatic resources, and risk of upset. For these areas, the analysis included projects that were located regionally. CEQA Section 15130 allows the lead agency, “... to define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.” This approach is consistent with direction provided in CEQA.

Geographic Area

As discussed on page 6-3 of the Draft EIR, the approach to the cumulative analysis presents specific projects within a 3-mile radius of the Project. The analysis considers projects anticipated to have similar, potentially overlapping impacts with those of the Project (refer to Draft EIR, pages 6-3 through 6-5). The Draft EIR evaluates the Project’s impacts taking into account these additional projects to identify impacts that would be cumulatively considerable. Considering the Project in connection with the effects of these other projects, the Draft EIR identifies cumulatively considerable impacts with respect to Biological Resources, Hazardous Materials, and Hydrology and Water Quality. Refer to pages 6-6, 6-8, and 6-9.

In addition, the Draft EIR cumulative analysis is also based on future development projections from adopted local and regional plans and planning documents. This is considered a hybrid approach because it uses a list of projects as well as projections. Using a list of projects is better suited to assess localized and near-term impacts, whereas using projections from a local or regional plan provides a more accurate evaluation of cumulative conditions within a regional context. To complete the analysis, the proposed Project’s incremental impacts were assessed together with the incremental cumulative impacts to determine whether significant impacts result.

To exemplify, for cumulative air quality impacts, the geographic area is regional to account for the dispersion of certain pollutants over a larger area. To set the analysis boundary, planning documents and projections for the affected air basins were used to evaluate whether the Project, together with the cumulative projects, would affect compliance with air emission attainment standards. For cumulative construction noise impacts, it was determined that using a 500-foot setback from construction activities was sufficient and that impacts would not occur beyond this setback from the construction site or along roadways used for construction traffic to access the site.

To provide clarification on the method used for each issue area, the following table is added to Section 6.4, Cumulative Impacts, page 6-3.

Table 6-1 Geographic Context of Cumulative Impacts

<u>Resource Topic</u>	<u>Geographic Area</u>
<u>Aesthetics</u>	<u>Local – area surrounding Project sites that encompass public viewpoints</u>
<u>Air Quality</u>	<u>Regional - for pollutant emissions that have regional effects, combined air basins within the following air districts were used: BAAQMD; SJVAPCD; San Luis Obispo County Air Pollution Control District; and Santa Barbara County Air Pollution Control District</u> <u>Local/Immediate Vicinity – a refined area was used to evaluate areas with highly localized air emissions, such as NOx and PM</u>
<u>Biological Resources</u>	<u>Regional - within 3-mile radius for more localized effects</u>
<u>Cultural Resources</u>	<u>Local/Immediate Vicinity – area of potential effect (APE)</u>
<u>Energy Conservation</u>	<u>Regional – energy grids serving Project Sites</u>
<u>Geology and Soils</u>	<u>Local/Immediate Vicinity</u>
<u>Greenhouse Gas Emissions</u>	<u>Statewide and Global</u>
<u>Hazards and Hazardous Materials</u>	<u>Regional and Local</u>
<u>Hydrology and Water Quality</u>	<u>Regional and Local</u>
<u>Land Use and Planning</u>	<u>County</u>
<u>Noise and Vibration</u>	<u>Local/Immediate Vicinity</u>
<u>Tribal Cultural Resources</u>	<u>Local/Immediate Vicinity</u>
<u>Wildfire</u>	<u>Local/Immediate Vicinity</u>
<u>Solid Waste</u>	<u>Local – service areas</u>
<u>Environmental Justice</u>	<u>Local/Immediate Vicinity</u>

Cumulative Contribution

Another issue raised in the comments is that cumulative air quality and GHG emission impacts should have been analyzed together within a nationwide and global context to accurately identify potential impacts. In terms of GHG emissions, the Project is analyzed against the goals and policies of applicable state, federal, and global guidelines. Refer to Section 4.8, Greenhouse Gas Emissions, Impact 4.8-2 and 4.8-3. For both air quality and GHG analyses, operation of the proposed Project would result in a net emissions decrease of all pollutants compared to baseline levels. Thus, the operational impact would be less than significant, no mitigation would be required (i.e., the proposed Project in itself encompasses mitigation), and aggregated impacts are not cumulatively considerable.⁹

CEQA Guidelines state an EIR’s discussion of cumulative impacts “should be guided by the standards of practicality and reasonableness.” 14 Cal. Code Regs. § 15130(b). An EIR must assess a project’s cumulative impact on the environment if the project has a “cumulatively considerable” incremental effect in combination with other projects. *Id.* § 15130(a). To conduct this analysis, the County must

⁹ CEQA Guidelines Section 15130(a): “An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.” See also *Santa Monica Chamber of Commerce v. City of Santa Monica*, 101 Cal. App. 4th 786, 799 (2002) (“Just as zero when added to any other sum results in no change to the final amount, so, too, when no environmental impacts cognizable under CEQA are added to the alleged environmental impacts of past projects, there is no cumulative increased impact.”).

contemplate the project's incremental effect on the environment "viewed in connection with" effects from past projects, other current projects, and "probable" future projects. *Id.* § 15065(a)(3). A project "must make *some* contribution to the impact; otherwise, it cannot be characterized as a cumulative impact of that project." *Sierra Club v. West Side Irrig. Dist.* (2005) 128 Cal.App.4th 690, 700 (emphasis supplied). If the County finds that a project's incremental effect is not cumulatively considerable, the EIR need only "briefly describe the basis" of this determination. 14 Cal. Code Regs. § 15130(a). In analyzing cumulative impacts, "[a]n agency's selection of the geographic area impacted by a proposed development . . . falls within the lead agency's discretion, based on its expertise."¹⁰

Within the cumulative analysis, discussion of each relevant resource area noted that the cumulative contribution of the Project would be minimal or negative, mitigation measures would be implemented and no significant cumulative impacts would occur locally, regionally, statewide, and globally (with exception of vessel spills and effects on marine biological resources and water quality impacts in the Bay).

Note that the analysis need not examine options for mitigating or avoiding impacts not attributable to the Project's contribution to the significant cumulative effects identified in the EIR, but only the Project's contribution to those effects. CEQA Guidelines Section 15130(c) notes that, for some projects, it may not be feasible to mitigate for cumulative impacts by imposing conditions on a project-by-project basis.

For additional discussion regarding analyzing global and market upstream effects, refer to Master Response No. 5, Land Use and Feedstocks.

Cumulative Feedstock Demand

Other comments suggest that the Draft EIR inadequately analyzes the potential cumulative impacts brought about by the Project's feedstock demands, and that the Draft EIR's cumulative impacts analysis should have considered the feedstock demands of additional California and national biofuels projects and their combined effect on the marketplace. These comments point to a number of existing and forthcoming biofuel projects that should have been included in the cumulative impacts analysis, and which based on comments, would have resulted in identifiable cumulative impacts had those projects been considered.

Based on assessment of the existing and future projects considered relevant,¹¹ certain comments contend that these projects could triple the total amount of lipids consumed to a total capacity of 693,000 barrels per day. (NRDC at page 76.) These comments conclude, "[i]t is foreseeable that cumulatively, these projects will require massive increases in domestic oil crop production or foreign imports, either of which will be associated with massive environmental and climate impacts from land use changes." (NRDC at page 76.)

As addressed in Master Response No. 4, Land Use and Feedstocks, statements about the market impacts of the Project contain assumptions and speculative conclusions about the Project and its feedstock supply chain. The County need not adopt those conclusions about the foreseeability or likelihood of "massive increases" in crop oil production. In addition, the Project is not expected to rely exclusively on domestic supplies of feedstocks. As a participant in the global feedstock market, the Project's demand will constitute less than 2 percent of the current feedstock market of more than 4.3 million barrels per day—or enough feedstock to produce 65 billion gallons per year of lower carbon intensive transportation fuel. Assuming the comments assertion of 693,000 barrels per day estimate for a

¹⁰ *South of Market Community Action Network v. City and County of San Francisco* (2019) 33 Cal.App.5th 321, 341 ("SOMAN") (citing 14 Cal. Code Regs. § 15130(b)(3) and *City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4th 899, 907).

¹¹ NRDC discusses feedstock use by eight operating renewable biofuel facilities and 75 biodiesel facilities (NRDC at pages 75–76, Table 8) as well as 16 future projects proposed, under construction, or under active consideration by refineries in addition to the Martinez Refinery Renewable Fuels Project (Marathon Project) discussed in the Draft EIR (NRDC at page 76); it also provides a table of over 75 current and future lipid-based biofuel projects across the United States (NRDC at pages. 77–79, Table 9). The Center for Biological Diversity points to three refineries in addition to the Martinez Refinery that it says should have been considered: "Chevron in Richmond, PBF in Martinez, and Valero in Benicia." (Ctr. for Bio. Diversity at page 6.)

set of projects taken together, there is no evidence to suggest that the market will be unable to absorb these demands or that the stated environmental impacts will result.

Like the Project's own individual feedstock-related impacts, the contribution to cumulative impacts of the Project's feedstock use is also speculative and unable to be quantified. Irrespective of the market-based projections that may or may not be available for other projects, this Project's feedstock mixes and sources cannot be predicted at this time without speculation (refer to Master Response No. 4, Land Use and Feedstocks). In turn, because the identities and availability of the Project's feedstocks cannot be determined at this time, the County cannot reasonably evaluate the Project's cumulative impacts related to these inputs beyond the information provided in the Draft EIR. Assessment of the Project's incremental contribution to cumulative impacts related to feedstocks would necessarily involve several layers of speculation. Because speculation precludes assessment of this Project's own feedstock cultivation impacts, it is unknowable whether the Project's feedstock demands will have an adverse environmental impact at all, let alone one that is cumulatively considerable. Market volatility, individual decision-making, and global governance issues are unpredictable in ways that do not allow for the analysis of the Project's incremental contribution to feedstock-related impacts. CEQA requires only that the County analyze impacts that are "reasonably foreseeable," and the overall effect of the Project's feedstock demands on its cumulative impacts cannot be reasonably predicted due to many uncertainties.

Notably, the Low Carbon Fuel Standard Environmental Assessment (LCFS EA) (CARB 2018) helps illustrate the speculative nature of the cumulative impacts determinations mentioned in comments. Statements made in the LCFS EA repeatedly emphasize that its program-level evaluation is based on certain predictions about responses to the LCFS program—responses that may or may not be borne out through any given set of projects under examination. The LCFS EA states directly that its predictions are merely "illustrative," and are rife with uncertainty (refer to LCFS EA, pages 33 and 34), noting the unpredictability of feedstock sourcing locations and market movements. Such language demonstrates CARB's uncertainty about the occurrence, location, and significance of any feedstock-related impacts *even in that aggregated setting*. The likelihood of any individual project contributing to potential impacts is only less certain. This supports the County's determination that it is overly speculative to draw conclusions about the Project's feedstock-related incremental contribution to any supposed cumulative impact.

In addition, an EIR's discussion of cumulative impacts must "reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." (CEQA Guidelines § 15130(b)). Though comments raise more than 175 additional projects (in California and further afield) for the County's consideration, the Draft EIR is not insufficient for failing to include these projects in determining the area in which the Project's reasonably foreseeable effects might result in cumulative impacts in combination with other projects.

Martinez Refinery Renewable Fuels Project

The comments also focus certain critiques on the Draft EIR's degree of analysis regarding the Martinez Refinery Renewable Fuels Project (Marathon Project), forecasting impacts caused by an increase in feedstock consumption from the projects taken together. The Draft EIR considers the Marathon Project among the relevant projects for cumulative impacts analysis (see Draft EIR, page 6-4).

Comments refer to the Marathon Project, stating that "the document contains functionally zero cumulative impacts analysis of the Project as considered together with the closely related Marathon Martinez project . . ." (Comment 35-144). Setting aside air quality and GHG impacts for the Rodeo Renewed Project, which were negative (less than zero) and thus, did not contribute to a cumulative impact, the Draft EIR evaluated impact areas where the Rodeo Renewed Project could contribute to a cumulative impact. In Section 6.4.2.3, Biological Resources, the Draft EIR acknowledged the Marathon Project and the cumulative impacts to marine biological resources:

However, the Project would result in significant and unavoidable impacts to marine biological resources as a result of an accidental spill of renewable feedstocks enroute, at or near the Marine Terminal. The frequency and size of potential spills could be lessened but not completely eliminated (refer to Mitigation Measure BIO-3, BIO-6 and BIO-7, which require implementation of HAZ-1 and HAZ-2). In addition, significant and unavoidable impacts would occur related to increased vessel traffic that would increase the presence of nonindigenous species. Mitigation Measure BIO-4 would reduce impacts but not to a less-than-significant level. Despite these recommended mitigation measures, the potential for a substantial adverse impact on special-status marine species or their habitat cannot be eliminated. The Project, in combination with specifically the Martinez Refinery Renewable Fuels Project, which identifies the same significant and adverse impacts, would be cumulatively considerable.

In Section 6.4.2.8, Hazards and Hazardous Materials, the Draft EIR refers to the Marathon Project relative to marine vessel spills:

However, the transitional phase and operational phase of the Project could result in discharges into waters of the San Pablo and San Francisco Bays from vessels (barges and tankers) transporting feedstocks and blending stocks to, and refined products from, the Marine Terminal. A marine vessel spill could impact a range of areas, depending on the tide, the wind and other factors. The spill sizes could cover a substantial range, with the worst-case discharge volume at the Marine Terminal estimated to be 3,976 bbls.

Although compliance with existing regulations and implementation of Mitigation Measures HAZ-1 and HAZ-2 for the Project would reduce the frequency and size of spills the potential for a substantial adverse impact on water quality cannot be eliminated. Therefore the Project, in combination with other projects, specifically the Martinez Refinery Renewable Fuels Project, which identifies the same significant and unavoidable impacts, would result in adverse impacts that would be cumulatively considerable.

In Section 6.4.2.9, Hydrology and Water Quality, again, the Draft EIR evaluates the Marathon Project in the context of marine vessel spills and water quality:

Although compliance with existing regulations and implementation of Mitigation Measures HAZ-1 and HAZ-2 for the Project would reduce the frequency and size of spills the potential for a substantial adverse impact on water quality cannot be eliminated. Therefore the Project, in combination with other projects, specifically the Martinez Refinery Renewable Fuels Project, which identifies the same significant and unavoidable impacts, would result in adverse water quality impacts that would be cumulatively considerable.

With respect to the level of detail required in a cumulative impacts analysis, CEQA provides that “the discussion need not provide as great detail as is provided for the effects attributable to the project alone.” See also *Fairview Neighbors v. County of Ventura*, 70 Cal. App.4th 238, 246 (1999) (court upheld cumulative impacts analysis with “brief discussions” of cumulative impacts).

Comments contend that the Draft EIR did not adequately evaluate potential impacts that might result from the feedstock demands of the Marathon Project and the Project combined. Specifically, these comments urge, with respect to agricultural resources and land use, “the combined impact of the two projects together could be catastrophic in scale.” (NRDC at page 80.)

As noted above and specifically in Master Response No. 4, Land Use and Feedstocks, analysis of the upstream impacts would necessarily require speculation about the feedstock types, sources, and relative demands of the Project that cannot be established at this time. As a result, the Draft EIR properly confines its cumulative consideration of the Marathon Project and the Rodeo Renewed Project to those impacts that are reasonably foreseeable.

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MASTER RESPONSE NO. 4: LAND USE AND FEEDSTOCKS

Comments indicate that the Draft EIR does not adequately identify and analyze the Project's feedstocks and related potential impacts. These comments are addressed below.

Comment: The Draft EIR must describe “geographic sources and existing volumetric supplies of each potential feedstock”.

Comments state that the Project will consume “unprecedented volumes of feedstock” and, “inevitably much of it [will] consist of agricultural food products such as soybean oil.” (NRDC at page 24.) Comments provide “exemplary” data related to feedstock availability (NRDC at page 25) that contradicts the County's conclusion that the Project's likely mix of feedstocks cannot be predicted without speculation. Based on the selected studies cited, comments claim that the Project “will largely rely on non-waste food system oils, primarily soybean oil,” and assert that the Draft EIR should indicate as much. (NRDC at page 28.)

Section 3.8 of the Draft EIR devotes a section of the Project Description to identifying the Project's anticipated feedstocks and their role in the Project's processes. This section discusses the agricultural factors, commodity uses and substitutions, incentives and government regulations, and transportation costs affecting the Project's anticipated feedstock use. As further explained, the Project's exact mix of feedstocks and their sources cannot presently be determined because it depends on a web of interconnected variables including weather, commodity prices, individual market participants, and national and international incentives and regulations. The impacts of such variables on availability and sources of feedstocks cannot and need not be modeled as part of this project-level CEQA analysis as described in more detail below.

Global Marketplace

The complex and ever-evolving state of the marketplace means that the mix of feedstocks that will be economically and physically available to the Project cannot be predicted with any reasonable means of analysis at this time. “CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentators.” (CEQA Guidelines § 15204(a)). In addition, the County has the authority to determine whether a particular source of information or requested analysis will be helpful or will be capable of providing meaningful, accurate information about a project.

The Draft EIR identifies the potential feedstock array and noting the factors that prevent further forecasting of their relative proportions or sources. See Draft EIR, Section 3.8 at page 3-28. There is no legal authority requiring the County to undertake the global analysis that would be needed to predict the likelihood of any particular feedstock type or source being relied upon by the Project¹². The County reasonably determined that it could not predict the market movements that may make certain feedstocks more or less available over the Project's operation, and thus concluded that the available information does not allow it to determine the specific types or sources of the Project's feedstocks beyond the discussion provided in the Draft EIR.

Agricultural Food Products and Feedstocks

Conclusions that the Project's feedstocks will “inevitably” consist of agricultural food products does not recognize the complex dynamics that will affect the Project's choice of feedstock mix and sourcing. Comments state that, had the County attempted such a forecast, the County “would have determined that the very large majority of the feedstock the Project will use will almost certainly come from food crop and

¹² See *Berkeley Keep Jets* (2001) 91 Cal.App.4th at 1356 (explaining, “the determination of EIR adequacy is essentially pragmatic”). The Draft EIR's identification of feedstocks properly attempted “to provide meaningful information about the [P]roject, while providing for flexibility needed to respond to changing conditions and unforeseen events” destined to impact the Project's final selection, relative volumes, and sources of those feedstocks. *Citizens for a Sustainable Treasure Island v. City & Cnty. of San Francisco* (2014) 227 Cal.App.4th. 1036, 1053.

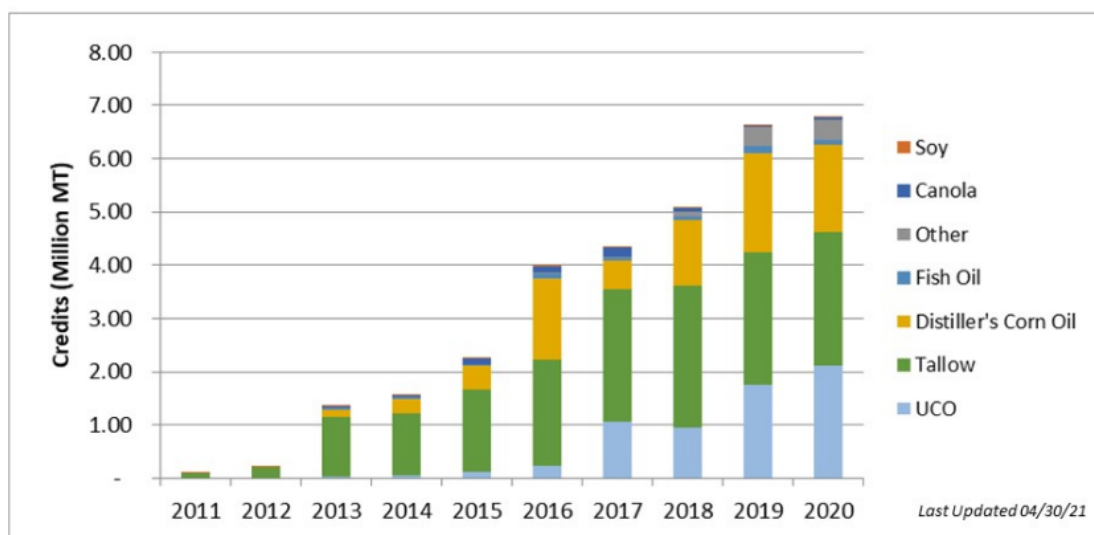
food system oils.” (NRDC at page 29.) However, as mentioned above, such feedstock selection will be market-driven, and California’s LCFS program “incentivizes growth in fuels derived from non-land based sources,” including waste oils (CARB 2021). In addition, recent California LCFS market data demonstrates that “[i]n 2020, 93percent of total credits generated by biodiesel and renewable diesel production were derived from wastes or residues rather than conventional crop-based fuel credit generation.” (CARB 2021).

It should be noted Phillips 66 has been able to access feedstocks from a variety of sources internationally. For example, at the Humber Refinery in the United Kingdom, Phillips 66 was able to source used cooking oils from over 21 countries.

The comment that feedstocks will utilize food crops and oils, particularly soybean, are not consistent with available data. Based on the credit generation and carbon intensities under the LCFS program, the majority of feedstocks used for renewable fuels in California beginning in at least 2013 have been waste-oil feedstocks—used cooking oil (UCO) and tallow (refer to CARB, LCFS Data Dashboard, Figure 6). The price or value of the credit is based on the reduction in carbon intensity. The credit price for soy oil-based renewable diesel is about \$0.70 per gallon, while the credit price for used cooking oil renewable diesel is about \$1.70 per gallon. As stated in the Cerulogy report (SGS 2021), “The extra value available to waste-oil-based renewable diesel under the LCFS system means that renewable diesel supplied to California overwhelmingly uses waste-oil feedstocks, and no use of soy oil is reported.”¹³ Thus, as stated in the Draft EIR, the incentives provided by the LCFS program affect the types of feedstocks utilized.

While the post-Project Rodeo facility would be a substantial contributor to the production of renewable fuels in the United States (1.2 billion gallons/year), it would constitute approximately 15 percent of the combination of existing capacity and targeted capacity (791 million gallons and 6,370 million gallons) in the United States (Cerulogy, Tables 2 and 4), and less than approximately 9 percent of global production capacity (EIA 2019). Given this information, Phillips 66 would not control the renewable feedstocks market globally or nationally.

**Crops and Residues used in Biomass-based Diesel Production
 Q1 2011 – Q4 2020**



¹³ The report does note that soy oil could be captured in the “Other” category, but even in that category would constitute a smaller percentage of overall feedstocks.

Renewable Diesel vs. Biodiesel

Comments state that there is a limited domestic supply of alternatives to food crop sources of feedstocks, and therefore, current feedstock demand for biodiesel will limit the availability of non-food crop feedstocks for the Project. (NRDC at page 29.)

Renewable diesel and biodiesel are distinct fuels. Renewable diesel processing has higher market margins than biodiesel production due to blending limitations and poor cold flow properties of biodiesel. Renewable diesel is generally further incentivized as compared with biodiesel by higher renewable credit generation and trading prices¹⁴. Market dynamics are such that demand for biodiesel production (and thus its associated feedstock demand) is not expected to continue along current lines.

The availability of feedstocks to the Project will be influenced by these market factors. Therefore, current biodiesel feedstock demand will not affect feedstock availability. The relatively poor blending properties and lower credit generation of biodiesel may actually lead renewable diesel production to pull the market away from biodiesel production. Comments on domestic feedstock supply also do not account for the availability of global feedstock sources to the Project, as discussed above, and the unpredictability of the Project's sources as discussed in the Draft EIR.

Comment: The Draft EIR improperly relies on the LCFS Environmental Assessment for potential feedstock impacts.

Comments describe the LCFS's carbon intensity scoring system for evaluating fuels and their life cycles, noting that California Air Resources Board (CARB) modeling provided in the LCFS Environmental Assessment (EA) does not evaluate the significance of any impacts of a particular project's fuel production and thus cannot serve as a stand-in for CEQA analysis by the County. These comments also claim that the LCFS EA's "programmatic level of analysis" does not obviate the need for the County to "determine project-level impacts and require project-level mitigation." (NRDC at page 27.) Comments emphasize that the LCFS's carbon intensity scoring does not take into account non-carbon impacts resulting from upstream land use change potentially associated with a particular type of fuel and its feedstock. Therefore, comments conclude that the County cannot rely on the LCFS for assessment of land use impacts of the Project.

The feedstocks analysis conducted by CARB in its LCFS EA is identified in the Draft EIR. However, the Draft EIR does not adopt or rely on the LCFS EA or otherwise use the existence of the LCFS to stand in for the County's own analysis of the Project's impacts related to land use or otherwise. As allowed under CEQA's multi-layered framework, the County recognized that its Draft EIR must evaluate the direct and indirect impacts of the Project subject to its approval (CEQA Guidelines § 15126.2(a)). The analysis necessarily includes changes in the physical environment that are caused indirectly by the project. However, if there are uncertainties that render potential impacts unforeseeable and their assessment speculative, those impacts reasonably cannot be evaluated (CEQA Guidelines § 15145).

Comments do acknowledge that the LCFS EA anticipates that additional analysis will be conducted and certain site-specific impacts addressed at the project level. Specifically, certain feedstock-related impacts noted in the LCFS EA, such as those to biological resources, refer to future evaluation and mitigation measures to be imposed at the project level by the approving local, state, federal, or other relevant regulatory authority (LCFS EA, page 89). The comments suggest that the County avoids responsibility by determining that the Project's feedstock-related impacts are too speculative for evaluation. The LCFS EA's discussion of project-level evaluation and mitigation states that such impacts must be addressed by the authorities contemplating the projects in the places when and where those impacts will occur. Like CARB, the County anticipates that projects related to feedstock cultivation and harvest, for example, will

¹⁴ Argus Media (Argus Media subscription). Pricing Data for v3 Renewable Diesel R99 San Francisco month, USC/USG, delivered, month, Houston close and v3 Biodiesel B99 FAME fob San Francisco, USC/USG, fob, prompt, Houston close. Available at: <https://www.argusmedia.com/en>

be subject to land use approvals and environmental review when those projects and their impacts are reasonably foreseeable. The County analyzed the reasonably foreseeable impacts of the Project at hand, and for the reasons discussed in the Draft EIR, certain feedstock-related impacts of the Project are not reasonably foreseeable at this time. See Draft EIR, pages 2-27 and 2-28. This aligns with the LCFS EA's recognition that site-specific impacts can only be evaluated when the location and design of those activities are known.

The analysis provided in the LCFS EA helps make clear why the Project's feedstock-related impacts are too speculative for evaluation. As stated in the LCFS EA, pages 64–65:

Because the LCFS program is market-driven, it is not possible to determine the exact locations where these feedstocks may be cultivated. The amount of land required to produce enough biofuel to meet projected demand depends entirely on the productivity of a given feedstock on a given parcel of land. Feedstocks may be sourced from forest and agricultural lands and would be dependent on available quantities and location of processing facilities. The productivity is, in turn, governed by a wide variety of physiological factors, including genetic diversity, agronomic practice, and environmental factors, such as soil quality, water availability, and climate. Thus, predicting the amount of land required to produce enough low-carbon biofuel to impact existing agricultural practices would require speculation.

The LCFS EA's conclusion is that the program itself—through a statewide “compliance response scenario” consisting of one proposed universe of hypothetical activities—may have potentially significant impacts. CARB has the discretion to conclude its chosen hypothetical “compliance response scenario” could cause a significant impact, but that same “compliance response scenario” is not required in every CEQA analysis. To the contrary, the LCFS EA itself enumerates many uncertainties with respect to the occurrence, location, and significance of any feedstock-related impacts in the aggregate, and it also explains that its compliance response scenario is but one possible set of activities resulting from the LCFS program as a whole. As a result, the LCFS EA's formulation does not provide or dictate a conclusion regarding any specific project like the Rodeo Renewed Project. In addition, the EA's repeated emphasis on the uncertainty of feedstock-related impacts even when considering statewide projects and activities all together, reinforces how speculative it would be to draw any conclusions about the impacts of any one individual project's feedstock needs, or its role in the market, even in terms of cumulative impact.

The Project's Pre-Treatment Unit (PTU) component is designed to ensure that the Project can treat and subsequently process a wide variety of renewable feedstocks from a wide variety of sources. The Project's feedstock selection—and the feedstock market at large—will be influenced by the LCFS program's incentives for growing the fuel market for those derived from non-land-based sources. Ultimately, the impact of these incentives on the overall market and the availability of particular feedstocks from particular sources at any given time would require settled and reliable inputs, which for the reasons discussed here, cannot be determined by the County without speculation at this time.

Therefore, the Draft EIR does not attempt to rely on the LCFS in lieu of analyzing the Project's feedstock-related land use impacts; rather, the Draft EIR discusses the potential feedstocks to be used by the Project without speculating about legal, economic, and climate variables that cannot be feasibly analyzed at this time. Nonetheless, the LCFS EA compliance response scenario serves as a helpful backdrop for the Project (CARB 2018).

Comment: The Draft EIR should evaluate a worst case scenario of possible feedstock mix scenarios.

The comments indicate that “the County should have evaluated a ‘reasonable worst case scenario’ for feedstock consumption and its impacts” (NRDC page 28 [citing *Planning & Conserv. League v. Castaic Lake Water Agency* (2009) 180 Cal.App.4th 210, 252; *Sierra Club v. Tahoe Reg'l Planning Agency* (E.D. Cal. 2013) 916 F.Supp.2d 1098, 1151–52]), and suggest that, “the County was required to evaluate a reasonable array of scenarios, including but not necessarily limited to the worst case scenario, in order to provide full disclosure.” (NRDC at page 28 [citing *City of Long Beach v. City of Los Angeles* (2018) 19

Cal.App.5th 465, 487–88]). Comments also contend that appropriate Draft EIR impact analysis should reflect historic, current, and projected feedstock availability that will influence the proportional selection of feedstocks as demand for feedstocks increases.

Additionally, comments state that had the County conducted the requested analysis of foreseeable feedstock mix scenarios, it “would have determined that the very large majority of the feedstock the Project will use will *almost certainly come from food crop and food system oils* . . . with little coming from waste oils such as tallow.” (NRDC at page 29.) Some of the comments suggest that this prediction is possible given certain “indicator[s]” such as the current breakdown of feedstock demand for biodiesel and the limited domestic supply of alternative feedstock sources. (See NRDC at page 29.) In sum, comments assert that these indicators demonstrate that “a large fraction of feedstock likely to be used for the Project will be food crop oils—both purpose-grown food crop oils, such as SBO [soybean oil], canola, rapeseed, and cottonseed oils; and oils currently used in the food system, such as DCO [distiller’s corn oil].” (NRDC at page 29.)

CEQA does not require the County to generate a worst case scenario in order to evaluate the Project’s impacts¹⁵. A lead agency is entitled to use its experience and the available information to identify whether and what impacts might occur within the reasonably foreseeable future. As such, the lead agency should “use its best efforts to find out and disclose all that it reasonably can,” 14 Cal. Code Regs. § 15144, but must avoid speculating when the information necessary to predict the requested likelihoods is unavailable (§ 15145). CEQA does not require a lead agency to use an extreme, maximum possible worst case scenario—it requires analysis of reasonably foreseeable impacts “in terms of what is reasonably feasible.” *Id.* § 15204(a); § 15064(d) (explaining that only reasonably foreseeable impacts need be evaluated).

In addition, comments cite no case law regarding requiring a worst case scenario. The cases cited show that it is acceptable for the County to use a worst case scenario analysis where certain inputs were known¹⁶ or the cases explain why the selected worst case scenario provided insufficient detail when presenting only an aggregate estimate of foreseeable impacts¹⁷.

The Draft EIR identifies the feedstocks anticipated to be used by the Project, but in accordance with CEQA, avoids undue speculation. Pursuant to CEQA Guidelines § 15204(a), “[T]he adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project.” It is not reasonably feasible for the County to construct models of regional, national, or global feedstock, land, and food markets. A project-level EIR is an inappropriate vehicle for conducting such comprehensive analyses under the auspices of CEQA¹⁸. CEQA is a state environmental statute, and it has never been interpreted to require an analysis of the global supply chain for a project’s inputs.

The Draft EIR provides the available information about the Project’s potential feedstock selection, but “[w]hen, as here, an EIR must address controversial matters that resist reliable forecasting, CEQA requires only that the County use its best efforts to find out and disclose all that it reasonably can, and

¹⁵ “[I]t has been held that an EIR is not required to engage in speculation in order to analyze a ‘worst case scenario.’” *High Sierra Rural Alliance v. Cnty. of Plumas* (2018) 29 Cal.App.5th 102, 122 (quoting *Napa Citizens for Honest Gov’t v. Napa Cnty. Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 373).

¹⁶ *Planning & Conservation League* (2009) 180 Cal.App.4th 210, 252 [rejecting the contention that an EIR’s worst case scenario had been inadequately justified]; *Tahoe Reg’l Planning Agency* (E.D. Cal. 2013) 916 F.Supp.2d 1098, 1152 [determining that a worst case scenario for noise generated by a snowmaking system adequately evaluated that project’s potential to result in significant noise impacts].

¹⁷ Refer to *City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, 487–88 (explaining why a single composite emissions scenario did not allow the reader to compare the relative concentrations in the project and no project scenarios, where the composite showed that there “could be an impact, but it did not examine what that impact might be, who might be affected, and for how long” (quoting the trial court)).

¹⁸ See *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 574 (explaining that requiring even regional comprehensive planning analysis as part of any individual project’s permit process “would impose an unnecessary and wasteful burden on local governments”).

that the EIR display adequacy, completeness, and a good faith effort at full disclosure.” *Planning & Conserv. League* (2009) 180 Cal.App.4th at 253. CEQA does not require the County to “quantify[] the unquantifiable”.

Lastly, comments contend that the County “could have readily used the same analysis conducted by CARB for the LCFS” in order to “quantify” the upstream feedstock-related impacts of the Project. (NRDC at page 34.) In contrast with this Project’s Draft EIR, the LCFS EA addresses a statewide programmatic policy shift affecting market movement. An equivalent type of investigation to assess the Project’s inputs is not consistent with the CEQA Guidelines’ specification that EIR adequacy is tethered to the scale of the project under consideration. See 14 Cal. Code Regs. § 15204(a).

Use of Indicators Provided in Comments

The County could not use the “indicators” cited in the comments as inputs for forecasting likely feedstock mix scenarios. For example, as noted above, biodiesel demand is not a reliable input for predicting feedstock availability for the Project, given that the future market for biodiesel is in flux. In addition to the relative market weaknesses of biodiesel discussed previously, the future of biodiesel is further made uncertain because it is not a drop-in fuel and thus would require vehicle engine conversions on a substantial scale. There is no evidence that vehicle fleet conversions to run higher percentages of biodiesel will occur, and thus biodiesel has an uncertain future and an uncertain impact on feedstock availability.

The current supply of domestic feedstocks likewise is not a useful indicator for purposes of this Project’s analysis, as there is no expectation that the Project will be constrained to use of domestic sources. The United States supplies less than 10 percent of the global feedstock market (see previous footnote). The Project’s Marine Terminal and Phillips 66’s global logistical reach, open up the Project to the international market. The Project’s feedstock selection will be driven by market incentives favoring lower carbon intensity feedstocks, and Phillips 66 has the ability to procure such feedstocks in the global market, as well as benefit from domestic sources.

Comment: The Draft EIR does not address upstream environmental impacts related to feedstocks.

Comments state that using the provided predictions of the Project’s likely feedstock types and their geographic sources (referring to the NRDC’s response to the Notice of Preparation), the County should have projected possible upstream environmental impacts brought about by the Project’s demand for feedstocks. Comments critique the level of analysis provided on several points.

Land Use Changes

Comments state that there is “broad consensus” among experts that increased demand for food crop oil feedstocks will result in land use changes with significant environmental impacts. (NRDC at page 29.) Because of such impacts, other countries such as the European Union and Belgium have taken steps to reduce reliance on one crop-based feedstock, soybean oil, in particular. (NRDC at page 30.) Comments further explain how, in general, food crop biofuel feedstocks such as soybean oil can induce land use changes by incentivizing conversion of lands for a particular crop’s production on both existing agricultural land (by replacing one crop with the lucrative feedstock crop) and on newly cleared land in order to meet feedstock demands. The comments also discuss how increased prices for a desired feedstock can generate additional land use changes by incentivizing increased production of another food crop consumers could use as a substitute for the valuable feedstock crop, indicating that this effect has been seen with soybean oil, distiller’s corn oil, and tallow. (NRDC at page 31.)

It is contended that, “all of the feedstocks demanded by the Project would lead to either direct or indirect increases in crops, such as soy, oil palm, and corn, which will require land use conversion”, and that the Project has the “potential to significantly disrupt food crop agricultural patterns.” (NRDC at page 32.) The comments suggest that the County should have analyzed the Project’s proposed consumption of up to

80,000 barrels per day of lipid feedstocks relative to total biofuel demand and total agricultural production data. (NRDC at page 32.) Comments note that the Project would increase the nationwide total of oil crop and animal fat demand currently associated with biodiesel production by 71 percent. (NRDC at page 32.) It is further stated that the Project “would consume approximately a 22 percent share of current total US production of lipid feedstocks,” and based on this figure, comments project that U.S. biofuel feedstock demand could claim as much as 52 percent of total U.S. farm yield for all uses. (NRDC at pages 33–34.) Noting the volume of soybean oil presently used in biodiesel production, comments claim that the Project could use as much as 39 percent of total domestic soybean oil production, which “would lead to rapid price spikes and substitution across the oil markets.” (NRDC at page 34.)

An EIR must identify and analyze all of a project’s significant effects on the environment, whether those effects are directly or indirectly caused by the project. An EIR need only analyze the significance of potential impacts that are reasonably foreseeable. “A change which is speculative or unlikely to occur is not reasonably foreseeable.” *Id.* § 15064(d)(3). If the County is unable to forecast whether a particular activity will occur, where the activity will occur, and/or what environmental impacts that activity may have, the agency should indicate that further analysis would require speculation and terminate its discussion without analyzing the potential significance of any hypothetical impacts¹⁹.

Assuming the Project’s feedstock selection were to rely on food crops, the conclusion that any increased demand will necessarily result in land use change does not account for the fact that crop yields can often be optimized without additional planting or any land use conversion, as when feedstock crops are substituted for cover crops on land that is already dedicated for agriculture. In developing the federal Renewable Fuel Standard, the U.S. Environmental Protection Agency (“U.S. EPA”) established a baseline number of acres for U.S. agricultural land in 2007 and determined that as long as this baseline number of acres was not exceeded, it was unlikely that new land outside of the 2007 baseline would be devoted to crop production based on historical trends and economic considerations. In 2020, U.S. EPA evaluated data from the U.S. Department of Agriculture Farm Service Agency and Natural Resources Conservation Service and “estimated that U.S. agricultural land reached approximately 379.8 million acres in 2019 and thus did not exceed the 2007 baseline acreage of 402 million acres.” (USDA 2022²⁰) As explained in the Draft EIR, the County has properly declined to speculate about land conversions, given that the Project’s feedstock mix and their sources cannot reasonably be predicted.

Regarding the numerical estimates of demand increases and supply limitations, comments noted that these numbers are on domestic feedstock production alone, while the renewable feedstock market accessible to the Project is international. There is no evidence that the Project will rely on only domestic feedstocks or crops. As stated in the Draft EIR and reiterated above, the types and sources of the Project’s feedstocks cannot be determined without speculation. To the contrary, based on the credit generation and carbon intensities under the LCFS program, the majority of feedstocks used for renewable fuels in California beginning in at least 2013 have actually been waste-oil feedstocks—used cooking oil (“UCO”) and tallow (refer to CARB, LCFS Data Dashboard, Figure 6 and accompanying note, linked above).

¹⁹ CEQA Guidelines § 15145; *Envtl. Council of Sacramento v. City of Sacramento* (2006) 142 Cal.App.4th 1018, 1031–33 (determining that, even where a city and county had executed a memorandum anticipating future development beyond the proposed project, “far too little [wa]s known about the scope, the location, or the types of projects that might be proposed in the future to assist decision makers in evaluating any potential environmental tradeoffs,” such that a final EIR did not need to further analyze these “amorphous” activities). “[W]here future development is unspecified and uncertain, no purpose can be served by requiring an EIR to engage in sheer speculation as to future environmental consequences.” *Atherton v. Bd. of Supervisors* (1983) 146 Cal.App.3d 346, 351.

²⁰ PSD Reports, Tables 6 and 14, Global and U.S. data, January 2021/2022). USDA data is in million metric tons, annually, and one metric ton is approximately 6.88 barrels. Daily barrels per day were calculated by multiplying metric tons by 6.88 and dividing by 365. ; K. Swisher, U.S. Market Report, *Render Magazine*, April 2021, at page 12 (citing Trade Data Monitor, EIA for biodiesel inputs, NASS Fats & Oils: Oilseed Crushings, Production, Consumption, and Stocks Annual Summary). Available at: https://pubs.rendermagazine.com/2021-04/page_14.html (U.S. animal fat and used cooking oil data).

The Draft EIR discusses the Project's potential feedstocks, but it does not attempt to analyze the national and international marketplace for the variety of crops identified as potential inputs for the Project. As explained above, such an analysis is not required by CEQA, and would require speculation, which CEQA instructs lead agencies to avoid. See 14 Cal. Code Regs. § 15145. The purpose of an EIR is to "provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." An EIR's evaluation of impacts "need not be exhaustive;" rather, an EIR's sufficiency will be reviewed "in light of what is reasonably feasible." See 14 Cal. Code Regs. § 15151.

As concluded in the Draft EIR, weather, market dynamics, changing transportation costs, and related uncertainties preclude determination of the Project's exact feedstocks, their sources, and their availability, and the associated impacts are thus too speculative for reasonable analysis. Courts have specifically recognized that variable inputs across a dynamic marketplace can preclude forecasting and make even existing historical indicators "an unreliable predictor of the future"²¹.

The foreseeability of forced land use changes is not able to be determined at this time. The comments describe a chain of inflection points, stating that the Project's additional demand for a given feedstock will increase the price of that feedstock, farmers will correspondingly devote more land to that crop, and this will encourage land conversions and/or clearance. The County is not required to assume that this string of events will come to pass and is unable to predict their likelihood. It would be pure speculation to state whether the existing feedstock market will absorb the Project's demand, whether new demand would be met from existing agricultural resources or would cause land conversions or clearance, whether any land changes would result in environmental harms, what kind of environmental harms might occur, and whether local environmental controls would allow those harms to come about. Further, as noted above, comments assume the Project will substantially rely on crop-based feedstocks, not supposing that the Project will rely on a mix of feedstock sources including non-food crop waste oils, which the project proponent can access. In any event, the Project's total anticipated feedstock demand is expected to amount to less than 2 percent of the 4.3 million barrels per day comprising the total global feedstock market. The influence of the Project's market participation on global feedstock supply, let alone on specific crop sources and land uses, is therefore not foreseeable.

If land conversions were to occur as comments hypothesize, the types, locations, and relationship to food markets would still be unpredictable. Forecasts such as the 3 million acres of land to be converted if the Project were to rely exclusively on soybean oil, (NRDC at page 34), are extrapolations from highly unpredictable inputs and constitute the type of speculation that CEQA instructs the County to avoid. There is no basis in the available information to presume that 100 percent of the Project's feedstock consumption would be soybean oil, though comments make such a presumption in calculating their 3-million-acre estimate. (NRDC at page 34.) The complex regulatory and physical landscape across which land use decisions are made does not allow the County to forecast the amount of land that would need to be converted, let alone its likely location or the potential impacts associated with those conversions, which are necessarily location-dependent.

Other Upstream Impacts

Certain comments stress that indirect land use impacts from "induced growth of croplands" will result in habitat loss for species. (Ctr. for Bio. Diversity at page 4.) Because these comments believe the Project will result in forced upstream land use changes, it is suggested that "an array of environmental impacts related to habitats, human health, and indigenous populations" may result from the Project's approval. (NRDC at page 35.) Comments discuss impacts that may come to pass when natural habitat is converted to cropland, stating that such impacts were identified in the LCFS EA as bearing relation to feedstock cultivation.

²¹ Rodeo Citizens Ass'n v. Cnty. of Contra Costa (2018) 22 Cal.App.5th 214, 227 (crediting the project proponent's explanation that the "state of transition" of the fuels market—in part due to government incentives designed to move the market—made the extent and "the fundamental direction of the impact, i.e., whether the change may be beneficial or adverse" unpredictable).

Comments specifically contend that increased soybean oil consumption resulting from the Project could lead to expanded palm oil production that will have “a particularly severe environmental impact.” (NRDC at page 35.)

It is further suggested that the Project’s feedstock-related impacts include net greenhouse gas emissions increases in addition to non-climate impacts related to land use. Comments provide examples of deforestation and loss of carbon sinks that can result from cropland expansion, stating that “substantial increases in GHG emission” will result from an increase in feedstock demand due to the interconnectivity of a “global food system.” (NRDC at page 36.)

Comments also assert that “modeled soy-based biofuel net carbon emissions are virtually the same as fossil diesel, with even worse climate impacts for greater quantities of soy-based biofuel produced.” (NRDC at pages 36–37.)

Impacts resulting from the land use changes are not reasonably foreseeable in light of the uncertainties discussed above, and set forth in the Draft EIR. The County cannot generate likely feedstock mix scenarios for the Project due to the intersecting variables laid out in the Draft EIR, including costs, transportation logistics, and other market conditions. Without a predictable set of these inputs—and likewise a reasonably feasible set of projections about feedstock mixes—the requested analysis of upstream impacts cannot be performed without relying on guesswork.

Comment: The Draft EIR should address potential mitigation of feedstock-related impacts.

Comments have asserted that the Project has feedstock-related impacts that are potentially significant and must be mitigated. Specifically, comments indicate that the County should have considered as mitigation a cap on use of certain specific feedstocks, such as soybean oil and potentially an overall cap on feedstock volume. These comments state that the County “should take steps to ensure that California does not consume a disproportionate share of available feedstock, in exceedance of its per capita share, in accordance with the prudent assumptions in CARB’s climate modeling.” (NRDC at page 37.)

Certain comments also assert that best management practices (BMPs) for feedstock crops should have been considered and included as mitigation, with reference to the LCFS EA’s notation that local governments would use their land use authority to require feedstock sources to develop BMPs. Comments simultaneously suggest that BMPs “ha[ve] no meaningful application here.” (NRDC at page 37.)

CEQA only requires evaluation of mitigation measures for impacts that are potentially significant, not those that are insignificant or not reasonably foreseeable (see Pub. Res. Code § 21100(b)(3); 14 Cal. Code Regs. § 15126.4(a)(3) [“Mitigation measures are not required for effects which are not found to be significant.”]). As such, the impacts comments state will arise as a result of the Project’s use of feedstocks are speculative, and therefore cannot be considered reasonably foreseeable (CEQA Guidelines § 15064(d)(3)). The Draft EIR does not need to attempt to mitigate impacts that are not reasonably foreseeable.

The restrictions on feedstock type and volume as proposed by comments are unnecessary absent identification of a significant impact, but are, in practice, an improper route to imposing competitive restrictions on a particular project.

California state regulators and federal agencies including the U.S. Environmental Protection Agency have far-reaching policies designed to encourage and control the development of lower carbon intensity fuels. Both state and federal regulators have imposed regulations on the renewable fuels market—including the LCFS and the federal Renewable Fuel Standard program.

For discussion regarding the cumulative impact analysis of feedstocks, refer Master Response No. 3, Cumulative Impacts.

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MASTER RESPONSE NO. 5: RENEWABLE FUELS PROCESSING

Comments state that the Draft EIR fails to disclose information regarding the proposed processing of renewable fuels for the Rodeo Renewed Project, affecting the project description and the evaluation of environmental effects. The comments provided Attachments A, B and C to the NRDC Comment Letter 36, which are addressed as a part of the comments in the letter. While the attachments are presented as technical references, they are not peer-reviewed technical papers.

Comment: The Draft EIR does not adequately describe the proposed processing methods, including the use of hydrogen.

Comments state that the Draft EIR fails to disclose that the processing method to be utilized for renewable feedstocks to produce renewable fuels are Hydrotreating Esters and Fatty Acids (HEFA), but also acknowledge that the Project is relying on “repurposed refinery hydrotreaters and hydrocrackers for feed conversion to fuels, and upon repurposed refinery hydrogen plants to produce and supply hydrogen for that hydro-conversion processing.” (NRDC, page 9) The comment suggests that HEFA processing is something different than the process described in the Draft EIR, but HEFA fuel is primarily renewable diesel in the United States (or hydrotreated vegetable oil [HVO] abroad). The U.S. Energy Information Administration (EIA) explains:

HEFA fuels are hydrocarbons rather than alcohols or esters. Hydrocarbons from nonpetroleum sources are known as drop-in fuels because they are nearly identical to comparable petroleum-based fuels. During the refining process, the oxygen present in the alcohols and esters is removed, leaving only hydrocarbons. HEFA fuels are the most common drop-in biofuels; they can be used in diesel engines without the need for blending with petroleum diesel fuel. Currently, HEFA fuels are approved by American Society of Testing and Materials (ASTM) International for use in jet engines at up to a 50 percent blend rate with petroleum jet fuel.

The most common HEFA biofuel production to date has been a diesel replacement fuel alternately marketed as HVO abroad, or as renewable diesel in the United States. HEFA fuels are produced by reacting vegetable oil or animal fat with hydrogen in the presence of a catalyst. The equipment and process are very similar to the hydrotreaters used to reduce diesel sulfur levels in petroleum refineries (EIA 2015).

The process to make renewable diesel (or HEFA fuel) is described in the Draft EIR, including “repurposed” refinery equipment and continued use of hydrogen, as noted in the comments. More specifically, the key components of the renewable fuels processing – the use of hydrotreaters, the use of hydrogen, and the use of vegetable oils or animal fats – are all set forth in the Draft EIR. The Project Description section depicts the proposed processing in Figure 3-7: Rodeo Facility Post Project Block Flow, which shows Unit 240, Hydrotreater, and Unit 246, Hydrotreater. Section 3.9.1.1, Reconfiguration of Process Units for Renewable Feedstock Processing, lists Units 240 and 246, each identified as a Hydrocracker, along with the existing Hydrogen Plant.

As stated in Section 3.4.2 of the Draft EIR, “Other feedstocks required in the refining process are transported by pipeline from the Santa Maria Site, by tanker vessel, and by truck (small quantities of transmix), while other feedstocks, such as hydrogen, are produced on the Rodeo Site or nearby.” The Hydrogen Plant (Unit 110) produces hydrogen at the Rodeo Site, and is described in Section 3.4.2.2, Additional Rodeo Refinery Facilities. The “nearby” production of hydrogen refers to an existing third-party supplier, Air Liquide. Although Air Liquide’s production and supply of hydrogen is an independent operation, the continued use of that hydrogen for Rodeo Renewed is considered in the Draft EIR.

In Section 4.3, Air Quality, the Draft EIR again describes the existing setting and the existing use of hydrogen: “Other feedstocks are required in the refining process; some are brought by tanker vessel and by truck, while others, such as hydrogen, are produced by a third-party facility adjacent to the refinery.” (Draft EIR, Section 4.3.4, Project Setting.) The Air Quality analysis also describes the Project’s potential

increase in the use of hydrogen relative to baseline, although the production capacity at the Air Liquide facility is not increasing: “In addition, operations of third-party plant operator Air Liquide, which supplies hydrogen gas (H₂) for the refinery operations, may indirectly increase due to the Project and therefore, its emissions are included in the evaluation against significance criteria. However, no modification will occur at Air Liquide as a result of the Project. Air Liquide is not increasing its hydrogen production capacity.” (Draft EIR, Section 4.3.4.1.)

Similarly, the use of hydrogen, including the Air Liquide facility, is evaluated in Section 4.6, Energy Conservation. Under Operational Energy Estimates, the Draft EIR states: “In addition, operations of the adjacent third-party plant operator Air Liquide, which supplies hydrogen for the refinery operations, may indirectly increase due to the Project.” (Draft EIR, page 4.6-205.) Table 4.6-5b, Operational Energy Usage, includes the energy usage from the Rodeo Site, including the Hydrogen Plan (Unit 110), and the Air Liquide facility, e.g., “Air Liquide will be increasing natural gas purchases to provide hydrogen for the Project” (Draft EIR, page 4.6-210, footnote to table). Section 4.8, Greenhouse Gas Emissions also includes an analysis of the use of hydrogen, including the Air Liquide facility. Under Operational GHGs estimates, the Rodeo Site and the Air Liquide facility are considered (Draft EIR, page 4.8-257) and are tabulated in Table 4.8-5, Total Annual Project Operational GHG Emissions (Draft EIR, page 4.8-263).

With respect to the use of vegetable oils or animal fat and their role in the processing of renewable fuels, Section 3.8.2, Anticipated Project Feedstocks, describes the various feedstocks to be utilized, including used cooking oils (UCO), fats, oil and grease (FOG), vegetable-based oils, including inedible corn oil, canola oil soybean oil and tallow.

In other words, all of the components of the renewable fuels process – the use of hydrotreaters, the use of hydrogen and the use of vegetable oils or animal fats - are described appropriately in the Draft EIR. The use of the acronym “HEFA” and the phrase “Hydrotreating Esters and Fatty Acids” is not required to describe the process to produce renewable fuels. Furthermore, an EIR is to be “written in plain language and may use appropriate graphics so that decision makers and the public can rapidly understand the documents.” CEQA Guidelines, Section 15140. The Draft EIR provides sufficient information to evaluate the environmental effects of the proposed processing method for renewable fuels, including the use of hydrogen.

Comment: Renewable fuels processing is “radically different” from petroleum processing.

Comments suggest that the HEFA process is “radically different from petroleum processing.” (NRDC, page 10.) However, numerous authorities confirm that the renewable fuels process is similar to the petroleum refining process. See discussion above explaining that the process to produce renewable fuels is “very similar” to the process used in petroleum refineries.

In addition, the process of hydrotreating of fats, oils, and greases (all renewable feedstocks) to renewable diesel is completed at temperatures and pressures similar to existing petroleum processing steps (Energy Fuels 2011; Jones 2009; Hongloi(a) 2021; Cheah 2021; Hongloi(b) 2021; Di Vito Nolfi 2021; Scaldaferrri 2019; Douvartzides 2019; Yusup 2019; Bezergianni 2010; Amin 2019; Hancsók 2007; Jakkula 2004; Neste Oil 2016; Jenistova K 2017; Hsu K-H 2018; Peng B 2012). One of the Project process units will be operating at a lower system pressure than current operations (the other process unit will remain at approximately the same system pressure as baseline operations). Because the conditions are so similar, existing process equipment designed for petroleum feeds can be used with minimal modification to process renewable feeds. More specifically, of the 450 vessels, exchangers and pumps/compressors currently used in Units 240 and 246, only 18 of them, or about 4 percent, will be new or modified as a part of the Project, and 17 are to be decommissioned.

It should be noted, in November 2021 the BAAQMD adopted administrative amendments to numerous rules regulating air emissions from refineries (“the Refinery Rules”) to ensure that renewable fuels manufacturing facilities are subject to the same rules as petroleum refineries (BAAQMD recognized that some petroleum

refineries, such as the Rodeo Refinery, would be converted to renewable fuels manufacturing facilities). As stated by the BAAQMD in its October 15, 2021 Staff Report (BAAQMD 2021):

The purpose of the proposed amendments is to ensure that the facilities that produce fuels and other products from non-petroleum feedstocks remain subject to and in compliance with the same emission standards and rule requirements that were in effect when the feedstock was petroleum based.

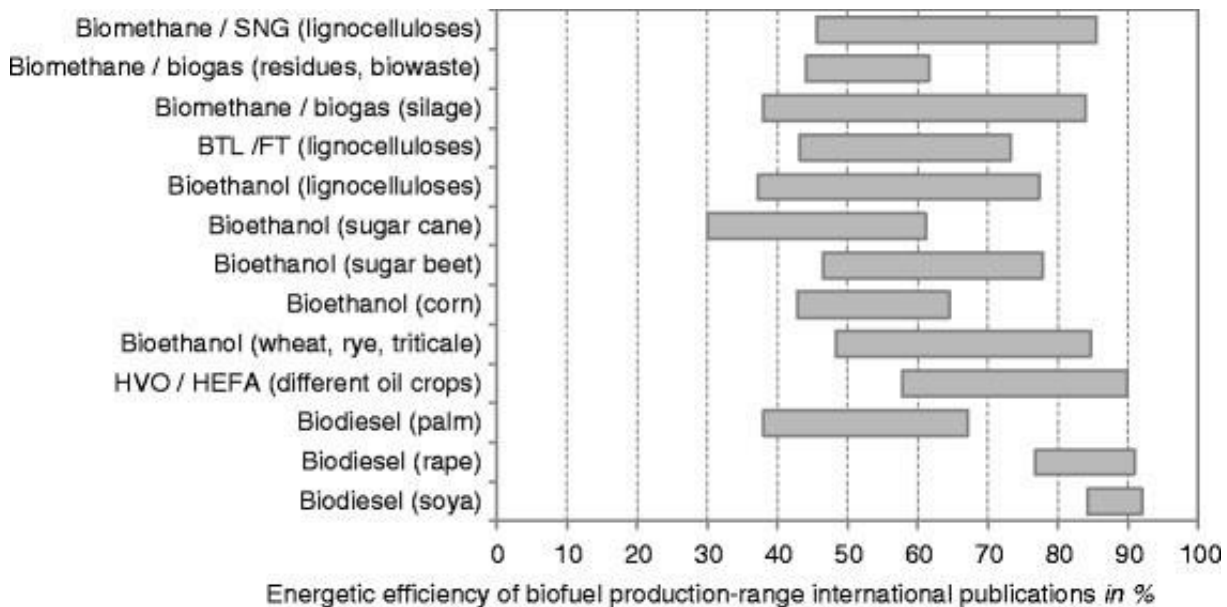
The Staff Report also explains the administrative nature of the amendments and the similarities between renewable fuels processing and petroleum-based refining:

While it appears that the volume of fuels produced will be lower than the current petroleum operation, the products will be very similar, if not identical, to the current products produced by the petroleum operation. Furthermore, each facility is likely to import petroleum-based products for distribution or blending, so there will be both petroleum and non-petroleum materials at the facility.

The types of air pollution emitted by the repurposed facilities will be similar to current operation. The proposed amendments will ensure emissions will not increase, keeping existing community protections in place.

Comment: Renewable fuels processing yield is limited.

Comments state that renewable fuels processing is limited due to its “low yield on feedstock”. However, technical authorities indicate that the yields from hydrotreating to produce renewable diesel are approximately 90-95 percent of renewable diesel produced for a given volume of feedstocks, similar to the clean product yield conventional hydroprocessing of crude oil feedstocks (Kubička 2012; Renewable and Sustainable Energy Reviews 2017 and 2022; Vasquez 2017; Sonthalia 2019; Müller-Langer 2014; NREL 2015; Crocker 2010). The yields of the HEFA technology have been documented and compared in numerous academic literature articles, including those by U.S. Department of Energy National Laboratories and Research Institutes, as well as government agencies. These studies demonstrate that since HEFA is selective towards liquid phase hydrocarbons, there is less loss of carbon in gas form when compared to other biofuels pathways, resulting in high yields mentioned above. In addition, HEFA technology also has one of the highest energy efficiencies among commercially viable renewable technologies. As reported by Müller-Langer: “... conventional biofuels with a high technology readiness level (TRL) (Müller-Langer 2014, Table 1), such as HVO/HEFA, show the highest overall conversion efficiencies.”, also shown in the plot below. The combination of high yields and high energy efficiency makes HEFA technology comparably better than other renewable technologies.



Comment: The Draft EIR does not disclose and evaluate the Project's hydrogen usage.

As noted above, the hydrogen usage for the existing facility was described in the Draft EIR through its description of the Hydrogen Plant at the Rodeo Site and the third-party supplier of hydrogen, Air Liquide. For the Project, the Draft EIR identified an increase in hydrogen usage, but it is no greater than the production capacity of the Air Liquide facility and the Hydrogen Plant (Unit 110). Hydrogen usage post-Project is fully described by the Draft EIR and evaluated against the baseline. The impacts are less than significant. In addition, the Project will not be operated continually using the maximum hydrogen amounts available from Unit 110 and the Air Liquide facility evaluated in the Draft EIR.

Comments state that the Draft EIR failed to disclose the hydrogen demand for the Project and claim that the Project would use "nine times more hydrogen per barrel" than the average refinery. (NRDC, pages 10, 38.) While this hydrogen demand per barrel is higher as the number of barrels of renewable diesel to be produced (67,000 barrels) is less than the existing refining capacity (120,000 barrels), the amount of hydrogen usage for the Project is approximately 30 percent over baseline (and within the production capacity of Unit 110 and the Air Liquide facility), and is not nine times more per barrel.

While the hydrogen demand does depend on the renewable feed, theoretical estimates can show that the differences are not as large as the comments suggest. The hydrogen demand depends largely on the number of unsaturated bonds in the molecule. Analysis of Table 2 (Karras, Changing Hydrocarbons Midstream) shows that this can vary as much as ~400 standard cubic feet of natural gas per barrel of crude oil at stock tank conditions (SCF/B), whereas the total demand for a diesel target is shown to be ~2,300 SCF/B. The Project estimates that the hydrogen usage per barrel will be approximately 2,100 SCF/B. This variation is less significant to the evaluation of emissions or other hazards because the process hazard analysis is performed using the overall hydrogen production capacity of the Refinery, which does not change with the implementation of the Project. The overall hydrogen usage of each processing unit is within the range of historic hydrogen usage for that unit; this may be accomplished because fewer barrels of renewable feedstock are being processed through each unit as compared to crude oil feedstocks.

The comments also state that the hydrogen consumption for jet fuel production would be higher than diesel fuel by 800 SCF/B based on theoretical calculations. However, hydrogen consumption for the production of jet fuel would be far less than estimates based on theoretical calculations. Determining the incremental hydrogen consumption when producing jet fuel requires experimental data for the reaction conditions and catalyst for a particular process unit. Moreover, the Project is limited by the total hydrogen production as determined by production capacity of the Air Liquide facility and Unit 110 and the capacity of the processing units.

Comment: Phillips 66 proposes additional hydrogen production by processing gasoline feedstocks.

Comments also state that Phillips 66 proposes to produce additional hydrogen through processing of gasoline feedstocks to address a "bottleneck" created by the theoretical hydrogen demands cited in the comments. The Draft EIR evaluates the Project based on the production capacities of the equipment and facilities, including the hydrogen used for the renewable fuels process as supplied by the Hydrogen Plant (Unit 110) and third-party supplier Air Liquide. A "bottleneck" implies that the Project has the capacity to produce more renewable fuels if it only had more hydrogen, and comments suggest that Phillips 66 intends to relieve this "bottleneck" by producing additional hydrogen to produce more renewable fuels than reported in the Draft EIR. The Draft EIR evaluates the production capacities and hydrogen usage as set forth for this Project and no "bottleneck" has been created.

Comment: Phillips 66 failed to consider alternative technologies.

Comments state that the Draft EIR failed to evaluate the renewable fuels process and its associated environmental effects by positing a different project to be evaluated in the EIR based on theoretical calculations using “new technology” (HEFA) that will consume “nine times” the amount of hydrogen per barrel and have additional environmental effects. The Draft EIR evaluates the Project that is proposed, which is defined by the processing capability of the Project’s equipment and facilities. Also, as explained above, the Draft EIR analyzes the Project based on the technologies, equipment, and processes that will be utilized. Phillips 66 is not creating a new facility to produce renewable fuels – it is transforming an existing facility to produce renewable fuels, with the addition of a PTU. The processing capabilities of existing equipment and facilities define the production capacity of the Project.

Specifically, the Project uses its existing hydroprocessing units (Units 240 and 246), each of which have their own processing capabilities, and while Phillips 66 proposes to alter those units to process renewable fuels, the units continue to have defined processing capabilities. Similarly, hydrogen has been used by the Rodeo Refinery for petroleum feedstocks processing and hydrogen usage will continue up to, but not in excess of, the production capacity of the Unit 110 Hydrogen Plant and the Air Liquide facility. The proposed increase in hydrogen usage as compared to the 2019 baseline is evaluated in the Draft EIR.

Other comments challenge the Project’s objectives related to converting the Rodeo Refinery to a renewable fuels transportation production facility, claiming that the Project’s objectives are drawn in an “artificially narrow” manner. (NRDC, pages 11, 72.) Comments state that the goal of the Project “is to manufacture biofuels” and that objectives to reuse existing equipment prevent the County from evaluating alternative biofuel production technology such as Fischer-Tropsch synthesis. The Project’s objectives do include the production of renewable fuels, but alternative technologies that do not reuse the existing equipment would not meet these project objectives (see Master Response No. 2, CEQA Alternatives) and likely necessitate the development of an entirely new industrial facility.²² The Project has not been developed from the ground up to manufacture biofuels, but instead is the conversion of an existing refinery to produce renewable fuels, and the processing capabilities of the Project’s equipment and facilities define the Project.

Comments also suggest that there is something improper about reusing the existing facilities of a refinery to produce renewable fuels. Repurposing existing industrial facilities supports sustainability goals by reducing waste, reducing overall construction activities and reducing environmental effects. Further, the importance of these refinery conversions was emphasized in Governor Newsom’s Executive Order N-79-20, which directed State agencies to “expedite regulatory processes to repurpose and transition upstream and downstream oil production facilities”

Comment: The Draft EIR fails to describe energy consumed for hydrogen production by third-party supplier.

The comments state that the Draft EIR “fails to specifically disclose that the type of hydrogen production proposed for this ‘renewable’ fuels Project would use fossil gas hydrogen production” (NRDC, pages 10-11.) Section 4.6, Energy Conservation of the Draft EIR, details the 2019 baseline energy use and the Project’s energy requirements, including information regarding Air Liquide’s energy consumption. The Air Liquide facility is not part of the Rodeo Renewed Project. The energy consumption for the existing

²² Fischer-Tropsch (FT) synthesis and gasification are significantly more capital intensive technologies compared to the hydroprocessing of oils and fats (HEFA) due to the significantly higher number of process steps (5 to 6 steps for gasification and FT synthesis compared to 1 or 2 for HEFA). None of the steps required for gasification and FT synthesis are currently present in a petroleum refinery and would require a new development and a significant land footprint. The expected capital investment required for a new, 2,000-3,000 barrels per day (bpd) gasification and FT facility would exceed \$200,000 per bpd of capacity (4Q2021 US dollars). See Ryan M. Swanson, Justinus A. Satrio, Robert C. Brown; Techno-Economic Analysis of Biomass Gasification Scenarios, DOE/NREL Report No. NREL/TP-6A2-46587, 2009, DOI: 10.2172/994017, <https://www.nrel.gov/docs/fy11osti/46587.pdf>; Udengaard, Niels; Knight, Richard; Wendt, Jesper; Patel, Jim; Walston, Kip; Jokela, Pekka; Adams, Cheryl, Green Gasoline from Wood using Carbona Gasification and Topsøe TIGAS Process, 2015, DOE Report no. DOE-TOPSOE-EE0002874-F, DOI: 10.2172/1173129 <https://www.osti.gov/servlets/purl/1173129/>.

Rodeo Refinery is set forth in Section 4.6.2.2 and Tables 4.6-2a and 4.6-2b, which identify for the 2019 baseline the natural gas purchased and the electricity produced, consumed, imported and exported.

Table 4.6-5b, Operational Energy Usage, sets forth the 2019 baseline, the Project's energy usage and the change from the CEQA baseline. The table includes electricity, natural gas and fuel consumption. Overall, the Project will result in a reduction of natural gas purchases of 8,261,200 MMBtu/year. Although the Air Liquide facility is not owned by Phillips 66 and is an independent facility, the table includes a reference stating: "The Rodeo Site will be greatly decreasing natural gas purchases, as indicated above. Air Liquide will be increasing natural gas purchases to provide hydrogen for the Project (approximate increase of 4,439,100 MMBtu/r above baseline)." The use of natural gas by third-party supplier Air Liquide is disclosed, including consideration of the hydrogen usage of a third-party supplier, thus, overall natural gas consumption will be reduced by approximately 3,800,000 MMBtu/year.

Comment: Renewable fuels processing increases the risk of hazards.

Comments suggest that renewable fuels processing increases the "risk of upsets, fires, explosions, and flaring" as compared to crude oil processing "because the extra hydrogen that must be added to convert the new biofuel feedstock to hydrocarbon fuels generates more heat in process reactions that occur under high pressure and are prone to runaway reactions." (NRDC, pages 11, 37-38). The comment is based on the hydrogen usage for the average refinery and does not consider the hydrogen usage for the Rodeo Refinery and the Project. Furthermore, the nature of renewable feedstocks and the catalysts used to hydrotreat them result in similar or reduced hazards.

The comments state the project would use roughly nine times more hydrogen per barrel of biorefinery feed as compared to the average petroleum refinery. The hydrogen usage of an average refinery is not an appropriate standard to apply, because all petroleum refineries are not the same, and they process different petroleum feedstocks. More specifically, crude oil varies greatly in sulfur concentration (can vary from 0.5 to 6.0 wt percent) and density, both reflective of the hydrogen requirements to process a given crude oil, and this process may or may not require hydrogen. For example, distillation units require no hydrogen, catalytic reforming units generate hydrogen (1000 SCF/B or greater), and hydrotreating units consume hydrogen. Thus, there is a varying range of hydrogen demand at each refinery. In the reference cited in the comments (Karras, 2010. Environ. Sci. Technol. 44(24): 9584), the average hydrogen demand for different crude oil feedstocks across the 5 (Petroleum Administration for Defense Districts (PADDs) varies by 6 times. This variation is expected to be greater for individual sites because these are averages of individual sites based on the type of crude oil feedstocks and the PADD. Comparing hydrogen demand of this Project to the average petroleum refinery is not as relevant as comparing the Project's usage with the existing usage of the Rodeo Refinery as was done in the Draft EIR.

As explained above, the overall hydrogen usage for the Project is based on the production capacity of the refinery's Hydrogen Plant (Unit 110) and the Air Liquide facility. The Draft EIR evaluates the increase in hydrogen usage over baseline, and given that the amount of renewable fuels to be processed and produced (67,000 bbls) is less than the amount of petroleum-based fuels (120,000 bbls), the amount of hydrogen per barrel is increased. Nonetheless, the hazards associated with hydrogen usage are not increased.

The comment also states that the process hazards are correlated with the hydrogen demand per barrel. but this does not consider the overall volume of renewable feedstocks being processed in the hydroprocessing units. A more accurate assessment of this Project would be to compare the hydrogen demand of hydrocracking units with the hydrotreating of triglycerides. The hydrogen demand for these hydroprocessing units ranges from 1500 to 2500 SCF/B. Even though the hydrogen use per barrel of feed may increase, the processing units will process fewer barrels of renewable feedstocks as compared to crude oil feedstocks, and the overall hydrogen usage per processing unit is within this historic range of the Rodeo Refinery. Accordingly, hydrogen demand of a renewable diesel hydrotreater (or hydroprocessor) is similar to that of existing process units at Rodeo Refinery.

As noted in the comments, the hydrodeoxygenation of triglyceride reactions are exothermic and require proper safeguards to control the heat release. The heat release under normal operating conditions is handled with well-established process technologies such as co-feeding with inert liquids and gases to dilute the concentration and reduce the exotherm (Zhang 2018; Kalnes 2018; Kubička 2013). In all hydroprocessing technologies, the potential for a so-called runaway or reactor excursion is one that needs to be considered. A reactor excursion is more likely to occur with hydrocracking catalysts for crude oil feedstocks, which are more prone to cracking reactions, unlike the reaction mechanism for the hydrotreating of fats, oils, and greases (all renewable feedstocks). The product from renewable feedstock processing contains predominantly paraffins (any of the saturated hydrocarbons) while petroleum feedstocks contain aromatics. Cracking of paraffins is significantly less exothermic, and therefore, less prone to a reactor excursion, than processing aromatics. The endothermic nature of cracking reactions of paraffins (leading to reduction in reactor temperature) has been documented in technical reports (Köhler 2007; Deldari 2005; Weitkamp 1991; Hsu 2019). The catalysts used for renewable feedstock processing (metal sulfide supported on unreactive oxides) are inherently safer than the conventional hydrocracking catalysts (metal supported on acidic catalysts) because they contain fewer acidic sites required to facilitate cracking reactions. Specifically, hydrocracking catalysts are zeolite-based catalysts with acidic site densities of 300 – 600 micromol/g as documented in numerous research articles (Dik 2019). In contrast, catalysts for hydrotreating of fats, oil, and greases have amorphous alumina as support with acidic sites density of 3-10 micromol/g (Emiel 2012). In hydrotreating of triglyceride (renewable) feedstocks, a runaway reaction or reactor excursion would only occur at higher temperatures (>800 F), and are therefore, less likely to occur than in the hydrocracking of crude oil feedstocks, which may occur at typical operating conditions (500-750 F). The Project employs process safety measures to reduce the potential for a risk of upset (IEC 2016).

Comments also state that renewable feedstocks that are high in “free fatty acids” may be “highly corrosive” and that such reactions could “gum or plug process flows.” (NRDC, page 38.) However, the Rodeo Renewed Project will have a dedicated PTU to remove the contaminants from the feed and significantly reduce the fouling and plugging in the equipment. Unique processes including polyethylene removal, degumming and adsorption (reduction of solids, phospholipids, phosphorous compounds, metals, proteins, nitrogen and sulfur containing compounds) will remove contaminants to specified levels to increase processing reliability and decrease corrosion and fouling risks.

In addition, free fatty acids in triglyceride feedstocks present similar corrosion risks as naphthenic acids in crude oils. This corrosion risk is mitigated by blending feedstocks to limit free fatty acid content, materials selection, and detailed inspection and maintenance plans, similar to naphthenic acid corrosion control in crude oil refining (Yao 2014; The International Nickel Company Inc. 1963; Sandvik Materials 2021; Dobson 1984; Gutzeit 2016).

More specifically, in the hydroprocessing units, there will be three safeguards to prevent side reactions that could lead to gum formation that may plug process flows. First, the preheat temperature of the triglyceride feeds is lowered to less than 250 F – which is below the temperature at which gum formation or corrosion has been seen. Following that, the feed will be pumped directly into the reactor without further heating or exposure to other processing equipment where gums may form and cause the equipment failures that were cited.

Inside the reactor Phillips 66 will dilute the reactive materials with product renewable diesel to reduce the potential for fouling by reducing the concentration of the reactive materials contacting the catalysts. Dilution with recycled product also limits the temperature rise and potential for fouling due to higher operating temperatures.

The catalysts that will be employed in the reactor have been specifically designed to have lower activity at the top of the bed and then also high void fractions to prevent plugging from particulates that may have survived pre-treatment or from polymerization reactions.

These catalysts are efficient in removing selectivity components from the feed that initiate and catalyze the polymerization reactions that would cause gumming and fouling. Moreover, the dilution of the feed with inert liquids and gases will further reduce the rate of such reactions leading to lower corrosion, gumming, and fouling risk.

Although free fatty acids are present in renewable feedstocks and share similar corrosion traits to naphthenic acids, there are a few notable differences. Free fatty acids have a wider temperature range at which they are corrosive as compared to standard refinery metallurgies; at low temperatures the presence of water aggravates corrosion, and at high temperatures corrosion resistant alloys must be used.

Low temperature mitigations for the highest free fatty acid content feedstocks include coating of storage tanks, installation of stainless steel fixed roofs on storage tanks, tank dewatering and sampling, and enhanced NDE (non-destructive equipment) inspections at low points, dead legs, and turbulent areas. Certain processes in the PTU where these feedstocks will be combined with water during different steps will be constructed from stainless steel to prevent free fatty acid corrosion. Upon exiting the PTU the renewable feedstocks will be dried to prevent free fatty acid corrosion in low alloy transportation systems.

High temperature mitigations for free fatty acid corrosion include alloy upgrades to high molybdenum content materials, which have proven track records of resisting high temperature acid attack. Also, the process is designed to minimize the amount of time and surface area of exposure to high temperature free fatty acids to minimize risk. Comments express concern over an increased risk of High Temperature Hydrogen Attack (HTHA) with renewable fuels processing. HTHA, while a present challenge across refining in general, is well-documented and there are existing internal and external resources, guidelines, and mitigation methods that cover the expected H₂ partial pressures and temperatures for renewables processing (API 2016). HTHA risk in future renewable processing was carefully evaluated through process modeling and material reviews. Although both Units 240 and 246 are being converted to renewable processing, these units have established HTHA process alarms and inspection programs which were leveraged into design decisions for the future. In addition, equipment and piping systems are being upgraded to HTHA resistant alloys to further mitigate any HTHA risk. The conversion of these hydrocrackers to renewable fuels will not increase the risk of HTHA. The comments also express concern regarding carbonic acid corrosion of the reactor effluent, which is a mechanism not expected in traditional crude oil hydroprocessing but is a potential mechanism with oxygenated renewable fuels. The risks of carbonic acid corrosion in the reactor effluent and additional mechanisms have been thoroughly modeled and evaluated across multiple internal studies for Rodeo Refinery since 2019 (DeBerry 1979), and are detailed in external resources as well (Akpanyung 2019). Mitigative steps, monitoring strategies, material upgrades (including metallurgical), and operating limits have been developed internally to address these various mechanisms. Specifically, sour water pH monitoring and control via neutralizer is key to controlling carbonic acid corrosion at the conditions and relatively lower carbon dioxide partial pressures expected in renewables processing (DeBerry 1979; Akpanyung 2019), and ionic modeling tools (e.g., OLI) were used to determine the potential pH ranges in the Rodeo Renewed units.

Comments state that historic hydrogen-related incidents “contributed to significant flaring incidents” and that “the Project’s new feedstock and process system” will “worsen the underlying conditions” that are the “root causes of hazardous incidents.” (NRDC, pages 39-40.) As described above, renewable fuels processing is very similar to crude oil processing and the purported increase in hazards described by comments is not supported by the science. Therefore, the Project is not expected to have an increase in flaring incidents.

Furthermore, flaring at refineries (and now renewable fuels facilities pursuant to the amendments to BAAQMD’s Refinery Rules mentioned above) is strictly regulated by the BAAQMD, including Regulation 12, Rule 11: Flare Monitoring at Refineries and Regulation 12, Rule 12: Flares at Refineries. In addition, the Rodeo facility’s BAAQMD Major Facility Review Permit includes conditions for flaring which will continue to apply with the Rodeo Renewed Project. The BAAQMD is aware of the incidents

mentioned by comments (as the data cited by comments is from the BAAQMD's website), and the BAAQMD has regulated refineries and renewable fuels facilities to address these concerns.

The comments express that the Project should have considered various process operation mitigation measures to address increases in safety hazards. (NRDC, page 41.) The Project's operations are not expected to increase safety hazards and therefore, no such mitigation measures are required by CEQA. The Rodeo Refinery employs and the Rodeo Renewed Project will continue to employ process safety measures to address the reduced risk of hazards (IEC 2016).

The comments state that additional mitigation measures should have been considered in the Draft EIR to address the safety hazards purportedly created by "high-process hydrogen demand feedstocks." (NRDC, page 42.) However, the Rodeo Renewed Project does not have an increased risk of hazards as a result of the hydrogen usage or the processing of renewable feedstocks. Therefore, the Project does not result in a significant impact with respect to hazards from renewable fuels processing. CEQA requires mitigations for significant environmental effects of a project, and in the absence of a significant impact, no additional mitigation measures are required. Cal. Publ. Res. Code § 21002.

Comment: The Draft EIR improperly evaluates the greenhouse gas emissions from hydrogen usage in renewable fuels processing.

Comments state that processing renewable feedstocks results in increased carbon emissions as compared to crude oil processing. The assertion is based on the increase in hydrogen assumed in the comments. As stated above, the Project's usage of hydrogen is described in the Draft EIR, and it is being supplied by the on-site Hydrogen Plant (Unit 110) and by Air Liquide, an independent third-party supplier. The potential greenhouse gas (GHG) emissions resulting from the Project are evaluated in the Section 4.8 of the Draft EIR. While the comments state that the hydrogen usage is not considered in the Draft EIR, Table 4.8-5 sets forth the annual operational GHG emissions for the Project, which includes all of the Rodeo Site emissions, including the Hydrogen Plant (Unit 110), and a separate line item for the Air Liquide facility, even though it is a third-party supplier operated by an independent company. The Project results in a reduction of GHG emissions as compared to the 2019 baseline.

Further, the GHG emissions evaluation in the Draft EIR conservatively underestimates GHG emissions reductions from the Project by orders of magnitude. This is because the GHG reductions resulting from the combustion of renewable fuels as opposed to the combustion of petroleum-based fuels have not been relied upon to determine that the Project's impacts to greenhouse gas emissions are less than significant, as the precise amount of the reductions would depend on the feedstocks being used. However, these reductions range from 45-75 percent and would far exceed the Project's GHG emissions even without taking into consideration the 2019 baseline. Based on the average carbon intensity of the renewable diesel sold in California in 2021, the Project would reduce the lifecycle carbon emissions of transportation fuels by approximately 8.5 million metric tons per year.

Comments suggest that the Project will actually increase GHG emissions by "pushing them overseas" based on a greater amount of petroleum distillate has been refined in California and exported out of state. (NRDC, pages 52-53.)

With respect to the Project's analysis of GHG emissions, the Project does not take credit for the combustion of renewable fuels as opposed to petroleum-based fuels. The comments misinterpret the Draft EIR's analysis of GHG emissions (NRDC, footnote 211) and suggest that these references refer to combustion emissions from transportation products produced by the Project. Instead, those references refer to the emissions of the Project's use of transportation fuels, i.e., construction vehicles. The comments that suggest the Draft EIR should have discounted the benefits of GHG reductions from the combustion of renewable fuels by considering petroleum distillate exports is not valid, because the Draft EIR did not consider those GHG reductions in determining that the impact was less than significant.

Furthermore, the comments state that increased petroleum distillate exports from California prove that the increase in renewable fuels' production in California did not supplant the use of petroleum distillate. Comments imply that the overall use of petroleum distillate either remained the same or increased, despite the production of renewable fuels. However, the petroleum distillate market is a global one and an increase in petroleum distillate exports from California does not necessarily mean that global demand for petroleum distillate remained the same or increased. Supply from California could be replacing other sources globally. Global demand for transportation fuels is driven by a multitude of factors, and supply is only one factor to consider. The comments speculate that increased petroleum distillate exports from California means that the global demand stayed the same or increased, but the market is far more complex. CEQA does not require speculation regarding the global market, particularly when global market changes are not a "reasonably foreseeable" consequence of this Project.

In addition, the chart provided in the comment (NRDC, page 53) shows that the petroleum distillate burned in California has been steadily replaced by renewable transportation fuels. Thus, while the Draft EIR did not take credit for the GHG reductions in the combustion of renewable fuels as compared to petroleum-based fuels, this chart supports the State's programs for the production and development of renewable fuels as the GHG emissions for fuels burned in California are decreasing.

The comments also state that the transformation of the Rodeo Refinery to the production of renewable fuels worsens the "in-state petroleum refining overcapacity." Stated in the comments: "California refining capacity, especially, is overbuilt." (NRDC, page 54.) The Project eliminates petroleum refining at the site, and therefore reduces the State's capacity of petroleum refining and could not possibly worsen any overcapacity.

The comments appear to attribute to this Project, GHG emissions from petroleum distillate exports, but such an analysis would be contrary to CEQA's fundamental requirements. (NRDC, pages 55-56.) CEQA requires the evaluation of the Project's direct or reasonably foreseeable indirect effects, and data regarding the State's overall exports of petroleum distillate does not provide any evidence that this Project (which is not refining petroleum distillate) will result in increased GHG emissions from the combustion of that petroleum distillate.

Comment: The Draft EIR improperly evaluates the air quality effects of hydrogen usage in renewable fuels processing.

Comments state that air quality impacts have not been evaluated properly in the Draft EIR as a result of increases in GHG emissions, flaring, and odors. The Draft EIR explains that the Project is not expected to increase GHG emissions, but to decrease them, with additional GHG reductions associated with the combustion of renewable fuels as compared to petroleum-based fuels. The likelihood of process upsets and flaring incidents due to reactor temperature excursions is lower in renewable fuels operations than crude oil processing. The catalysts used for the hydroprocessing of renewable feedstocks into renewable transportation fuels are inherently safer than the conventional hydrocracking catalysts due to the significant difference in their chemical structures and cracking reaction ability. To address potential process upsets and minimize flaring incidents, the Project is designed to meet or exceed industry standards and best practices for process safety (IEC 2016). These approaches include designing hydrogen quench for temperature increases, automatic interlocks, and emergency depressuring systems. Therefore, the processing of renewable feedstocks does not increase the likelihood of upsets.

Furthermore, Section 4.3 of the Draft EIR evaluates the air quality effects of hydrogen usage in renewable fuels processing. Tables 4.3-15 and 4.3-16 shows that the Rodeo Site, including the Hydrogen Plan (Unit 110), was included for evaluation along with third-party supplier Air Liquide. These tables also demonstrate that the Rodeo Site air quality effects are less than significant, as the Project results in reduced levels of criteria pollutants across the board – VOC, NOx, PM10, PM2.5, SO2 and CO.

Comments state that contaminants in the feedstocks can be released during processing, adding to the air emissions burden. However, renewable feedstocks are primarily composed of long-chain fatty acids and

esters with extremely low vapor pressure (significantly lower than crude oil). Because of their lower vapor pressure, they would produce less air emissions compared to crude oil. With very few exceptions, constituents of renewable feedstocks, unlike the constituents of crude oil, are not toxic. That is why soybean oil and vegetable oil, unlike crude oil, are edible and used for human consumption. Any trace levels of contamination present in renewable feedstock would still be at significantly lower levels than crude oil. Therefore, switching from crude oil to renewable feedstocks will only reduce air pollution.

Last November 2021, the BAAQMD adopted administrative amendments to the Refinery Rules to ensure that petroleum refineries that have proposed to modify their facility operations to process renewable (or alternative) feedstocks would continue to be subject to these rules. As stated by the BAAQMD in its October 15, 2021 Staff Report (BAAQMD 2021):

The purpose of the proposed amendments is to ensure that the facilities that produce fuels and other products from non-petroleum feedstocks remain subject to and in compliance with the same emission standards and rule requirements that were in effect when the feedstock was petroleum based.

The comments also state that increased risk of upset, increased flaring and increased hazards will result in increased air pollution, but as explained above, the Project's potential hazards were fully evaluated and these risks are not expected to increase. Similarly, flaring at the site is also not expected to increase, and based on the recent BAAQMD amendments, the Rodeo facility will continue to be subject to Regulation 12, Rule 11: Flare Monitoring at Refineries and Regulation 12, Rule 12: Flares at Refineries. Permit conditions related to flaring currently contained in the refinery's BAAQMD Major Facility Review Permit will apply post-Project.

Regarding odor, comments state that the Draft EIR does not provide sufficient information with respect to the mitigation of any potential odors from the Project. (NRDC, pages 61-62.) Refer to Response to Comment 1-3, which revises Mitigation Measure AQ-4.

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MASTER RESPONSE NO. 6: PURPOSE OF PROJECT

Comment: The Project is inconsistent with climate goals.

Various comments suggest that the Project, in general, risks exacerbating climate change for a variety of reasons, including extending reliance on fossil fuels or continuing with heavy industrial operations. It should be noted that a key Project objective is to “[p]rovide/maximize production of renewable fuels to assist California in meeting its goals for renewable energy, GHG emission reductions, and reduced CI [carbon intensity] for transportation fuels,” and the Project has been designed to achieve this objective and assist California in ultimately transitioning to carbon neutrality (see Draft EIR at page 3-22).

As described in the Draft EIR, GHG emissions are regulated at the federal and state levels, and local and regional entities have also adopted plans designed to reduce GHG emissions consistent with statewide mandates. Refer to Draft EIR at 4.8-245 to 4.8-255. At the federal level, a suite of measures, policies, and regulations aim to reduce GHG emissions from a variety of sources, including industrial sectors and transportations fuels through mandates and incentive programs. Chief among these is the federal Renewable Fuels Standard (RFS). The RFS was enacted as part of the 2007 Energy Independence and Security Act (Public Law 110-140) [EISA] whose purpose includes effort to “*move the United States toward greater energy independence and security, to increase the production of clean renewable fuels,...*” EISA, preamble. The RFS is a federal mandate for the commercialization of biofuels, requiring fuel refiners and importers to commercialize increasing volumes of different types of biofuels, up to 36 billion gallons through 2022.

At the state level, executive orders have set goals to reduce GHG emission along set milestones, with subsequent rulemaking and legislation designed to achieve these goals. The Global Warming Solutions Act of 2006 (AB 32) (California Health and Safety Code, Division 25.5) sets forth GHG emissions reduction targets and requirements for implementing regulations to achieve them. Among other mandates, AB 32 directed CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. As explained in the Draft EIR, at pages 4.8-249 through 4.8-251, the initial Scoping Plan, adopted in 2008, included recommendations for development of a Cap-and-Trade program, and adopting and implementing measures pursuant to existing laws and policies, including the LCFS. Subsequent updates to the Scoping Plan in 2014 and 2017²³ acknowledged the successes achieved in GHG emissions reductions from the adopted programs and measures, and accordingly recommended expanding the Cap-and-Trade program, extending the LCFS, and incorporating the 2016 Mobile Source Strategy with its recognition of the importance of renewable fuels in reducing the CI of the transportation sector. These three programs, and their relevance to the Project, are discussed at length in the Draft EIR. Draft EIR at pages 4.8-251 through 4.8-253. Once operational, the Project will be a source of renewable transportation fuel – and part of the solution to GHG emissions reductions in the state – as contemplated by these programs.

The Project’s renewable fuels are intended as part of the state’s GHG emissions reduction strategies. Consistent with the Governor’s Executive Order EO B-55-18, which sets a goal to achieve carbon neutrality no later than 2045, CARB is currently in the process of developing the 2022 update to the Scoping Plan with a focus on achieving carbon neutrality by 2045.²⁴ The EO notes that that “*clean renewable fuels play a role as California transitions to a decarbonized transportation sector,*” and although a draft plan has not yet been published, CARB has conducted numerous public workshops to outline conceptual approaches to the update as well as solicit feedback from stakeholders that indicate low CI fuels will, indeed, be part of the pathway in this transition.

²³ CARB. 2017. The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California’s 2030 Greenhouse Gas Target. January 20, 2017.

²⁴ In addition, Executive Order N-79-20 highlights the importance of repurposing downstream assets and the role of renewable fuels in achieving California’s GHG emission reduction objectives.

Among the reports that CARB has stated are informing the 2022 update²⁵ is a study developed for CARB entitled “Achieving Carbon Neutrality in California - PATHWAYS Scenarios Developed for the California Air Resources Board”²⁶ which evaluates potential scenarios for achieving carbon neutrality by 2045. In developing this report, the authors reviewed numerous carbon neutrality studies published to date (primarily in Europe) and observed several commonalities among them, including a reliance on “low-carbon fuels, including low-carbon electricity and some reliance on low-carbon liquid and gaseous fuels, such as hydrogen, for hard-to electrify sectors,” (E3 Report at page 11). The report goes on to note that “Most decarbonization pathways show a significant reliance on low-carbon (or zero carbon) liquid and/or gaseous fuels across all sectors of the economy (buildings, industry, transportation, and electricity) in order to meet climate goals, and in particular when targeting net zero emissions,” and includes renewable diesel and renewable jet fuel in its use of the term biofuel. (E3 Report at page 27). Of the three pathways to 2045 carbon neutrality considered in this report, renewable transportation fuel is a consistent component in each of them. See, E3 Report at pages 30-31.

Another report informing the Scoping Plan update is “Driving California’s Transportation Emissions to Zero,”²⁷ which notes that in addition to renewable diesel’s GHG reductions of 30-60percent²⁸ when compared to petroleum diesel taking into account the refining process, renewable diesel also “significantly reduces PM and slightly reduces NOx when substituted for petroleum diesel.” (UC Report, at page 95).

Local and regional agencies have also addressed GHG emissions reduction strategies within their jurisdictions, consistent with the state’s goals and mandates. Contra Costa County’s Climate Action Plan (CAP) inventories emissions from unincorporated areas of Contra Costa County, provides GHG reduction measures for, and is applicable to all unincorporated areas, including the Project area. The quantification of the CAP’s GHG emissions inventory is consistent with guidance set forth by the BAAQMD. (See, CAP, 2016, at page D-1). The reduction measures in the CAP, while generally focused on local-scale activities such as facilitating solar installation or incentive programs for energy efficient home improvements, nonetheless dovetail with the broader purposes of the statewide programs, including a self-imposed requirement to reduce County fleet use of traditional fuels 25 percent by the year 2020, and to advocate for regional, state, and federal activities that support GHG emissions reductions in the county. CAP at page 73.²⁹ (Subsequent updates to the CAP, such as the 2020 progress report, indicate the County is continuing to green its fleet, although the percentages achieved are not specified.)³⁰ Ultimately, Renewable transportation fuels will assist in achieving California’s goal of carbon neutrality by 2045, particularly in sectors that do not easily contribute to decarbonization, such as aviation, heavy industry, and maritime.

Consistent with these various federal, state, and regional goals, the Project helps to mitigate climate change by contributing to the reduction of GHG emissions within industries that are difficult to decarbonize, such as heavy industry and aviation, where use of renewable fuels will ultimately help lower the lifecycle carbon emissions of their transportation fuel. The Project provides a mechanism for compliance with California’s LCFS and Cap-and-Trade programs and the RFS, while continuing to meet regional market demand for transportation fuels. Development and deployment of renewable transportation fuels is a component of a suite of measures intended to help achieve California’s goal of carbon neutrality by 2045³¹.

²⁵ CARB, Public Workshop Series to Commence Development of the 2022 Scoping Plan Update to Achieve Carbon Neutrality by 2045, June 8, 2021 (see, <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/scoping-plan-meetings-workshops>, last accessed February 8, 2022).

²⁶ Energy + Environmental Economics (E3). 2020. Achieving Carbon Neutrality in California - PATHWAYS Scenarios Developed for the California Air Resources Board. October 2020. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-10/e3_cn_final_report_oct2020_0.pdf

²⁷ University of California – Institute for Transportation Studies, *Driving California’s Transportation Emissions to Zero*, April 1, 2021. Available at <https://escholarship.org/content/qt3np3p2t0/qt3np3p2t0.pdf?t=qs0sle>

²⁸ Based on the CIs for soybean oil and tallow, the reductions are estimated to range from 45-75 percent.

²⁹ <https://www.contracosta.ca.gov/DocumentCenter/View/39791/Contra-Costa-County-Climate-Action-Plan?bidId=>

³⁰ <https://www.contracosta.ca.gov/DocumentCenter/View/69585/2020-CAP-Progress-Report---final?bidId=>

³¹ Available at <https://www.arb.ca.gov/lists/com-attach/94-lcfs18-BmpQNQFmAyMHXlc0.pdf>, last accessed February 8, 2022.

MASTER RESPONSE NO. 7: PROJECT DESCRIPTION–PIECEMEALING

Comments received state that the Draft EIR fails to include as part of the Rodeo Renewed Project the following activities or projects: (1) the processing of renewable feedstocks at Rodeo Refinery's Unit 250; (2) Nustar Shore Terminals (Nustar project); and (3) terminal and wharf improvements at the Port of Los Angeles. None of these activities is part of the Rodeo Renewed Project. The Draft EIR's project description is complete and correct in not including these other activities or projects, as discussed below.

CEQA "Piecemealing"

The comments state that the County improperly divided the Rodeo Renewed Project into two or more different projects, which is often referred to as "piecemealing" in CEQA parlance (or improper project segmentation). The CEQA piecemealing refers to whether the overall environmental effects are understated, minimized, or submerged by evaluating the projects separately. In case law, the California Supreme Court affirmed that a lead agency must consider the environmental effects of a future action if: "(1) [that future action] 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." *Laurel Heights Improvement Assn. of San Francisco, Inc.* (1988) 47 Cal.3d 376, 396. Courts have also held that projects with "significant independent or local utility" are not considered part of the same project.³² The County followed established principles for assessing "the whole of the action," in its review of the Rodeo Renewed Project.

Unit 250 Operations

Comments state that existing renewable feedstock processing at the Rodeo Refinery's Unit 250 is functionally part of the Rodeo Renewed Project. That is not the case. Unit 250 is a diesel hydrotreater that has been operational for approximately 15 years. In April 2021, Phillips 66 began processing pretreated renewable feedstocks in the unit, whereas previously the unit solely processed petroleum feedstocks. Unit 250 has the flexibility to run either feedstock and, notwithstanding the Rodeo Renewed Project, will continue to process either pretreated renewable feedstocks or petroleum feedstocks depending on future market considerations such as transportation, logistics, economic, supply, and possibly other factors. Further, absent the Rodeo Renewed Project, Unit 250 renewable feedstock processing will continue to supplement the Refinery's current, primary operation of refining crude oil and other petroleum feedstocks, but on a small scale (i.e., less than 10 percent of the throughput capacity). As described in the following paragraphs, the processing of renewable feedstocks at Unit 250 involves typical operational activities using existing equipment, whereas the Rodeo Renewed Project will transform the entire Rodeo Refinery by introducing new equipment and a new mode of operations.

The Project will transform the existing Rodeo Refinery into a facility that no longer refines crude oil. The Project will permanently shut down Refinery equipment for crude oil refining. It also will include the shutdown of the Santa Maria Refinery, as well as removing the Pipeline Sites from service. The renewable feedstocks delivered to the Rodeo Refinery as part of the Project will first undergo pre-treatment (in the proposed PTU) prior to being manufactured into renewable transportation fuels onsite. This is not the case for renewable feedstock processing in Unit 250. There, renewable feedstocks received at the Refinery are already pretreated offsite prior to being processed in Unit 250 using the same equipment that was (and still can be) used for refining petroleum feedstocks until the Rodeo Renewed Project is operational.

Importantly, Unit 250 can process pretreated renewable feedstocks without the Rodeo Renewed Project, and has done so for almost a year. It will continue to do so whether the Rodeo Renewed Project becomes operational or not. The processing of renewable feedstocks has independent utility from the

³² See *Planning and Conservation League v. Castaic Lake Water Agency* (2009) 180 Cal.App.4th 210, 237 [rejecting allegations of piecemealed review for projects that had "significant independent or local utility"]; see also *Banning Ranch Conservancy* (2012) 211 Cal.App.4th 1209, 1223-26 [rejecting allegations of piecemealed review for a park that would be built regardless of other proposed development].

Rodeo Renewed Project. The converse is true as well: the Rodeo Renewed Project has independent utility from renewable feedstock processing at Unit 250. If Unit 250 was dismantled tomorrow, the Rodeo Renewed Project would still occur as currently proposed.

Comments also state that the Rodeo Renewed Project "would depend on Unit 250 to maximize onsite refining of the pretreated feed output [of the proposed PTU]; and in turn, Unit 250 would be dependent on the Project for economical access to pretreated feed, feedstock acquisition, and Unit 250 product distribution." While it is true that, from time to time, treated renewable feedstocks from the proposed PTU may be used as an alternative source of feedstock for Unit 250 (in addition to offsite-treated renewable feedstock), the Rodeo Renewed Project does not depend on Unit 250 to maximize onsite processing of the PTU output.

Depending on market conditions and feedstock supply, pretreated feedstock that is received at the Rodeo Site and processed through the Rodeo Renewed PTU and that cannot be processed onsite will be sold to third parties for processing elsewhere. Operational and market flexibility is the purpose underlying construction and operation of the third PTU processing train – not maximization of onsite processing using Unit 250 solely for the processing of treated feedstocks. The use of Unit 250 for processing pretreated feedstocks that are outputs from the yet-to-be-constructed PTU does not make Unit 250 "functionally part" of or an "interdependent component" of the Project.

Comments note that changes were made to Unit 250. However, the work on Unit 250 has been consistent with typical operational, maintenance, and turnaround activities for equipment used at the Rodeo Refinery. Industrial facilities regularly implement changes to equipment or facilities for maintenance or upgrades, and these activities generally do not require a permit from a regulatory agency. The County determined that none of the Unit 250 work needed a discretionary permit, and thus, CEQA review was not required for the work performed on Unit 250, per Contra Costa County Ordinance Code Section 84-63 (i.e. hazardous materials land use ordinance).

Comments also state that Phillips 66 began processing renewable feedstocks in Unit 250 without a BAAQMD permit, which is not the case. The Rodeo Refinery has a facility air permit from BAAQMD that includes Unit 250 operations (BAAQMD 2018). The air permit covering Unit 250 operations applies whether petroleum feedstocks or renewable feedstocks are processed in the unit.³³ The comments also conclude that the BAAQMD permitting issue "underscores the need for the Draft EIR to determine whether Unit 250 is functionally part of the [Rodeo Renewed] Project and if so – evaluate it as such." This statement does not render the Draft EIR deficient, nor does it transform Unit 250 operations from a standalone, separate project into part of the Rodeo Renewed Project.

The comments also make related technical claims (Karras, Attachment C, page 13) that "the deoxygenated output of HEFA hydrotreating is too waxy to meet fuel specifications and must be isomerized in a separate processing step before it can be sold as transportation fuel...Unit 250 depends on the project isomerization component to make its output saleable..." This is not accurate as renewable fuels production from Unit 250 meets all of CARB's diesel specifications without a separate processing step. Also refer to Master Response No. 5, Renewable Fuels Processing.

CEQA prohibits piecemeal review, which is separating a large project into smaller pieces to avoid CEQA significance thresholds by dividing environmental effects among two or more projects. As indicated in the forgoing discussion, this is not the case with the Rodeo Renewed Project and existing renewable feedstock processing in Unit 250.

To summarize, the operational capacity of the Rodeo Refinery did not change when it began processing renewable feedstocks in Unit 250; Phillips 66 is still utilizing existing equipment, without modification, to process pretreated renewable feedstocks, which is not the case with the Rodeo Renewed Project; and

³³ On July 31, 2013, the California Air Resources Board and the State Water Resources Control Board issued a joint statement stating that renewable diesel should be treated the same as conventional CARB diesel for all purposes.

the Rodeo Renewed Project is undergoing full environmental review under CEQA. As such, the "piecemealing to avoid environmental review" argument does not apply here.

Nustar Project

Comments state that "[t]here is basis to conclude that the Nustar project is an undisclosed component of the [Rodeo Renewed] Project." The comments point to pipelines transporting treated soybean feedstock unloaded at Nustar rail facilities and transported via pipeline to the Rodeo Refinery to "almost certainly be used in connection with the [Rodeo Renewed] Project."

The soybean oil unloaded at the Nustar rail facilities and transported via pipeline to the Rodeo Refinery is used as feedstock at the Refinery's Unit 250, which as explained above is not part of the Rodeo Renewed Project. The manufacturing inputs to the Rodeo Refinery have historically been variable (e.g., the crude slates processed at the Refinery change frequently). The Refinery's current operating configuration allows for processing pretreated renewable feedstocks - the soybean oil coming from Nustar is just another part of the variable feedstocks processed by the Refinery. See *Communities for a Better Environment v. City of Richmond*, 184 Cal.App.4th 70 (2010). This case determined that a project to replace and upgrade manufacturing facilities at an existing refinery need not include pipeline in the project, as the facility upgrade activities and the pipeline activities were not "interdependent." Each had different purposes and were proposed by different applicants, and the facility upgrade did not depend on the pipeline.

The Nustar project is not needed for the Rodeo Renewed Project, nor vice versa. The NuStar project is not a foreseeable consequence of the Rodeo Renewed Project, nor is the Rodeo Renewed Project a foreseeable consequence of the NuStar project. Further, neither project will change the scope or nature of the other project or the environmental effects.

Lastly, there were comments faulting the Draft EIR for not expressly making any disclaimer regarding the Nustar project, when in fact the Draft EIR explained the status of Unit 250 in Section 3.7, Project Operation.

Los Angeles Refinery Marine Terminal Project

Comments state the Los Angeles Refinery Marine Terminal Project is a third project that is part of the Rodeo Renewed Project and therefore "merits discussion in the DEIR and further investigation by the County." (NRDC Comment Letter, pages 6-8.) This is not correct.

This "third project" identified in the comments is a project undertaken by the Port of Los Angeles and Phillips 66. The primary purpose of the project is to perform construction upgrades at Berths 148-151 in the Port of Los Angeles. Phillips 66 leases those berths from the Port of Los Angeles and the construction upgrades are necessary to comply with California's Marine Oil Terminal Engineering and Maintenance Standards (MOTEMs). Portions of this property were first identified as in need of MOTEMs upgrades in 2009 and both the Port of Los Angeles and Phillips 66 have been evaluating and subsequently preparing for the MOTEMs upgrades since that time. The Port of Los Angeles issued a Draft Initial Study and Mitigated Negative Declaration (IS/MND) for the MOTEMs project in November 2021.³⁴

³⁴ Berths 148-151 [Phillips 66] Marine Oil Terminal and Wharf Improvement Project, Draft Initial Study/Mitigated Negative Declaration, Port of Los Angeles, November 2021. The IS/MND also includes as part of the project being evaluated a renewal of the Phillips 66 lease from the Port of Los Angeles for Berths 148-151. The lease expired in the mid-1990s and operators of the Los Angeles Refinery Marine Terminal, including, now Phillips 66, have been operating under a month-to-month holdover tenancy since that time.

The comments also speculate that the Los Angeles Refinery Marine Terminal project "may have a purpose, in part, of advancing the Rodeo Renewed Project." (NRDC, page 7.). This is speculated for two reasons. First, comments note that the IS/MND contains the following sentence:

The Phillips 66 MOT loads and unloads oil commodities products such as gas oil, residual fuel, dark oils, lube oil stocks, naphthas, gasoline/gasoline blend stocks, diesel and jet fuels, and distillate blend stocks, as well as renewables and renewable feedstocks, recovered oil, and water, to and from tanker vessels, both oceangoing vessels (OGVs) and barges.

Comments state that the listing of "renewables and renewable feedstocks" among the eleven other commodities loaded or unloaded at the Los Angeles Refinery Marine Terminal is evidence that the Los Angeles Refinery Marine Terminal project is part of the Rodeo Renewed Project. Phillips 66 has been unloading renewable diesel at the Los Angeles Marine Terminal since 2012, primarily for use as blendstocks in transportation fuels produced at the Los Angeles Refinery. Phillips 66 does not have any plan to unload renewable diesel or renewable feedstocks at the Los Angeles Refinery and then transport those materials to the Rodeo Refinery for subsequent processing there.

The comment also suggests information presented in a document that Phillips 66 submitted to CARB as part of its application to certify a Low Carbon Fuel Standard pathway. That document, which is entitled "CARB LCFS Fuel Pathway Report, Renewable Diesel" (cited in footnote 11 of the NRDC comments), supports an application to certify an LCFS pathway for canola oil processed at the Rodeo Refinery Unit 250. The canola oil was transported by rail from a crushing plant in the U.S. Midwest to the Port of Vancouver, where it was then loaded on a ship for unloading at the Rodeo Refinery. Because the ship's itinerary required it to first travel to unload materials in Southern California before then transiting to Rodeo to unload the canola oil, the LCFS pathway needs to account for the full transport distance (i.e., the LCFS carbon intensity is based on a lifecycle analysis that includes transportation). The canola oil "comes through" the Port of Los Angeles, which suggests offloading at the Los Angeles Refinery, thereby creating "a potential connection" between the Rodeo Renewed Project and the Los Angeles MOTEMs project. The projects, however, are not related because the canola oil being processed at the Rodeo Refinery had traveled on a ship that first offloaded materials in Southern California prior to offloading in the Bay Area.

MASTER RESPONSE NO. 8: NON-CEQA TOPICS AND PROJECT MERITS

CEQA does not require lead agencies to respond to comments that do not raise significant environmental issues on the content of the EIR or the impacts of the Project on the environment (see CEQA Guidelines Section 15088). Where a comment does not identify any specific deficiencies related to the analysis presented in the Draft EIR, no further response is warranted and the “comment is noted”. In addition, this Master Response is included to provide consideration of these comments by decision makers as part of the Project approval process. Moreover, because the comments were submitted during the public review period on the Draft EIR, they nonetheless constitute part of the public record that will be available to decision makers as part of this Final EIR.

MASTER RESPONSE REFERENCES

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3.3 Individual Responses to Comments

Individual comments and responses are presented starting on the following page and in the order shown in Table 2-1, Commenters on the Draft EIR, in Chapter 2, List of Commenters. The comment letters are organized by Agencies, Organizations, and Individuals. Each letter/correspondence is assigned a number and each comment that requires a response within a given letter/correspondence is also assigned a number.

Responses focus on comments that pertain to the adequacy of the analysis in the EIR or to other aspects pertinent to the potential effects of the Project on the environment pursuant to CEQA. As addressed in Master Response No. 8, Non-CEQA Topics/Project Merits, comments that address topics beyond the purview of the EIR or CEQA are noted as such for the public record.

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Comment Letter 1. Bay Area Air Quality Management District

COMMENT LETTER: 1

Gary Kupp

From: Alison Kirk <AKirk@baaqmd.gov>
Sent: Friday, December 17, 2021 1:58 PM
To: Gary Kupp
Cc: Lashun Cross; Joseph Lawlor; Gregory H. Nudd; Henry Hilken; Wendy Goodfriend; Matthew Hanson; Lily Maclver; Justine Buenaflor
Subject: BAAQMD Comment Letter on Phillips 66 Renewed Project DEIR attached
Attachments: 2021-12-17 P66 Renewed DEIR Comment ltr.pdf

Dear Gary,

Attached please find the Air District's comment letter on the Phillips 66 Renewed Project DEIR.

Please reply to confirm receipt.

Sincerely,

Alison Kirk
Pronouns: she/her
Principal Environmental Planner
Bay Area Air Quality Management District
375 Beale Street
San Francisco, CA 94105

COMMENT LETTER: 1



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

December 17, 2021

Gary Kupp, Senior Planner
Community Development Division
Contra Costa County, Department of Conservation & Development
30 Muir Road, Martinez, CA 94553

Re: Phillips 66 Rodeo Renewed Project Draft Environmental Impact Report

Dear Mr. Kupp:

ALAMEDA COUNTY

John J. Bauters
(Secretary)
Pauline Russo Cutter
David Haubert
Nate Miley

CONTRA COSTA COUNTY

John Gioia
David Hudson
Karen Mitchoff
(Vice Chair)
Mark Ross

MARIN COUNTY

Katie Rice

NAPA COUNTY

Brad Wagenknecht

SAN FRANCISCO COUNTY

Tyrone Jue
(SF Mayor's Appointee)
Myrna Melgar
Shamann Walton

SAN MATEO COUNTY

David J. Canepa
Carole Groom
Davina Hurt

SANTA CLARA COUNTY

Margaret Abe-Koga
Cindy Chavez
(Chair)

Rich Constantine
Rob Rennie

SOLANO COUNTY

Erin Hannigan
Lori Wilson

SONOMA COUNTY

Teresa Barrett
Lynda Hopkins

Jack P. Broadbent
EXECUTIVE OFFICER/APCO

Connect with the
Bay Area Air District:



Bay Area Air Quality Management District (Air District) staff has reviewed the Draft Environmental Impact Report (DEIR) for the Phillips 66 Rodeo Renewed Project (Project). The Project location in Contra Costa County (County), called the Rodeo Refinery, is located at 1380 San Pablo Avenue in Rodeo, and comprises approximately 1,100 acres of land. The main components of the Project would be located within the 495-acre developed area of the property northwest of Interstate 80 (I-80). This area is referred to as the Rodeo Site. The Rodeo Site is currently covered by a mixture of impervious surfaces associated with process equipment, parking areas, and roads. The remaining portion of the Rodeo Refinery, southeast of I-80, consists of a tank farm, the Carbon Plant Site, and undeveloped land that serves as a buffer zone.

As part of the Project, the Rodeo Site will stop processing crude oil, but will receive, blend, and ship up to 40,000 barrels per day (bpd) of gasoline and gasoline blendstocks. In addition to gasoline, the Rodeo Site will blend renewable diesel, propane, naphtha, and potentially aviation fuel, for a total of up to 55,000 bpd. In addition, the Carbon Plant Site, located southeast of I-80 at 2101 Franklin Canyon Road in Rodeo within the 1,100-acre Rodeo Refinery, will cease to be used and will be demolished.

Project construction activities are planned in two phases. The first phase includes construction activities only. The second phase includes construction and "transitional" activities. Transitional activities are described as a period of approximately seven months when there will be a temporary increase in marine vessel traffic while Project construction activities continue. At the end of the construction and transitional phase, Project operations will begin.

The Project also includes the demolition of the Santa Maria Refinery, located in San Luis Obispo County. Pipelines 100, 200, 300, and 400, which transport crude oil from the Santa Maria Refinery to the Rodeo Refinery, will cease to be used under the Project.

COMMENT LETTER: 1

The Air District has the following comments on the Project's DEIR.

Air Quality Impacts and Mitigation Measures

1. Please note that Project construction activities will be subject to District Regulation 6-6: Prohibition of Trackout. In addition, Mitigation Measure AQ-1 Implement Air District Basic Control Measures (MM AQ-1) (Page 4.3-63) includes the Air District's recommended Basic Construction Mitigation Measures but not the Air District's Advanced Construction Mitigation Measures. MM AQ-1 should commit to the following additional best practices during both phases of construction:
 - a. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
 - b. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
 - c. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
 - d. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - e. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
 - f. All trucks and equipment, including tires, shall be washed off prior to leaving the site.
 - g. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6-to-12-inch compacted layer of wood chips, mulch, or gravel.
 - h. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
 - i. Using only Tier 4 engines for all construction equipment and using zero-emission equipment as available.

2. Mitigation Measure AQ-2 Implement a NOx Mitigation Plan (MM AQ-2 or NM Plan) (Page 4.3-65) requires a mitigation plan to address nitrogen oxides (NOx) from construction and construction and transitional activities phases. The NM Plan would be submitted to the Air District and Contra Costa County prior to issuance of the construction-related permits and would prioritize mitigations in this order: on-site, off-site but within the Air District's jurisdiction, and finally, through relinquishment of Emission Reduction Credits. The Air District has the following comments on the proposed NM Plan:
 - a. The Air District does not agree with the conclusion that with MM AQ-2 (NM Plan) NOx emissions are less than significant with mitigation (LTSM) because the NM Plan has not been completed and made public and, thus, its effectiveness cannot be evaluated.

1

2

COMMENT LETTER: 1

- b. The Project Sponsor must commit to specific actions in the EIR as part of the public review process for the NM Plan to be acceptable as a mitigation measure.
 - c. The NM Plan must include specific emission reduction actions that are enforceable, quantifiable, and supplemental to actions required by any law or regulation.
 - d. The Air District has not agreed to review the NM Plan nor to review NM Plan Annual Reports during the construction and transition phases.
 - e. Before any off-site NOx mitigation is acceptable, the NM Plan must exhaust all on-site opportunities to reduce emissions during both the construction and transitional phases, for example, by using or installing:
 - i. All on-road heavy-duty trucks traveling to the construction site shall be model year 2014 or later.
 - ii. All off-road equipment shall use the highest tier engines available when zero-emissions equipment is not available (e.g., Tier 4 construction, rail, marine equipment, including for any dredging activities). In place of Tier 4 engines, off-road equipment can incorporate retrofits such that emission reductions achieved equal or exceed that of a Tier 4 engine.
 - iii. In advance of California Air Resources Board (CARB) requirements, the site will provide shore power to all vessel fleets and require all fleets to be shore power compatible.
 - iv. Off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) shall be battery powered.
 - v. Renewable diesel shall be used for all truck fleets.
 - vi. Diesel back-up generators shall not be used on the property unless absolutely necessary. If necessary, generators shall have Best Available Control Technology (BACT) that meets CARB's Tier 4 emission standards or meets the most stringent in-use standard, whichever has the least emissions.
 - f. The Air District does not support the relinquishment of Emission Reduction Credits to mitigate construction and transitional activity emissions, because this would not result in contemporaneous emissions reductions benefiting nearby communities.
3. Mitigation Measure AQ-4 Implement Odor Management Plan (MM AQ-4 or Odor Plan) (Page 4.3-81) states that during the 2-year construction phase of the Project, an Odor Plan shall be developed and implemented upon commencement of the renewable fuels processes. The Air District has the following comments on the proposed Odor Plan.
- a. The Air District does not have sufficient information to agree or disagree with the determination that with MM AQ-4 (Odor Plan) that operation and maintenance odors are less than significant with mitigation (LTSM) because the Odor Plan has not been completed and made public and, thus, its effectiveness cannot be evaluated.
 - b. The Project Sponsor must commit to specific actions in the EIR as part of the public review process for the Odor Plan to be acceptable as a mitigation measure.

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COMMENT LETTER: 1

- c. The Air District recommends more robust discussion of enforcement measures to address odors from processing renewable feedstock.
- d. Include a discussion in the Odor Plan of odors from mobile sources carrying odorous materials.
- e. Additional details are needed to document how the County will enforce the Odor Plan to ensure the expected management and control strategies are achieved, such as what actions will be taken if an odor is suspected.
- f. When odor complaints are reported, the Odor Plan should require immediate action to prevent repeat complaints. In addition, the Odor Plan should include an annual evaluation of the overall system performance, identifying any trends to provide an opportunity for improvements to the plan, and updating the odor management and control strategies, as necessary.

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cont'd

The Air District is available to help the County address the Odor Plan's potential compliance and enforcement issues by including odor control conditions on new, altered or modified stationary source permits, and by assisting with the development of a robust Odor Plan to mitigate potential odors.

Project Renewable Feedstocks

Section 3.8 Project Renewable Feedstocks discusses use of lipids (such as fats, oils, and grease) but does not mention cellulosic material commonly used in the production of renewable fuels (such as crop residues and woody biomass). The Air District recommends that the County investigate requiring that the Project Sponsor procure a percentage of organic waste from local sources for use as feedstock at the facility. Local governments in California are required to meet SB 1383 organic waste diversion requirements to reduce statewide disposal of organic waste by 75 percent from 2014 levels by 2025. The procurement and utilization of this organic waste as potential feedstock could result in benefits for associated transportation impacts and costs, greenhouse gas emissions, and land use.

4

Health Risk Assessment & Emissions Estimates Methodology

- 1. The DEIR methodology and calculations should reflect the most health protective analysis and therefore all future scenarios should include the Project's potential to emit under existing Air District permits. In addition, for the most health protective analysis, Appendix B, Attachment A, Stationary Source Table 12, page 144 of 4191 should include an additional 25,000 bpd of gasoline material to reflect the amount of throughput that is allowed to be processed under current Air District permits.
- 2. The DEIR should clarify if butane is a feed material for Unit 110, as butane is not included in the New Source Review (NSR) permit application for this unit (Appendix B, Attachment A, Stationary Source Table 9, page 140 of 4191).
- 3. Provide documentation that Air District permits issued to the Project Sponsor include Unit 250. If no documentation is available, please include Unit 250's throughput of 12,000 bpd of renewable fuel in the Project's emissions calculations.

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COMMENT LETTER: 1

4. The Air District recommends that for the construction and operations truck analysis, the methodology use the more conservative local silt loading factor to estimate resuspended road dust (DEIR page 4.3-54). 8
5. For the HRA methodology associated with entrained road dust emissions, use PM2.5 particle size multiplier (k) of 0.25 grams per mile from US. EPA AP-42. (DEIR Appendix B, Construction Table 6, p. 33 of 4191). 9
6. DEIR Appendix B Section 3.4.1.1 Marine Vessel Transiting should analyze marine emissions from the Marine Terminal to a distance of 11 nautical miles to be consistent with Air District transiting estimation purposes per Regulation 2-2-610 (Appendix B p. 14 of 4191). 10
7. For Marine Terminal Loading Emissions, explain why DEIR Appendix B uses a 0.2 saturation factor rather than the 0.35 factor submitted for stationary sources in the New Source Review application (Appendix B, Attachment A, Stationary Source Table 12 p. 144 of 4191). 11

If you have any questions regarding the Air District's permits, please contact Barry Young, Senior Advanced Projects Advisor, at byoung@baaqmd.gov or (415) 940-9641 to discuss permit requirements.

We encourage the County to contact Air District staff with any questions and to request assistance during the environmental review process. If you have any questions regarding these comments, please contact Alison Kirk, Principal Environmental Planner akirk@baaqmd.gov, Matthew Hanson, Environmental Planner at (415) 749-8733 mhanson@baaqmd.gov, or Lily MacIver, Environmental Planner I at lmaciver@baaqmd.gov.

Sincerely,



Greg Nudd
Deputy Air Pollution Control Officer – Policy

Cc: BAAQMD Director John Gioia
BAAQMD Director David Hudson
BAAQMD Vice Chair Karen Mitchoff
BAAQMD Director Mark Ross

Response to Comment 1

Phillips 66 will comply with BAAQMD Regulation 6-6: Prohibition of Trackout as part of the implementation of the BAAQMD's recommended Basic Construction Mitigation Measures. These measures are listed in the BAAQMD's CEQA Air Quality Guidelines (May 2017) in Section 8.1.2, Table 8-2, and presented in the Draft EIR as Mitigation Measure AQ-1: Implement BAAQMD Basic Control Measures.

The Executive Summary, Table ES-3, and Section 4.3, Air Quality, Mitigation Measure AQ-1 are revised as follows:

Mitigation Measure AQ-1: Implement BAAQMD Basic Control Measures

Construction contractors shall implement the following applicable BAAQMD basic control measures as BMPs:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least 2 times per day, not less than 4 hours apart, on San Pablo Avenue, between the refinery and I-80, and on the access roads between the Carbon Plant and Highway 4. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes as recommended by the BAAQMD, and not to exceed 5 minutes as required by the California airborne toxics control measure CCR Title 13, Section 2485. Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.
- All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Construction contractors shall implement the following Advanced Construction Mitigation Measures:

- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

With respect to the proposed mitigation measure listed at subpart (i) (“[u]sing only Tier 4 engines for all construction equipment and using zero-emission equipment as available”), portable and mobile equipment and vehicles used for Project construction will not be owned by, rented by, or otherwise under the direct control of Phillips 66. Offroad construction equipment and onroad vehicles owned or rented by third parties are regulated by CARB under the DOORS, PERP, and TRUCRS programs, as applicable. Phillips 66 will specify in contracts that diesel-powered terrestrial construction equipment and vehicles used for the Project comply with applicable CARB programs (DOORS, PERP, and TRUCRS), and request that Tier 4 equipment, as applicable, be used if available.

Response to Comment 2

The quantity of NO_x emissions from daily Carbon Plant emissions exceed the quantity of NO_x emissions needed to offset the incremental construction NO_x emissions from the Project. Table 4.3-7 in the Draft EIR indicates that baseline average daily NO_x emissions from the Carbon Plant are 1,967 lb/d, or 983.5 lb/d, per kiln. The Project’s potential daily NO_x emissions from construction are 257 lb/d (Table 4.3-11). Therefore, a reduction of approximately 983 lb/d of NO_x from the Carbon Plant would be sufficient to mitigate the projected increase of 257 lb/d.

The Executive Summary, Table ES-3. Summary of Determinations and Mitigation for the Proposed Project, and Section 4.3, Air Quality, Mitigation Measure AQ-2: Implement a NO_x Mitigation Plan, is revised as follows:

Recommended Onsite Emission Reduction Measures:

- i. Onsite equipment and vehicle idling and/or daily operating hour curtailments;
- ii. Construction “clean fleet” using Tier 4 construction equipment to the maximum extent practicable;
- iii. Reductions in Vessel and/or Rail Traffic;
- iv. Other onsite NO_x reduction measures (e.g., add-on NO_x emission controls); or
- v. Avoid the use of Suezmax vessels to the maximum extent practicable.

Contra Costa County Department of Conservation and Development in its consideration of the NM Plan shall have the option to require daily NO_x reductions at the Carbon Plant necessary to achieve the NO_x daily emissions significance threshold. Daily idling of one kiln would provide sufficient NO_x

reductions to offset the Project's incremental NOx emissions to below the NOx daily emissions threshold of significance on individual days that construction emissions are estimated to potentially be above the daily NOx significance threshold.

Response to Comment 3

Section 4.3, Air Quality Mitigation Measure AQ-4 is revised as follows:

Mitigation Measure AQ-4: Implement Odor Management Plan

~~During the 2-year construction phase of the Project, an Odor Management Plan (OMP) shall be developed and implemented upon commencement of the renewable fuels processes, which will become an integrated part of daily operations at the Rodeo Refinery. The purpose of the OMP is to prevent any offsite odors and effect diligent identification and remediation of any potential odors generated by the Project. The OMP shall outline equipment that is in place and procedures that facility personnel shall use to address odor issues, facility wide. The OMP would include evaluation of the overall system performance, identifying any trends to provide an opportunity for improvements to the plan, and updating the odor management and control strategies, as necessary. This plan would be retained at the facility for County or other government agency inspection upon request.~~

Phillips 66 shall develop and implement an Odor Management Plan (OMP). The OMP shall be an integrated part of daily operations at the Rodeo Site, to effect diligent identification and remediation of any potential odors generated by the Facility.

- The OMP shall be developed and reviewed by the County and the BAAQMD prior to operation of the Project, and implemented upon commencement of the renewable fuels processes.
- The OMP shall be an "evergreen" document that provides continuous evaluation of the overall system performance, identifying any trends to provide an opportunity for improvements to the plan, and updating the odor management and control strategies as necessary.
- The OMP shall include guidance for the proactive identification and documentation of odors through routine employee observations, routine operational inspections, and odor compliant investigations.
- All odor complaints received by the facility shall be investigated as soon as is practical within the confines of proper safety protocols and site logistics. The goal of the investigation will be to determine if an odor originates from the facility and, if so, to determine the specific source and cause of the odor, and then to remediate the odor.
- The OMP shall be retained at the facility for Contra Costa County, the BAAQMD, or other government agency inspection upon request.

It should be noted Phillips 66 has prepared a draft OMP which is currently being reviewed by the County.

Response to Comment 4

The County is aware of SB 1383 and is taking appropriate steps to comply with its provisions. However, while SB 1383 addresses collection of organic waste, procurement and use of organic waste by local jurisdictions, along with capacity planning for counties and cities, it does not set forth requirements for the procurement of organic waste by private businesses. If the County determines that such a mechanism is appropriate to meet organic waste requirements under SB 1383, it will take appropriate steps to consider such regulatory action in a manner that would be applicable County-wide, not to a single business. Further still, as explained in more detail below, the Project's feedstocks are regulated by CARB as part of the LCFS program and the County is not empowered by CEQA to narrow the array of feedstocks

contemplated by that program or otherwise usurp state and national regulators with respect to the Project's feedstock use.

Response to Comment 5

The methodology and calculations used in the Draft EIR is a health protective analysis because it includes the potential to emit for all new sources included in the Project. In response to the comment, the emissions were calculated for the loading of 25,000 bpd of gasoline material and health risks were characterized. Emissions are presented in Revised Draft EIR Appendix B, Attachment B, Table 12 of the Final EIR. Appendix B of the Draft EIR has been replaced in whole by Final EIR Appendix B, Revised Draft EIR Appendix B, Air Quality and Greenhouse Gas Emissions Technical Data. The results of the impacts of the gasoline loading activity when combined with the impacts reflected in the Draft EIR analysis do not result in any additional significant impacts.

For reference purposes, the table shown below includes the impacts of the gasoline loading activity and the Unit 110 equipment leaks (see Response to Comment 6) when combined with the Project Operational impacts included in the Draft EIR.

Summary of Rodeo Refinery Operational MEIR Results for Residential and Worker for Cancer, Chronic, PM2.5, and Acute in Response to Comments 5 and 6

Type of Estimated Health Impact	Excess Lifetime Cancer Risk ^a (in a million)	Chronic Hazard Index ^b (unitless ratio)	PM _{2.5} ^c (µg/m ³)	Acute Hazard Index ^d (unitless ratio)
Residential Receptor—30 Years of Operation				
Draft EIR Maximum Health Risk	8.33	0.14	0.22	NA
25,000 bbl/day Gasoline Loading Maximum Health Risk (Comment 5)	0.0013	4.9E-06	0.0044	NA
U110 Stream Change Maximum Health Risk (Comment 6)	0.0055	3.0E-05	0	NA
Revised Total^e	8.34	0.14	0.23	NA
Worker Receptor—30 Years of Operation				
Draft EIR Maximum Health Risk	0.51	0.17	NA	NA
25,000 bbl/day Gasoline Loading Maximum Health Risk (Comment 5)	1.1E-04	5.0E-06	NA	NA
U110 Stream Change Maximum Health Risk (Comment 6)	7.7E-04	5.0E-05	NA	NA
Revised Total^e	0.51	0.17	NA	NA
Acute Receptor				
Draft EIR Maximum Health Risk	NA	NA	NA	0.39
25,000 bbl/day Gasoline Loading Maximum Health Risk (Comment 5)	NA	NA	NA	1.7E-04

Type of Estimated Health Impact	Excess Lifetime Cancer Risk ^a (in a million)	Chronic Hazard Index ^b (unitless ratio)	PM _{2.5} ^c (µg/m ³)	Acute Hazard Index ^d (unitless ratio)
U110 Stream Change Maximum Health Risk (Comment 6)	NA	NA	NA	0.0018
Revised Total^e	NA	NA	NA	0.39
Thresholds				
BAAQMD Significance Threshold	10.0	1.0	0.3	1.0
Exceed Threshold?	No	No	No	No

Notes:

- ^a. MEIR for cancer risk located at UTMx 566686, UTM_y 4214279. MEIW for cancer risk located at UTMx 567215, UTM_y 4213753.
- ^b. MEIR for chronic hazard index located at UTMx 567333, UTM_y 4212103. MEIW for chronic hazard located at UTMx 566577, UTM_y 4211924.
- ^c. MEIR for PM_{2.5} located at UTMx 567308, UTM_y 4212253.
- ^d. MEI for acute hazard index located at UTMx 566488, UTM_y 4210717.
- ^e. Maximum risks for each receptor type (residential, worker, acute) were individually identified for the 25,000 bbl/day Gasoline Loading (in response to Comment 5) and U110 Stream Change (in response to Comment 6). The maximum risks from these two individual analyses do not occur at the same locations as each other nor at the same locations as the original Draft EIR maximum health risks. Therefore, adding all three risks together is conservative. The actual combined health risk would be lower.

Response to Comment 6

See Response to Comment 3-21. Butane is currently capable of being used as feed for the Unit 110 Hydrogen Plant (U110). As noted in the Project Description (Draft EIR page 3-29), piping and a control valve will be added to allow fuel gas to be used as feed for U110 to produce hydrogen. The Draft EIR indicates that the material in the new components for U110 (Revised Draft EIR Appendix B, Attachment B, Stationary Source Table 9) will be in butane service. The material should have been shown as RFG (refinery fuel gas) instead of butane. Appendix B of the Draft EIR has been replaced in whole by Final EIR Appendix B, Revised Draft EIR Appendix B, Air Quality and Greenhouse Gas Emissions Technical Data.

The revised VOC and TAC emissions are presented in Revised Draft EIR Appendix B, Attachment B, Table 9 and Appendix B, Attachment B, Table 11 of the Final EIR, respectively. The results of the impacts of this stream revision at U110 when combined with the impacts reflected in the Draft EIR analysis do not result in any significant impacts. A conservative assessment of these risks is presented in Response to Comment 5. The impacts of the gasoline loading activity are analyzed in the Response to Comment 5.

Response to Comment 7

The Refinery’s current BAAQMD Title V Operating Permit includes Unit 250, also designated as S#460 in the permit.³⁵

Also see Master Response No. 7, Project Description - Piecemealing.

³⁵ https://www.baaqmd.gov/~media/files/engineering/title-v-permits/a0016/a0016_12_27_2018_mr_final_permit_02-pdf.pdf?ia=en&rev=a7c5b209190f469db56191de29bbda38

Response to Comment 8

The construction and operations truck analysis uses the same silt loading factor that is used in the BAAQMD New Source Review application. The BAAQMD permit will require testing to determine the silt loading factor.

Response to Comment 9

The PM2.5 multiplier has been updated to 0.25 grams per mile for entrained road dust emission calculations. Use of this multiplier does not change the significance of any of the conclusions in the Draft EIR.

Response to Comment 10

Marine transit emissions were analyzed out to 11 nautical miles outside of Golden Gate Bridge as required per Regulation 2-2-610. This is reflected in Marine Table 49 of Revised Draft EIR Appendix B that includes the marine transit zones.

The following sections of the Draft EIR are revised as follows:

4.3.4.2 CEQA Baseline Emissions

Vessel emissions of criteria pollutants include hoteling at the wharf or at anchor, and vessel maneuvering and transit between the wharf or anchorage area out to the Pilot Buoy located ~~approximately 9 nautical miles (7.8 statute miles)~~ 11 nautical miles west of the Golden Gate.

4.8.2.3 Project Setting

Vessel emissions include hoteling at the wharf or at anchor, and vessel maneuvering and transit between the wharf or anchorage area out to the Pilot Buoy located ~~approximately 9~~ 11 nautical miles ~~(10.4 statute miles)~~ west of the Golden Gate.

Appendix B Section 3.4.1.1

~~Project transiting was modeled as far as approximately 10 nautical miles from the Marine Terminal. Vessel emissions include hoteling at the wharf or at anchor, and vessel maneuvering and transit between the wharf or anchorage area out to the Pilot Buoy located 11 nautical miles west of the Golden Gate. Figure 3-3 shows the modeled transiting route within this 10 nautical mile boundary for all Project sources.~~

Response to Comment 11

The Draft EIR used the saturation factor that is used in the facility's BAAQMD Regulation 12 Rule 15 emission inventory. This is appropriate for the Draft EIR because it is consistent with baseline conditions. The factor used in the New Source Review (NSR) application reflects a 50/50 split between barge and vessel loading for NSR Potential to Emit (PTE) purposes and is not meant to represent baseline conditions.

Loading emissions were estimated using a saturation factor of 0.35 for both the baseline and post-project scenarios. The table below shows a comparison of the emissions from the Draft EIR using the original 0.2 saturation factor and the emissions using the 0.35 saturation factor. The decrease in loading emissions from the Project is larger using the 0.35 factor than the decrease in the Draft EIR using the 0.2 factor. Therefore, the analysis in the Draft EIR using the 0.2 saturation factor and lower emission reduction is more conservative.

Comparison of Loading Emissions – 0.2 vs. 0.35 Saturation Factor

Saturation Factor	VOC Baseline (tpy)	VOC Post-Project (tpy)	Change from Project (tpy)
0.2 (Draft EIR)	2.84	1.67	-1.17
0.35	4.97	2.92	-2.05

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Comment Letter 2. California State Lands Commission (CSLC)

COMMENT LETTER: 2

Gary Kupp

From: Mongano, Sarah@SLC <Sarah.Mongano@slc.ca.gov>
Sent: Friday, December 17, 2021 2:03 PM
To: Gary Kupp
Cc: Oliver, Kendra@SLC; Schroeder, Marlene@SLC; Ceballos, Lina@SLC
Subject: RE: Phillips 66 Rodeo Renewed Project comment extension request
Attachments: 2021-12 P66 RODEO RENEWED PROJECT DEIR Review Comments - DRAFT.docx; 2021-12 P66 RODEO RENEWED PROJECT DEIR MEPD.docx

Hi Gary,

Please see CA State Lands Commission staff's DRAFT comments, attached. We appreciate you allowing us a couple more days to get the final letter routed and signed. However this draft letter includes all of staff's comments on the Phillips 66 Rodeo Renewed Project Draft EIR. Please note that the attachments include a letter incorporating commission staff comments in general, and also an attachment that is specifically comments from our Marine Environmental Protection Division engineering staff.

I will be following up as soon as possible next week.

Have a great weekend,

Sarah Mongano

Senior Environmental Scientist, Division of Environmental Planning and Management

California State Lands Commission

100 Howe Ave, Suite 100-South, Sacramento, CA 95825-8202

sarah.mongano@slc.ca.gov

Office: 916-574-1889 (for faster response please email, as I am working at home due to Covid-19 restrictions)

PRIVILEGE AND CONFIDENTIALITY NOTICE. This message, its contents, and any attachments are intended only for the use of the individual to whom or entity to which it is addressed and may contain information that is legally privileged, confidential, and exempt from disclosure under applicable law. If you are not the intended recipient of this message, you are hereby notified that any dissemination, distribution, or copying of this communication and any attachments or other use of a transmission received in error is strictly prohibited. If you have received this transmission in error, please notify me immediately at the above telephone number or return email and delete this message, along with any attachments, from your computer. Thank you.

From: Gary Kupp <Gary.Kupp@dcd.cccounty.us>
Sent: Thursday, December 16, 2021 2:16 PM
To: Mongano, Sarah@SLC <Sarah.Mongano@slc.ca.gov>
Subject: RE: Phillips 66 Rodeo Renewed Project comment extension request

Attention: This email originated from outside of SLC and should be treated with extra caution.

Sounds good.

Thanks,
Gary

COMMENT LETTER: 2

From: Mongano, Sarah@SLC <Sarah.Mongano@slc.ca.gov>
Sent: Thursday, December 16, 2021 11:55 AM
To: Gary Kupp <Gary.Kupp@dcd.cccounty.us>
Subject: RE: Phillips 66 Rodeo Renewed Project comment extension request

Thank you, I certainly can provide you an email summary of our comments tomorrow. Its simply the administrative time to route the official letter through legal and getting it signed that will probably get pushed to Monday or Tuesday.

I appreciate the understanding.

Sarah Mongano

*Senior Environmental Scientist, Division of Environmental Planning and Management
California State Lands Commission
100 Howe Ave, Suite 100-South, Sacramento, CA 95825-8202
sarah.mongano@slc.ca.gov*

Office: 916-574-1889 (for faster response please email, as I am working at home due to Covid-19 restrictions)

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From: Gary Kupp <Gary.Kupp@dcd.cccounty.us>
Sent: Thursday, December 16, 2021 10:16 AM
To: Mongano, Sarah@SLC <Sarah.Mongano@slc.ca.gov>
Subject: RE: Phillips 66 Rodeo Renewed Project comment extension request

Attention: This email originated from outside of SLC and should be treated with extra caution.

Hi Sarah,
Unfortunately, we cannot extend the comment period. So I suggest that you send me before the deadline your letter or email summarizing your overall comments and also indicate that supplemental information will follow on 21st. Hope this helps.



Gary Kupp, Senior Planner
CONTRA COSTA COUNTY
Conservation & Development
30 Muir Road, Martinez, CA 94553
Direct: (925) 655-2871
Main: (925) 655-2705
Email: gary.kupp@dcd.cccounty.us

From: Mongano, Sarah@SLC <Sarah.Mongano@slc.ca.gov>
Sent: Wednesday, December 15, 2021 3:50 PM
To: Gary Kupp <Gary.Kupp@dcd.cccounty.us>
Subject: Phillips 66 Rodeo Renewed Project comment extension request

COMMENT LETTER: 2

Hi Mr Kupp,

I'm coordinating comments from the California State Lands Commission for the Phillips 66 Rodeo Renewed Project Draft EIR. We have run into some administrative delays due to heavy work load and illness among our reviewers, and the same staff is reviewing both this document and the Martinez Refinery Renewable Fuels Project to meet the same deadline. We are wondering if you could give us a couple of extra days to submit our comment letter? I'm currently compiling all Phillips 66 Rodeo Renewed Project comments from CSLC staff into one letter and it needs to be reviewed by legal and managers before it can be signed, which may not be possible before COB on Friday. Could I email our signed letter to you on the 21st or 22nd next week?

Sarah Mongano

Senior Environmental Scientist, Division of Environmental Planning and Management

California State Lands Commission

100 Howe Ave, Suite 100-South, Sacramento, CA 95825-8202

sarah.mongano@slc.ca.gov

Office: 916-574-1889 (for faster response please email, as I am working at home due to Covid-19 restrictions)

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COMMENT LETTER: 2

STATE OF CALIFORNIA

GAVIN NEWSOM, *Governor*

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202



Established in 1938

JENNIFER LUCCHESI, *Executive Officer*
(916) 574-1800 Fax (916) 574-1810
California Relay Service TDD Phone 1-800-735-2929
from Voice Phone 1-800-735-2922

Contact Phone: (916) 574-1890

December 17, 2021

File Ref: SCH #2020120330

Gary Kupp, Senior Planner
Community Development Division
Contra Costa County, Department of Conservation and Development
30 Muir Road, Martinez, CA

VIA REGULAR & ELECTRONIC MAIL (gary.kupp@dcd.cccounty.us)

Subject: Draft Environmental Impact Report for the Phillips 66 Rodeo Renewed Project

Dear Mr. Kupp:

The California State Lands Commission (Commission) staff has reviewed the subject Draft Environmental Impact Report (Draft EIR) for the Phillips 66 Rodeo Renewed Project (Project), which is being prepared by the Community Development Division of the Department of Conservation and Development of Contra Costa County (County). The County is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Commission is a trustee agency for projects that could directly or indirectly affect State sovereign land and their accompanying Public Trust resources or uses. Additionally, if the Project involves work on State sovereign land, the Commission will act as a responsible agency. The Commission is also a regulatory agency that oversees the Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS).

Commission Jurisdiction, Public Trust Lands, and Regulatory Authority

The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6009, subd. (c); 6009.1; 6301; 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust Doctrine. Therefore, the Commission has jurisdiction over present day and historic tidelands on the Site comprising approximately 35 acres out of the 66-acre Site. The Commission leases its portion of the Site to C.S. Land, Inc., an



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affiliate of Phillips 66 Company, through Lease No. PRC 5736. The lease authorizes C.S. Land to hold the Commission's portion of the Site in an "undeveloped state." Phillips 66 Company owns the approximate remaining 31 acres. Because the exact ownership boundaries are undetermined, Phillips 66 may need to coordinate with the Commission to determine if any amendments to the lease are required if staging is to occur on State owned land, such as the Selby Slag (Selby Site).

On December 5, 2012, the Commission authorized an assignment of Lease No. PRC 600.1 to Phillips 66 for use and maintenance of a Marine Oil Terminal in San Pablo Bay, town of Rodeo, Contra Costa County (Rodeo Refinery). This lease has a term of 30 years, beginning September 1, 2001, and ending August 31, 2031. The approximate area of the lease premises is 16.726 acres of filled and unfilled sovereign land in San Pablo Bay. In review of the proposed Project, Phillips 66 will need to submit an application to amend their existing lease for the proposed conversion of the existing butane rail loading stations.

The proposed Project also mentions three points of water effluent discharge into San Pablo Bay. The existing lease includes a wastewater outfall line and diffuser within parcel 2 and a saltwater intake platform within parcel 6. If the Project's three points of water effluent are not the points already authorized in the lease, an application will be required to bring the three points of water effluent discharge under lease.

On December 5, 2012, the Commission authorized an assignment of Lease No. PRC 1449.1 to Phillips 66 for use and maintenance of an 18-inch-diameter wastewater outfall pipeline and an abandoned 14-inch-diameter outfall pipeline in the Pacific Ocean, offshore of Oceano Dunes State Vehicular Recreation Area, near the city of Santa Maria, San Luis Obispo County. This lease has a term of 25 years, beginning October 25, 2003, and ending October 24, 2028. The approximate area of the lease premises is 4.5 acres of tide and submerged land in the Pacific Ocean. The wastewater outfall pipeline and abandoned outfall pipeline service the upland Santa Maria Oil Refinery Facility located three miles inland. In review of the proposed Project, Phillips 66 would discontinue the processing of crude oil at the Rodeo Refinery. As a result, the Santa Maria facility would no longer be necessary to provide feedstock and would be demolished, including most existing process equipment and support infrastructure (storage tanks, buildings, onsite piping, and pumps). Phillips 66 will need to submit an application for amendment of the lease to remove the outfall pipelines.

Finally, the Commission also has regulatory authority over MOTEMS, which are codified in California Code of Regulations, title 24, California Building Code, Chapter 31F—Marine Oil Terminals (Cal. Code Regs., tit. 24, § 3101F et seq.).

Project Description

Phillips 66 proposes to modify the existing Rodeo Refinery into a repurposed facility that would process renewable feedstocks into renewable diesel fuel, renewable components for blending with other transportation fuels, and renewable fuel gas. The Project lists the following objectives:



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- Convert the Rodeo Refinery to a renewable transportation fuels production facility;
- Provide/maximize production of renewable fuels to assist California in meeting its goals for renewable energy, greenhouse gas emission reductions, and reduced Carbon Intensity for transportation fuels;
- Convert existing equipment and infrastructure to produce transportation fuels from non-hazardous renewable feedstocks and discontinue the processing of crude oil at the Rodeo Refinery;
- Preserve and protect existing family-wage jobs in Contra Costa County during and after the transition to a renewable transportation fuels production facility;
- Repurpose and reuse the facility's existing equipment capacity, including the Marine Terminal and Rail Butane Loading Rack;
- Preserve marine, rail, and truck offloading facilities to access national/international renewable feedstocks to provide renewable transportation fuels and conventional fuels and conventional fuel components;
- Provide the ability to process a comprehensive range of renewable feedstocks, including treated and untreated feedstocks;
- Maintain the facility's current capacity to supply regional market demand for transportation fuels, including renewable and conventional fuels;
- Ensure California transportation fuel supply needs are met during the transition to a renewable fuels facility by temporarily (approximately 7 months) increasing gas oil and crude deliveries at the Marine Terminal to maintain current transportation fuel production at the Rodeo Refinery;
- Provide a beneficial use for recyclable fats, oil, and grease within the state of California; and
- Provide a mechanism for compliance with the federal Renewable Fuel Standard and the state Low-Carbon Fuel Standard through processing facilities in California.

From the Project Description, Commission staff understands that Phillips 66 proposes to modify the existing Rodeo Refinery into a repurposed facility that would process renewable feedstocks into renewable diesel fuel, renewable components for blending with other transportation fuels, and renewable fuel gas. This would include the proposed activities to convert the refinery to process renewable feedstocks, and the decommissioning of various facilities at the following four sites:

- Rodeo Site, the 495-acre area within the Rodeo Refinery where the main Project activities would occur.
- Carbon Plant Site, the current location of the Carbon Plant in Franklin Canyon (within the 1,100-acre Rodeo Refinery). Under the Project, the Carbon Plant would no longer be necessary and would be demolished.
- Santa Maria Site, the Santa Maria Refinery, including the applicant-owned buffer land, located near Nipomo, San Luis Obispo County. The Santa Maria Site would no longer be necessary to provide semi-refined feedstock to the Rodeo Refinery and would be demolished under the Project.

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- Four pipelines (Lines 100, 200, 300, and 400) that provide crude oil from the Santa Maria Site to the Rodeo Refinery. The pipeline sites would cease to be used under the Project.

The Draft EIR identifies the Reduced Project Alternative as the Environmentally Superior Alternative.

The comments below are specific to any use of State-owned sovereign land under the jurisdiction of the Commission within the Project area. Commission staff request that the County consider the following comments on the Project's Draft EIR to ensure that impacts to State sovereign land are adequately analyzed for the Commission's use of the EIR when considering a future lease amendments.

Engineering Review

Please see the attached table.

Environmental Review

General Comments

Figure 3-1, *Rodeo Refinery and Vicinity* indicates the Project boundary with a solid black line. This boundary shows a triangular shaped inclusion on the east side that encompasses a portion of submerged and therefore sovereign lands. This area does not appear to be included in the existing Commission lease. What is the purpose of including that aquatic area inside the Project boundary? What activities will take place specifically in that area?

5

Marine Invasive Species

Staff recommends that the Marine Invasive Species Program (MISP) regulatory language be updated with the following:

MISP was reauthorized and expanded in 2003 with the passage of the Marine Invasive Species Act (MISA; AB 433, Chapter 491, Statutes of 2003) which, among other provisions, directed the Commission to adopt ballast water management regulations for vessels moving coastally between ports on the west coast of the U.S. Since 2003, the MISA has been amended numerous times, most notably to establish California's ballast water discharge performance standards (SB 497, Chapter 292, Statutes of 2006) and to authorize the Commission to adopt and implement biofouling management regulations (AB 740, Chapter 370, Statutes of 2007).

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The Commission adopts and amends regulations to implement the MISA (Public Resources Code section 71201.7). The ballast water management regulations for coastal vessels were adopted in 2006 (California Code of Regulations, title 2, section 2280 et seq.); ballast water discharge performance standards were codified in 2007 (California Code of Regulations,

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title 2, section 2291 et seq.); and the biofouling management regulations (see section 7.1) were adopted and implemented in 2017 (California Code of Regulations, title 2, section 2298.1 et seq.). These regulations were strengthened through the adoption of enforcement regulations in 2017 (California Code Regulations, title 2, section 2299.01 et seq.).

In 2019, the Commission sponsored AB 912 (Chapter 433, Statutes of 2019) which authorizes the Commission to:

- Adopt and enforce the federal ballast water discharge performance standards set forth in section 151.2030(a) of Title 33 of the Code of Federal Regulations
- Delay implementation of the interim and final California ballast water discharge performance standards to 2030 and 2040, respectively, due to a lack of available ballast water treatment technologies to enable vessels to meet the California standards

In 2021, the Commission amended existing regulations (California Code of Regulations, title 2, section 2291 et seq.) to implement the requirements of AB 912.

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cont'd

Cultural Resources and Tribal Cultural Resources

Title to Resources Within Commission Jurisdiction: The EIR should state that the title to all archaeological sites, and historic or cultural resources on or in the tide and submerged lands of California is vested in the state and under the jurisdiction of the Commission (Pub. Resources Code, § 6313). Commission staff requests that the County consult with Staff Attorney Jamie Garrett ([contact](#) information below) should any cultural resources on state lands be discovered during construction of the proposed Project.

7

Staff requests that the following statement be included as a mitigation measure in the final EIR, “The final disposition of archaeological, historical, and paleontological resources recovered on State land under the jurisdiction of the California State Lands Commission must be approved by the Commission.”

8

Land Use

The proposed project contemplates using the Selby Site in Contra Costa County as a staging area for the project construction. The Selby Site consists of about 66 acres located in Contra Costa County, California, near the communities of Rodeo and Crockett and next to the southern shoreline of the San Pablo Bay and the Carquinez Strait, both part of the San Francisco Bay. The Selby Slag Remediation Project, encompassing the entire 66-acre Selby Site, is anticipated to begin within the next few years, and therefore may not be available for use as a staging area for this project as described in the Draft EIR. Therefore, Phillips 66 may need to find an alternate location for staging.

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Cumulative Impacts

The Selby Slag Remediation Project, which is within a 3-mile radius of the Rodeo Refinery and in the environmental review stages, is not considered in the cumulative analysis. The Selby Site is also identified as a construction and demolition laydown area for equipment staging for this Project (ref. Section 3.12.3 [pg. 3-34] and Section 4.11.6 [pg. 4.11-374]). The Selby Slag Remediation Project should be included in the cumulative analysis.

10

Thank you for the opportunity to comment on the Draft EIR for the Project. As a trustee and regulatory agency, Commission staff request that you consider our comments prior to certification of the Draft EIR.

Please send copies of future Project-related documents, including electronic copies of the Final EIR, Mitigation Monitoring and Reporting Program, Notice of Determination, CEQA Findings, and Statement of Overriding Considerations when they become available. Please refer questions concerning environmental review to Sarah Mongano, Senior Environmental Scientist, at (916) 574-1889 or at sarah.mongano@slc.ca.gov. For questions concerning Commission leasing jurisdiction, please contact Marlene Schroeder, Public Land Management Specialist, at marlene.schroeder@slc.ca.gov or (916) 574-2320. For questions concerning the MOTEMS review, please contact Kendra Oliver, Senior Engineer, at (510) 680-0875, or at kendra.oliver@slc.ca.gov. For questions concerning archaeological or historic resources under Commission jurisdiction, please contact Jamie Garrett, Staff Attorney, at jamie.garrett@slc.ca.gov or (916) 574-0398.

Sincerely,

Nicole Dobroski, Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
Eric Gillies (DEPM), Commission
Sarah Mongano (DEPM), Commission
Marlene Schroeder (LMD), Commission
Brian Busch (LMD), Commission
Kendra Oliver (MEPD), Commission
Chris Beckwith (MEPD), Commission
Lina Ceballos (MISP), Commission
Joe Fabel (Legal), Commission
Ben Johnson (Legal), Commission
Wendy Hall (Exec), Commission

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att: table of Marine Environmental Protection Division comments on the Phillips 66
Rodeo Renewed Project Draft EIR

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Marine Environmental Protection Division comments on the Phillips 66 Rodeo Renewed Project Draft EIR:

Reference (Page #s)	Description	Comments																																																																																									
xxii xxvii 3-24 3-39 5-10 to 11	<p>PRODUCT THROUGHPUT & VESSEL TRAFFIC AT THE RODEO REFINERY'S MARINE TERMINAL:</p> <p>Table ES-1. Rodeo Refinery Pre- and Post-Project Operational Activity</p> <table border="1"> <thead> <tr> <th></th> <th>Baseline</th> <th>Post-Project</th> </tr> </thead> <tbody> <tr> <td colspan="3">Product Received</td> </tr> <tr> <td>Marine Terminal Crude and Gas Oil Received (1,000 bpd 12-month average)</td> <td>35</td> <td>0</td> </tr> <tr> <td>Pipeline Crude Received (1,000 bpd 12-month average)</td> <td>70</td> <td>0</td> </tr> <tr> <td>Renewable Feedstocks Received (1,000 bpd 12-month average)^a</td> <td>0</td> <td>80</td> </tr> <tr> <td>Gasoline and Blendstocks Received (1,000 bpd 12-month average)</td> <td>10</td> <td>38</td> </tr> <tr> <td colspan="3">Product Shipped</td> </tr> <tr> <td>Petroleum Products Shipped (1,000 bpd 12-month average)</td> <td>121</td> <td>40</td> </tr> <tr> <td>Renewable Fuels Shipped (1,000 bpd 12-month average)</td> <td>0</td> <td>67</td> </tr> <tr> <td>Treated Renewable Feedstock Shipped (1,000 bpd 12-month average)</td> <td>0</td> <td>25</td> </tr> <tr> <td colspan="3">Mode of Transportation</td> </tr> <tr> <td>Tanker Vessels (calls/year)</td> <td>80</td> <td>201</td> </tr> <tr> <td>Barges (calls/year)</td> <td>90</td> <td>161</td> </tr> <tr> <td>Carbon Plant Site Rail (average railcars per week)</td> <td>6.96</td> <td>0</td> </tr> <tr> <td>Refinery Railcar Loading/Unloading Rack (average railcars per day)</td> <td>4.7</td> <td>16</td> </tr> <tr> <td>Santa Maria Site Rail (railcars per year)</td> <td>409</td> <td>0</td> </tr> <tr> <td>Refinery and Carbon Plant Truck Trips (roundtrips per year)</td> <td>40,213</td> <td>16,026</td> </tr> <tr> <td>Santa Maria Site Truck Trips (roundtrips per year)</td> <td>13,008</td> <td>0</td> </tr> <tr> <td>Rodeo Refinery Approximate Number of Employees and Contractors</td> <td>650</td> <td>650</td> </tr> </tbody> </table> <p><small>^a The facility currently has the capacity to produce approximately 12,000 bpd of renewable fuels from pretreated feedstocks using Unit 250, which was previously used to process petroleum-based feedstocks. However, renewable feedstocks and renewable fuels were not produced from U250 during the baseline period in 2019 and are not included in this table.</small></p> <p>Table 3-7. Annual Vessel Traffic at Rodeo Refinery Marine Terminal</p> <table border="1"> <thead> <tr> <th>Vessel Class</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>3 Year Average (2017-2019)</th> <th>5 Year Average (2015-2020)</th> </tr> </thead> <tbody> <tr> <td>Barge Visits</td> <td>83</td> <td>63</td> <td>73</td> <td>135</td> <td>86</td> <td>90</td> <td>98</td> </tr> <tr> <td>Tanker Visits</td> <td>81</td> <td>82</td> <td>76</td> <td>84</td> <td>63</td> <td>81</td> <td>74</td> </tr> <tr> <td>Total</td> <td>164</td> <td>145</td> <td>149</td> <td>219</td> <td>149</td> <td>170</td> <td>172</td> </tr> </tbody> </table> <p><small>*Note: 3-year average numbers used in the analysis were averaged and rounded by vessel category and tier level group, which results in a lower baseline and larger tanker increase being evaluated.</small></p>		Baseline	Post-Project	Product Received			Marine Terminal Crude and Gas Oil Received (1,000 bpd 12-month average)	35	0	Pipeline Crude Received (1,000 bpd 12-month average)	70	0	Renewable Feedstocks Received (1,000 bpd 12-month average) ^a	0	80	Gasoline and Blendstocks Received (1,000 bpd 12-month average)	10	38	Product Shipped			Petroleum Products Shipped (1,000 bpd 12-month average)	121	40	Renewable Fuels Shipped (1,000 bpd 12-month average)	0	67	Treated Renewable Feedstock Shipped (1,000 bpd 12-month average)	0	25	Mode of Transportation			Tanker Vessels (calls/year)	80	201	Barges (calls/year)	90	161	Carbon Plant Site Rail (average railcars per week)	6.96	0	Refinery Railcar Loading/Unloading Rack (average railcars per day)	4.7	16	Santa Maria Site Rail (railcars per year)	409	0	Refinery and Carbon Plant Truck Trips (roundtrips per year)	40,213	16,026	Santa Maria Site Truck Trips (roundtrips per year)	13,008	0	Rodeo Refinery Approximate Number of Employees and Contractors	650	650	Vessel Class	2016	2017	2018	2019	2020	3 Year Average (2017-2019)	5 Year Average (2015-2020)	Barge Visits	83	63	73	135	86	90	98	Tanker Visits	81	82	76	84	63	81	74	Total	164	145	149	219	149	170	172	<p>(1) Tables ES-1/3-2 identify that vessel traffic (i.e. calls/year) at the Rodeo Refinery's Marine Terminal will increase post-Project; however, it is unclear the extent to which the volume of product throughput at the Marine Terminal will increase since the "Renewable Feedstocks Received", "Gasoline and Blendstocks Received", and all "Product Shipped" activities are not discretized by mode of transportation. Please identify the post-Project product throughput at the Marine Terminal (i.e. received/offloaded/discharged and shipped/loaded).</p> <p>(2) Many agencies track vessel traffic and product throughput at California Marine Oil Terminals (MOTs). Please identify the source of the vessel traffic and product throughput data used to establish the data in Tables ES-1/3-2 and related reporting such as Table 3-7. It is noted that the vessel traffic data presented in Table 3-7 differs from the CSLC Marine Environmental Protection Division (MEPD) Oil Spill Prevention Database (OSPD) records, where the MEPD records identify fewer total vessel calls in each of the 5 years. The OSPD values differ slightly in almost every case/cell and are generally a little lower than those shown in Table 3-7.</p> <p>(3) While tugs are discussed elsewhere in the DEIR, clarify why tug visits (e.g. tug fueling) are excluded from the mode of transportation analysis.</p> <p>(4) Inconsistencies in the terminologies, format and organization of Tables ES-1/3-2 and ES-2/5-1 make the data presented ambiguous (e.g. "Received" vs. "Processed" vs. "Processed/Received"; "Shipped" vs. "Produced" vs. "Produced/Shipped", "Petroleum Products" vs. "Conventional Fuels", "Post-Project" vs. "Project", 1,000 bpd 12-month average vs. bpd, order of presentation/rows).</p> <p>(5) Inconsistencies in the Tables ES-1/3-2 and ES-2/5-1 data and DEIR reporting should be clarified such as:</p> <p>(a) Several references to the Rodeo Refinery's capacity to produce approximately 120,000 bpd vs. 121,000 bpd in Tables ES-1/3-2.</p>
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Reference (Page #s)	Description	Comments																																																																																										
	<p>Table ES-2. Summary of Alternatives</p> <table border="1"> <thead> <tr> <th></th> <th>Project</th> <th>No Project</th> <th>Reduced Project</th> <th>Terminal Only</th> <th>No Temporary Increase in Crude Oil</th> </tr> </thead> <tbody> <tr> <td colspan="6">Product Processed (bpd)</td> </tr> <tr> <td>Renewable Feedstock Received/Processed</td> <td>80,000</td> <td>0</td> <td>55,000</td> <td>0</td> <td>80,000</td> </tr> <tr> <td>Gasoline Blendstocks Received/Processed</td> <td>38,000</td> <td>115,000</td> <td>38,000</td> <td>0</td> <td>38,000</td> </tr> <tr> <td>Existing Renewable Fuels Processed</td> <td>13,000</td> <td>13,000</td> <td>13,000</td> <td>0</td> <td>13,000</td> </tr> <tr> <td colspan="6">Product Produced (bpd)</td> </tr> <tr> <td>Renewable Fuels Produced/Shipped</td> <td>55,000</td> <td>0</td> <td>50,000</td> <td></td> <td>55,000</td> </tr> <tr> <td>Existing Renewable Fuels Produced</td> <td>12,000</td> <td>12,000</td> <td>12,000</td> <td>75,000</td> <td>12,000</td> </tr> <tr> <td>Conventional Fuels Produced/Shipped</td> <td>40,000</td> <td>100,000</td> <td>40,000</td> <td></td> <td>40,000</td> </tr> <tr> <td colspan="6">Mode of Transportation^g</td> </tr> <tr> <td>Ships (annual visits)</td> <td>201</td> <td>80</td> <td>165</td> <td>70</td> <td>201</td> </tr> <tr> <td>Barges (annual visits)</td> <td>161</td> <td>90</td> <td>161</td> <td>40</td> <td>161</td> </tr> <tr> <td>Truck Trips (roundtrips/year)</td> <td>16,026</td> <td>53,221</td> <td>11,230</td> <td>0</td> <td>16,026</td> </tr> <tr> <td>Railcars (per day)</td> <td>16</td> <td>5</td> <td>16</td> <td>8</td> <td>16</td> </tr> <tr> <td>Employees</td> <td>650</td> <td>650</td> <td>630</td> <td>75</td> <td>650</td> </tr> </tbody> </table> <p>Notes:</p> <p>^a No Project and Terminal Only Alternatives would transport blend stock and product by pipeline, marine vessel, and rail.</p> <p>^b The No Temporary Increase in Crude Oil Alternative at full buildout is identical to the Project, it differs only in the temporary change in throughput of crude oil during the construction period, and associated vessel calls, which is not reflected in this table. This difference, however, is described in the following discussion.</p> <p>^c Up to 25,000 bpd excess capacity of pre-treated feedstocks could be sold elsewhere.</p> <p>^d As explained in the Project Description, Section 3.7, <i>Project Operation</i>, the facility currently has the capacity to produce approximately 12,000 bpd of renewable fuels from pretreated feedstocks using Unit 250, which was previously used to process petroleum-based feedstocks. Unit 250 is not included in the Project as the Project does not propose any changes for Unit 250 and it would continue to produce 12,000 bpd of renewable fuels. Given that Unit 250 is not part of the Project, Unit 250 feedstock and production numbers are not included in this chart under the No Project Alternative.</p> <p>^e 70,000 bpd out of 115,000 bpd would arrive by pipeline, the rest would arrive through the Marine Terminal.</p> <p>^f Blendstocks and product into the facility would arrive through the Marine Terminal and by rail, and products leaving the facility would be transported by pipeline and rail.</p> <p>^g Reflects operations (not construction) of the Project and Alternatives.</p>		Project	No Project	Reduced Project	Terminal Only	No Temporary Increase in Crude Oil	Product Processed (bpd)						Renewable Feedstock Received/Processed	80,000	0	55,000	0	80,000	Gasoline Blendstocks Received/Processed	38,000	115,000	38,000	0	38,000	Existing Renewable Fuels Processed	13,000	13,000	13,000	0	13,000	Product Produced (bpd)						Renewable Fuels Produced/Shipped	55,000	0	50,000		55,000	Existing Renewable Fuels Produced	12,000	12,000	12,000	75,000	12,000	Conventional Fuels Produced/Shipped	40,000	100,000	40,000		40,000	Mode of Transportation^g						Ships (annual visits)	201	80	165	70	201	Barges (annual visits)	161	90	161	40	161	Truck Trips (roundtrips/year)	16,026	53,221	11,230	0	16,026	Railcars (per day)	16	5	16	8	16	Employees	650	650	630	75	650	<p>(b) In Section 3.4.2.2 (pg. 3-16), the existing/baseline vessel calls/year reported appear inconsistent with the data in Tables ES-1/3-2 (i.e. 91 vs. 90 barge calls/year, respectively).</p> <p>(c) In Table 3-7 (pg. 3-39), the baseline tanker calls/year reported appear inconsistent with the data in Tables ES-1/3-2 (i.e. 81 tanker calls/yr for the 3 year average [2017-2019] vs. 80 tanker calls/yr, respectively).</p> <p>(d) In Sections 3.5 (pg. 3-21) and 3.7.2 (pg. 3-23), the “receive, blend, and ship up to 40,000 bpd of gasoline and gasoline blendstocks” statements appear inconsistent with the data presented in Tables ES-1/3-2 and ES-2/5-1 (i.e. 38,000 bpd received/processed vs. 40,000 bpd produced/shipped).</p> <p>(6) The Table ES-2 “Notes” are not correlated to the tabular data. Provide.</p> <p>(7) Explain why “Treated Renewable Feedstock Shipped” (per Tables ES-1/3-2) is excluded from consideration in the alternatives analysis (per Table ES-2/5-1).</p> <p>(8) For the “No Project” alternative in Tables ES-2/5-1, explain the differences from the Tables ES-1/3-2 baseline data, including:</p> <p>(a) 115,000 bpd of “Gasoline Blendstocks Received/Processed” vs. the baseline 10,000 bpd “Gasoline and Blendstocks Received”, where the former value appears to include all petroleum products received/processed (i.e. crude, gas oil, gasoline and blendstocks)</p> <p>(b) 100,000 bpd of “Conventional Fuels Produced/Shipped” vs. the baseline 121,000 bpd “Petroleum Products Shipped”</p> <p>(c) 5 railcars/day vs. the baseline 6.96 railcars/week at Carbon Plant Site and 4.7 railcars/day at the Refinery Railcar Loading/Unloading Rack</p> <p>(9) For the “Terminal Only” alternative in Table ES-2/5-1, explain why no products are identified as “received” when the alternative description states: “Operation of this alternative would involve the receipt of gasoline blendstocks, as under existing conditions, as well as renewable fuels and blendstocks, by marine vessel and potentially rail...” (pg. 5-18).</p>
	Project	No Project	Reduced Project	Terminal Only	No Temporary Increase in Crude Oil																																																																																							
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<p>3-16 3-22 3-29 4.7-224</p>	<p>BUTANE STORAGE SYSTEM & RAIL LOADING RACK: [Page 3-16] ...<i>The butane storage system consists of four storage spheres—Tank-300, Tank-301, Tank-302, and Tank-833...</i> [Page 3-22] ...<i>The Project has the following objectives: ... Repurpose and reuse the facility’s existing equipment capacity, including the Marine Terminal and Rail Butane Loading Rack...</i> ----- [Page 3-29] 3.9.1.1 Reconfiguration of Process Units for Renewable Feedstock Processing <i>To accommodate the transition from processing crude oil to renewable fuels, Phillips 66 proposes to implement the following physical and operational changes to the processing units listed below: ... Rail Butane Loading Rack: Convert the existing butane rail loading stations to receive renewable feedstock by rail. Install new steam piping connections to warm up and liquefy renewable feed in railcars prior to unloading. For analysis purposes, impacts will be assessed based on utilizing existing rail capacity to unload up to 16 railcars per day...</i> [Page 4.7-224] 4.7.2.5 Seismic Hazards <i>... According to the ABAG Liquefaction Susceptibility Map, the majority of the Rodeo Refinery is mapped as having a very low risk of liquefaction (ABAG 2018). The exception is the western shoreline area, where the railcar loading rack and tanker dock components of the Rodeo Refinery are located; that area is characterized as an area of very high liquefaction susceptibility (ABAG 2018)...</i></p>	<p>(10)Phillips 66 leases 6 parcels of sovereign lands at the Rodeo Refinery and Marine Terminal site (ref. CSLC Lease PRC 600.1), including Parcel 1 defined in lease <i>Exhibit B</i> as follows: “Butane Tank On The Above Water Land On Parcel 1 — 3.68 Acres, plus or minus; and all improvements on the land, including, but not limited to the following: <i>This parcel is the site of an approximately 19,000 barrel butane tank. The site includes roads, railroad tracks, loading rack facilities, pipelines, pumps and associated facilities that are used to store butane, and to transfer butane by internal refinery pipeline and railroad car. Included are facilities for fire protection, storm water handling, drainage, electrical power and controls, lighting, personnel shelters, and the appropriate minor accessories to be able to operate the butane handling system.”</i></p> <p>(11)Repurposing and reuse of the rail butane loading rack are stated to be analyzed in the DEIR, but the DEIR does not directly address how the butane storage tanks and all associated appurtenances will be impacted as part of the Project (e.g. repurposed, demolished). Provide this information, including consideration of the following: (a) Commission consent is required for any construction, alteration, modification or repair activities or projects or changes to plans in accordance with the CSLC Lease Section 9(b). (b) If the butane sphere will be repurposed, the CSLC Lease mitigation measure states: <i>“In the future, if different material, besides butane, shall be stored in the spherical tank, then proper evaluations of structural integrity shall be performed”,</i> and the associated implementation and/or monitoring criteria states: <i>“An evaluation shall be made by a California registered civil engineer or structural engineer prior to a change in material, as to whether the loads imposed can be adequately and safely carried by the structure under both static and dynamic loading conditions. A copy of the evaluation shall be submitted to the SLC.”</i> (c) If the butane sphere will be taken out-of-service, the Commission will require removal of the butane sphere and associated out-of-service appurtenance on Parcel 1 to restore the property as</p>

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		nearly as possible to the conditions existing prior to their installation or construction (ref. CSLC Lease Sections 9(b)(1), 19(e) and 23(j)). This is prudent due to the risks associated with this site, such as susceptibility to liquefaction during a seismic event (DEIR Section 4.7) and sea level rise inundation (DEIR Section 4.8).	21 cont'd
xxxviii 2-12 4.4-140	MM BIO-3: Update and Review Facility Response Plan and Spill Prevention, Control, and Countermeasure Plan with OSPR <i>The Facility Response Plan and Spill Prevention, Control, and Countermeasure (SPCC) Plan shall be updated to address the change in proposed feedstocks. Phillips 66 will consult with OSPR during update of the SPCC Plan, especially adequacy of booms at the Marine Terminal to quickly contain a spill of renewable feedstocks...</i>	(12)The SPCC Plan should be updated to address all hazards associated with the Project operations at the Rodeo Refinery's Marine Terminal (i.e. not just "the change in proposed feedstocks"). (13)Explain why the SPCC Plan is required to be updated for the post-Project phase only and not for the different phases of the Project (e.g. during the 7-month transitional phase of interim increased Marine Terminal crude oil and gas oil feedstocks operations). (14)See MOTEMS Section 3101F.5 for SPCC Plan related design/built and operational/administrative regulatory requirements.	22
xli-xlii 2-15 to 16 4.9-334 to 335	MM HAZ-1: Implement Release, Monitoring and Avoidance Systems <i>The following actions shall be completed by Phillips 66 prior to Project operations, including the transitional phase, and shall include routine inspection, testing and maintenance of all equipment and systems conducted in accordance with manufacturers' requirements.</i> ... <i>Document procedures and training for systems use and communications between Marine Terminal and vessel operator(s).</i>	(15)The existing release, monitoring and avoidance systems at the Rodeo Refinery's Marine Terminal were installed approximately 20 years ago for compliance with the Mitigation Measures in CSLC Lease PRC 600.1. Based on age and advancements in technology, these existing systems are antiquated. Systems upgrades should be required to meet up-to-date best achievable technology standards and best industry practices, including but not limited to consideration of equipment updates and operational effectiveness (e.g. visual and audible alarm options, data display location and functionality, optional system features). (16)The terminology "manufacturers' recommendations" should be considered in lieu of "manufacturers' requirements" since equipment manufacturers cannot hold customers to requirements. For general industry guidance on effective maintenance of critical equipment at Marine Terminals, also reference industry standards such as the SIGTTO/OCIMF 2008 "Jetty Maintenance and Inspection Guide". (17)Identify who is permitted to perform the routine inspection, testing and maintenance (i.e. the Marine Terminal owner/operator vs. the manufacturer). (18)Identify how the monitoring systems operations will be documented and operationally enforced. Note that CSLC MEPD oversees MOT	23

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		regulatory compliance with: (1) Article 5. Marine Terminals Inspection and Monitoring (2CCR§2300 <i>et seq.</i>), including Operations Manuals (2CCR§2385) and Mitigation Monitoring requirements (2CCR§2400), and (2) Article 5.3. Marine Terminals Personnel Training and Certification (2CCR§2540 <i>et seq.</i>)
xli 2-15 4.9-334	<p>MM HAZ-1: Remote Release Systems <i>Of note, the Marine Terminal has a remote release system that can be activated from a single control panel or at each quick-release mooring hook set. The central control system can be switched on in case of an emergency necessitating a single release of all mooring lines.</i></p> <p>...</p> <ul style="list-style-type: none"> • <i>Provide and maintain mooring line quick release devices that shall be able to be activated within 60 seconds.</i> • <i>These devices shall be capable of being engaged by electric/push button release mechanism and by integrated remotely-operated release system...</i> 	<p>(19) Remote release systems can differ significantly in layout and functionality, and system designs have evolved over the years based on advancements in technology and operational practices. Therefore, it is unclear if the MM presents the best achievable technology and best industry practice, including but not limited to consideration of:</p> <p>(a) Functionality – Controlled release of the mooring lines (i.e. a single control system where each line can be remotely released individually in a controlled order and succession) vs. release all (i.e. a single control system where all lines are released simultaneously via a single push button).</p> <p>(b) Layout – The location(s) of the single control panel and/or central control system to validate that it is operationally manned such that the remote release systems can actually be activated within 60 seconds. For example, remote release systems may be controlled via a single control panel located on the wharf and/or controlled via computer-based control systems on the wharf or at an alternative control center location.</p>
xli-xlii 2-15 to 16 4.9-334 to 335	<p>RECORDING, RETENTION & AVAILABILITY OF SYSTEMS DATA MM HAZ-1: Tension Monitoring Systems & Allision Avoidance Systems</p> <p>...</p> <ul style="list-style-type: none"> • <i>Line tensions and environmental data shall be integrated into systems that record and relay all critical data in real time to the control room, Marine Terminal operator(s) and vessel operator(s).</i> <p>...</p> <ul style="list-style-type: none"> • <i>...The AASs shall also be able to record and store monitoring data.</i> <p>...</p>	<p>(20) All systems data should be required to be recorded (i.e. not just “able” to be recorded) and readily accessible to enable tasks such as: (1) verification that systems are routinely operated in compliance with the MM (e.g. vessels are berthing within the MOTEMS-compliant speed and angle requirements), and (2) post-event investigation and root-cause analysis (e.g. vessel allision during berthing).</p> <p>(21) Specify the record retention duration required.</p>
xli-xlii 2-15 to 16	<p>CSLC MOT JURISDICTIONAL LIMITATIONS</p>	<p>(22) The CSLC MOTEMS regulations apply when vessels are transporting <u>oil, petroleum products and renewable fuels only</u> in accordance with</p>

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4.9-334 to 335	<p>MM HAZ-1: Tension Monitoring Systems & Allision Avoidance Systems ...Updated <i>MOTEMS Terminal Operating Limits (TOLs)</i>, including <i>breasting and mooring, provide mooring requirements and operability limits that account for the conditions at the terminal...</i> ... <i>Monitoring these factors would ensure that all vessels can safely berth at the Marine Terminal and comply with the minimum standards required in the MOTEMS...</i></p>	<p>the statutory authority granted in the <i>Lempert-Keene-Seastrand Oil Spill Prevention & Response Act</i>. Nevertheless, products not regulated under the LKS Act (e.g. renewable feedstocks such as soybean oil and tallow) may be detrimental to the environment if spilled. Thus, the MOTEMS TOLs are not regulatorily enforceable for “all vessels” calling at the Rodeo Refinery’s Marine Terminal unless supplementally required via the MMs. Therefore, please specify that MOTEMS-compliant TOLs will be required for all vessels calling at the Rodeo Refinery’s Marine Terminal regardless of product type and LKS regulatory status.</p> <p>(23) Similarly, CSLC MOT operations regulations are not enforceable on MOT assets that are converted from petroleum to non-regulated products (e.g. renewable feedstocks such as soybean oil and tallow). These operations regulations are codified in Article 5. Marine Terminals Inspection and Monitoring (2CCR§2300 <i>et seq</i>), Article 5.3 Marine Terminals Personnel Training and Certification (2CCR§2540 <i>et seq</i>), and Article 5.5 Marine Terminals Oil Pipelines (2CCR§2560 <i>et seq</i>). For example, static liquid pressure testing of pipelines is a fundamental spill prevention measure that may not have state regulatory oversight for all pipelines at the post-Project Rodeo Refinery’s Marine Terminal.</p>
xlii 2-16 4.9-335	<p>MM HAZ-1: Allision Avoidance Systems ...<i>The Marine Terminal has a compliant AAS which is not required for MOTEMS compliance so long as MOTEMS TOLs are followed.</i> ...</p>	<p>(24) This statement is erroneous. MOTEMS Section 3103F.6.7 states: “<i>The berthing velocity, normal to berth, shall be in accordance with Table 31F-3-7. Site condition is determined from Table 31F-3-8. Subject to Division approval, if an existing MOT can demonstrate lower velocities by utilizing velocity monitoring equipment, than such a velocity may be used temporarily until the berthing system is compliant with this Code.</i>” Phillips 66 September 2021 MOTEMS berthing analyses and associated TOLs identify that when the initial point of contact during berthing is at a single cone fender panel location (as compared to double cone fender locations), the berthing velocities are not MOTEMS compliant for most vessel types. This implies that velocity monitoring equipment is required to monitor reduced berthing velocities until permanent MOTEMS-compliant corrective actions are implemented.</p>

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xlii 2-16 4.9-335	<p>MM HAZ-1: Allision Avoidance Systems <i>...Excessive surge or sway of vessels (motion parallel or perpendicular to the wharf, respectively) and/or passing vessel forces may result in sudden shifts/redistribution of mooring forces through the mooring lines, which can quickly escalate to the failure of mooring lines, breaking of loading arm connections, the breakaway of a vessel, and/or other unsafe mooring conditions that could ultimately lead to a spill.</i></p>	(25)Specify if the AASs will also be utilized for monitoring vessel motion (i.e. surge and sway) during breasting/mooring operations to ensure excessive surge and sway are not incurred.
3-2 3-5	<p>Figure 3-1: Rodeo Refinery and Vicinity Figure 3-2: Rodeo Site</p>	<p>(26)In Figures 3-1 and 3-2, please identify the features described in the DEIR text such as the bordering assets (e.g. San Pablo Bay, NuStar Energy tank farm, Tormey, Union Pacific/Amtrak railroad right-of-way), the Rodeo Refinery’s Marine Terminal (i.e. Figure 3-1), and the Selby site (pg. 3-34).</p> <p>(27)In Figure 3-1, explain why a portion of the butane storage and railcar loading facility is excluded from the Rodeo Refinery Project Boundary. It is noted that this portion of the butane storage and railcar loading facility appears to be part of Parcel 1 in Phillips 66’s CSLC lease (ref. CSLC Lease PRC 600.1). See related comments above.</p>
3-20 4.9-301 4.9-313 4.10-354	<p>[pg. 3-20] 3.4.2.5 Marine Oil Terminal Engineering and Maintenance Standards <i>The California State Lands Commission (CSLC) developed Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) to establish standards for the design, construction, and maintenance of marine oil terminal berthing and cargo loading/unloading facilities. MOTEMS is intended to minimize the possibility of accidents at marine oil terminals during extreme weather events and seismic activity that would lead to releases of petroleum substances to the environment. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS, which has been completed at the Rodeo Refinery’s Marine Terminal, and Phillips 66 will continue to comply with MOTEMS requirements.</i></p> <hr/> <p>[pg. 4.9-301] 4.9.2.7 Marine Oil Terminal Engineering and Maintenance Standards <i>The Marine Terminal operates as a MOTEMS-compliant facility, meaning that its construction, materials, equipment, and operating</i></p>	<p>(28)MOTEMS (24CCR§3101F <i>et seq</i>) establishes minimum engineering, inspection and maintenance criteria for all MOTs in California, including the <u>design and evaluation</u> (i.e. not just “design”) of new and existing MOTs.</p> <p>(29)The MOTEMS standards are comprehensive and contain requirements for assessment of the structural, mechanical, and electrical systems, including, but not limited to routine audits and inspections, geotechnical assessments, structural evaluations, seismic analyses, berthing and mooring analyses, fire protection, pipelines, mechanical and electrical equipment, and electrical systems (i.e. not just the “berthing and cargo loading/unloading” portions of the MOT).</p> <p>(30)MOTEMS also addresses numerous potentially damage causing events such as earthquake, storm, vessel impact, fire, explosion, and tsunami (i.e. not just “extreme weather events and seismic activity”).</p> <p>(31)The statements “...to meet MOTEMS, which has been completed at the Rodeo Refinery’s Marine Terminal...”, “The Marine Terminal</p>

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	<p><i>procedures meet the standards for marine terminals established by CSLC. The operating procedures are set forth in the Phillips 66 Rodeo Marine Terminal Handbook, which was revised and updated in 2016...</i></p> <p>[pg. 4.9-313] 4.9.2.11 Regulatory Setting ... State Authority ... California State Lands Commission <i>The CSLC developed Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) to establish standards for the design, construction, and maintenance of marine oil terminal berthing and cargo loading/unloading facilities. MOTEMS is intended to minimize the possibility of accidents at marine oil terminals during extreme weather events and seismic activity that would lead to releases of petroleum substances to the environment. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS, which the Marine Terminal has completed, and the terminal will continue to comply with MOTEMS requirements.</i></p> <p>[pg. 4.10-354] 4.10.2.11 Regulatory Setting ... California State Lands Commission’s Marine Terminal Lease and Marine Oil Terminal Engineering and Maintenance Standards Program <i>...In addition, marine terminals located on lands under CSLC jurisdiction are subject to comply with the CSLC’s Marine Facilities Division–developed MOTEMS. For the existing Marine Terminal, these regulations establish standards for the maintenance of marine oil terminal berthing and cargo loading/unloading facilities. MOTEMS are intended to minimize the possibility of accidents at marine oil terminals during extreme weather events and seismic activity that would lead to releases of petroleum and oil-based substances to the environment. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS, which the Rodeo Refinery’s Marine Terminal has, and Phillips 66 would continue to comply.</i></p>	<p><i>operates as a MOTEMS-compliant facility...” and “...to meet MOTEMS, which the Marine Terminal has completed...” are erroneous. MOTEMS compliance is a living process such that no MOT, including the Rodeo Refinery’s Marine Terminal, has “completed” and fully satisfied the MOTEMS compliance requirements. CSLC MEPD continues to work with Phillips to identify deficiencies during routine MOTEMS audits and inspections of the Rodeo Refinery’s Marine Terminal and take appropriate corrective actions.</i></p> <p>(32)The “Marine Facilities Division” should be updated to the “Marine Environmental Protection Division”.</p>
3-24	<p>3.7.3.1 Marine Traffic <i>... No physical changes are needed at the Marine Terminal as part of the Project.</i></p>	<p>(33)The extent of future built modifications to the Marine Terminal for Project implementation are unclear. Please elaborate on this statement, such as addressing the following:</p>

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		<p>(a) Identify if any mechanical or electrical components or systems will be changed as part of the Project, including MM-required systems at the Marine Terminal (i.e. Remote Release Systems, Tension Monitoring Systems, Allision Avoidance Systems, environmental monitoring systems).</p> <p>(b) Identify if built mitigations resulting from the SPCC will be implemented.</p> <p>(c) Identify if any additional piping/pipelines will be changed as part of the Project, included but not limited to upgrades, modifications and/or re-routing existing piping and ancillary components, piping insulation, or heat trace, such as the pipeline modifications implemented at the Rodeo Refinery's Marine Terminal in 2019-2020 to accommodate renewable feedstock service.</p> <p>(d) Identify if any piping/pipelines at the Marine Terminal will be taken out of service as part of the Project. Note that per MOTEMS Section 3109F.2, Item #12: "Pipelines that do not have a valid and certified Static Liquid Pressure Test (SLPT) [9.4] shall be marked "OUT OF SERVICE". Out-of-service piping and pipelines shall be purged, gas-freed and physically isolated from sources of oil."</p>
<p>xxxviii 3-27 4.4-146 5-9</p>	<p><u>BIOFUELS VS. RENEWABLE FUELS</u> [pg. xxxviii] IMPACT 4.4-4 ... Due to the potential for rapid dispersion of <i>biofuels</i> and oils under high energy conditions, Phillips 66 shall increase the frequency of the following drills ...</p> <hr/> <p>[pg. 3-27] IMPACT 4.4-7 ... While there are differences in behavior, fate and transport depending on type of oil spilled, substantial adverse effects would be expected in the event of a spill during the transitional phase (petroleum) or during Project operation (feedstocks, <i>processed biodiesel fuel</i>, renewable fuel gas or blending components) ...</p> <hr/> <p>[pg. 4.4-146] IMPACT 4.4-9 ... Substantial adverse impacts have the potential to occur in the event of a significant spill during the Project transitional phase (petroleum) or during Project operation (feedstock vegetable oils, animal fats, or</p>	<p>(34) Since biofuels and renewable fuels are not equivalent (i.e. produced via different processes, chemically differ, blended and used dissimilarly):</p> <p>(a) Mixed use of these terminologies (i.e. "biofuels" vs. "renewable fuels", "biodiesel" vs. "renewable diesel", etc.) should be verified for accuracy.</p> <p>(b) Regulatory compliance requirements may differ.</p> <p>(c) Identify all types of biofuels that will be transferred at the Marine Terminal post-Project (i.e. received/offloaded/ discharged and shipped/loaded).</p>

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	<p><i>processed biodiesel fuel, renewable fuel gas, renewable components for blending with other transportation fuels) ...</i></p> <p>[pg. 5-9] 5.4.4.2 Decommission All Facilities <i>... Importantly, the failure to re-use the facilities and equipment at the Rodeo Refinery undermines the state’s ability to produce renewable diesel as compared to biodiesel. Renewable diesel is not subject to the blending constraints of biodiesel due to its chemical composition, and it can be used at any blend level up to 100 percent (USDA 2021). Renewable diesel production is different than the production of biodiesel, as it uses “refinery-grade hydrogen,” and existing petroleum-refining hydrotreating can be converted to produce renewable diesel, as is proposed for the Project (USDA 2021). Because the capital costs for renewable diesel are three to four times those of biodiesel, the conversion of existing refining and hydrogen production facilities has been important to the development of renewable diesel facilities throughout the United States (USDA 2021). ...</i></p>	
<p>3-32 4.9-301</p>	<p>[pg. 3-32] 3.10.2 Fire Protection <i>As required by the Contra Costa County Fire Protection District, Phillips 66 will prepare a Management of Change (MOC) for the refinery process unit modifications that would enable it to shift to processing renewable feedstocks. The MOC would include an assessment of the refinery process changes on process piping corrosion, including the frequency of piping inspections. The Project would likely have multiple MOCs for the different phases of the Project</i></p> <p><i>Prior to construction, Phillips 66 would submit design documents and specifications to the Fire Protection District for its review and approval of the installation, repair, or modification of process piping and equipment containing flammable and combustible liquids to ensure compliance with the minimum fire and safety requirements. The MOC and the design documents and specifications would be prepared after design review has been completed and all discretionary agency permits have been issued.</i></p> <p>[pg. 4.9-301] 4.9.2.5 Process Safety Management and Management of Change</p>	<p>(35)A Management of Change process is also required whenever physical changes are made to the built MOT that significantly impact operations (ref. MOTEMS § 3101F.7).</p> <p>(36)Updated Marine Terminal Fire Hazard Assessment and Risk Analysis (ref. MOTEMS § 3108F.2.1) and Fire Protection Assessment (ref. MOTEMS § 3108F.2.2) are required for this Project due to changes in MOT characteristics, product types, etc.</p>

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Reference (Page #s)	Description	Comments
	<p>To comply with the Process Safety Management requirements, Phillips 66 has established procedures for the MOC...</p>	
<p>4.4-10 4.9-307 to 308</p>	<p>CALIFORNIA STATE LANDS COMMISSION'S REGULATORY AUTHORITY</p> <p>[pg. 4.4-10] 4.4.3.2 State Authority</p> <p>...</p> <p>California State Lands Commission</p> <p>The CSLC administers lands owned by the state, which includes the beds of all naturally navigable waterways, such as major rivers, streams and lakes, and tidal and submerged lands below the high tide line. The CSLC issues land use leases or permits for use of state lands that are determined to be consistent with the public trust values for fisheries, navigation, public access, recreation, wildlife habitat and open space. Phillips 66 operates the Rodeo Refinery's Marine Terminal and the portion of the refinery within the tidelands under a lease from CSLC. The CSLC establishes controls on the operation of the Marine Terminal through lease conditions. The CSLC promulgated and administers the MOTEMS (Marine Oil Terminal Engineering and Maintenance Standards) that establish design and operating standards intended to ensure the safe operation of such terminals. The MOTEMS, by bringing existing and new oil terminals into compliance with modern safety standards, substantially decrease the risk of large-scale releases of liquid bulk cargos from vessels at-berth.</p> <p>[pg. 4.9-307 to 308] 4.9.2.11 Regulatory Setting</p> <p>...Numerous federal, state, and county laws, regulations, guidelines, and policies focus on reducing the risks from the hazards associated with the transport, storage, and refining of petroleum and petroleum products, some of which include the following:</p> <p>...</p> <ul style="list-style-type: none"> • CSLC's MOTEMS; <p>...</p>	<p>(37) MOTEMS (24CCR§3101F <i>et seq</i>) is a building standard in the California Building Code (i.e. <i>Chapter 31F Marine Oil Terminals</i>) and does not specifically address operational requirements.</p> <p>(38) The CSLC Marine Environmental Protection Division (MEPD) oversees both engineering and operations regulations. The engineering regulations are codified in MOTEMS. The operations regulations are codified in Article 5. Marine Terminals Inspection and Monitoring (2CCR§2300 <i>et seq</i>), Article 5.3 Marine Terminals Personnel Training and Certification (2CCR§2540 <i>et seq</i>), and Article 5.5 Marine Terminals Oil Pipelines (2CCR§2560 <i>et seq</i>).</p>
<p>4.4-135</p>	<p>IMPACT 4.4-3</p> <p>...The size and type of vessels calling at the Marine Terminal would be similar or smaller than under existing conditions, with drafts ranging</p>	<p>(39) The existing Rodeo Refinery's Marine Terminal TOLs (ref. Phillips 66's September 2021 TOLs) identify the maximum draft at berth as 40 feet (i.e. not 39 feet) and the minimum design water depth at berth</p>

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COMMENT LETTER: 2

Reference (Page #s)	Description	Comments
	<p><i>from less than 15 to 39 feet (see Tables 4.4-2, 4.4-3). In addition, the size of vessels calling at the Marine Terminal are limited by the water depths of the Federal navigation channels, which range from approximately -55 feet Mean Lower Low Water (MLLW) at the entrance to -35 feet MLLW in the Project area (URS Group 2015)...</i></p>	<p>as -43 feet MLLW (i.e. not -35 feet MLLW). Therefore, identify if vessel at-berth operating limits and/or dredging activities at the Rodeo Refinery's Marine Terminal will be modified as part of the Project.</p> <p>OR</p> <p>(40)The maximum draft at berth of 39 feet and water depth in the Project area of -35 feet MLLW appear inconsistent with the existing Rodeo Refinery's Marine Terminal TOLs (ref. Phillips 66's September 2021 TOLs). Therefore, identify if vessel at-berth operating limits and/or dredging activities at the Rodeo Refinery's Marine Terminal will be modified as part of the Project.</p> <p>(41)Vessel size and draft limitations can change over time due to factors such as dredging activities, sea level rise, and natural changes in seafloor characteristics.</p>
4.7-227	<p>4.7.2.7 Regulatory Setting California Building Code <i>... The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, CBC Chapter 16, Section 1613, provides earthquake loading specifications for every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, which shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7-05. ...</i></p>	<p>(42)CBC Chapter 31F (MOTEMS) provides earthquake loading and geotechnical specifications for Marine Terminal structures and portion thereof, including nonstructural components and nonbuilding structures that are permanently attached to the terminal. All structures, nonstructural components and nonbuilding structures (i.e. existing, new, modified, etc.) at the Marine Terminal shall comply with these requirements.</p> <p>(43)The 2019 California Building Code is currently in effect and references ASCE/SEI 7-16 (i.e. not "ASCE 7-05").</p>
4.9-299	<p>UNIFORM BUILDING CODE REFERENCES</p> <p>4.9.2.4 Existing Phillips 66 Safety Management Systems ... Design <i>... Some of the main design standards include the American Petroleum Institute's (API's) Recommended Practice 750, Codes of Management Practices of the Chemical Manufacturers, the American National Standards Institute's B31.1: Power Piping and B13.3: Petroleum Refinery Piping, National Fire Prevention Association 30, and the Uniform Building Codes.</i></p>	<p>(44)The DEIR references the Uniform Building Code in multiple sections. It should be noted that the Uniform Building Code is outdated. The 1997 Uniform Building Code (UBC) was the last edition published by the International Conference of Building Officials (ICBO) and was last used as the base code for the 2001 CBC. The International Building Code (IBC) has served as the model building code in California since first adopted in the 2007 CBC.</p>

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cont'd

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Response to Comment 1

Comment noted. Consistent with CSLC regulations, Phillips 66 will update the existing CSLC lease, as necessary to accommodate changes resulting from the Project. Also refer to Response to Comment 23.

Response to Comment 2

There are no changes to the water effluent discharge points currently authorized in the lease. No amendments to the lease will be necessary.

Response to Comment 3

Phillips 66 will work with CSLC to update its lease as necessary to remove outfall pipelines at the Santa Maria facility. See Master Response No. 1, CEQA Baseline for additional information regarding the Santa Marina Refinery.

Response to Comment 4

Section 3.4.2.5, page 3.20, paragraph 2 of the Draft EIR is revised as follows:

The California State Lands Commission (CSLC) developed Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) to establish standards for the design, construction, and maintenance of marine oil terminal berthing and cargo loading/unloading facilities. MOTEMS is intended to minimize the possibility of accidents at marine oil terminals during extreme weather events and seismic activity that would lead to releases of petroleum substances to the environment. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS, which has been completed at the Rodeo Refinery's Marine Terminal, and Phillips 66 will continue to comply with MOTEMS requirements. The CSLC has regulatory authority over MOTEMS.

Section 4.9.2.11, page 4.9-313, paragraph 5 of the Draft EIR is revised as follows:

The CSLC developed Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) to establish standards for the design, construction, and maintenance of marine oil terminal berthing and cargo loading/unloading facilities. MOTEMS is intended to minimize the possibility of accidents at marine oil terminals during extreme weather events and seismic activity that would lead to releases of petroleum substances to the environment. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS, which the Marine Terminal has completed, and the terminal will continue to comply with MOTEMS requirements. The CSLC has regulatory authority over MOTEMS.

Section 4.10.2.11, page 4.10-354, paragraph 6 of the Draft EIR is revised as follows:

In addition, marine terminals located on lands under CSLC jurisdiction are subject to comply with the CSLC's Marine Facilities Division–developed MOTEMS. For the existing Marine Terminal, these regulations establish standards for the maintenance of marine oil terminal berthing and cargo loading/unloading facilities. MOTEMS are intended to minimize the possibility of accidents at marine oil terminals during extreme weather events and seismic activity that would lead to releases of petroleum and oil-based substances to the environment. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS, which the Rodeo Refinery's Marine Terminal has, and Phillips 66 would continue to comply. The CSLC has regulatory authority over MOTEMS.

Response to Comment 5

The solid black line boundary on Draft EIR Figure 3-1 shows the approximate property boundary of the Rodeo Refinery. As described in the Draft EIR, Project activities will occur within a portion of the Rodeo Refinery property boundary. No Project activities will occur within the triangular-shaped inclusion on the

east side referenced in the comment (that portion of the property comprises Contra Costa County Assessor's Parcel No. 357-010-002-8, which is attributed to the Project applicant).

Response to Comment 6

Section 4.4.3.2, page 4.4-109 is revised as follows:

Coastal Ecosystems Protection Act of 2006, California State Lands Act

The Coastal Ecosystems Protection Act of 2006 directed the CSLC to adopt performance standards for discharging ballast water by January 1, 2008, and prepare a report assessing the availability of treatment technologies to meet those standards (Falkner et al. 2009). The CSLC completed the rulemaking process and adopted the standards in October 2007 as part of its Marine Invasive Species Program (MISP), as described below ~~(a multi-agency programs that includes CDFW's OSPR, the SWRCB, and the Department of Tax and Fee Administration)~~. The technology assessment report was completed in December 2007. In response to the report's recommendations, the California Legislature passed Senate Bill 1781 (Chapter 696, Statutes of 2008), which delayed initial implementation of the performance standards from January 1, 2009, to January 1, 2010, and required an update of the technology assessment report by January 1, 2009. The CSLC continues to support research into evolving ballast water management practices, treatment technologies, compliance monitoring techniques and equipment, and environmental effects of ballast water treatment. According to CSLC (2021), in 2018–2019, less than 1 percent of reported ballast water discharged in California did not meet the state's ballast water management requirements.

The CSLC is also mandated to adopt regulations governing the management of vessel fouling by January 1, 2012, specifically, introduction of nonindigenous invasive species via vectors other than ballast water. Two studies are currently underway to guide the development of these regulations. In January 2008, Hull Husbandry Reporting Forms were used to gather data on fouling-related husbandry practices of the commercial vessel fleet visiting California waters. In addition, ongoing fouling-related research conducted by the CSLC's ~~Marine Invasive Species Program~~ MISP will better define how hull husbandry practices and voyage characteristics affect the quantity and quality of fouling biota associated with vessels separating in California (CSLC 2021).

Section 4.4.3.2, page 4.4-109, following paragraph titled "California Marine Invasive Species Act" is revised as follows:

Marine Invasive Species Program

MISP was reauthorized and expanded in 2003 with the passage of the Marine Invasive Species Act (MISA; AB 433, Chapter 491, Statutes of 2003) which, among other provisions, directed the Commission to adopt ballast water management regulations for vessels moving coastally between ports on the west coast of the U.S. Since 2003, the MISA has been amended numerous times, most notably to establish California's ballast water discharge performance standards (SB 497, Chapter 292, Statutes of 2006) and to authorize the Commission to adopt and implement biofouling management regulations (AB 740, Chapter 370, Statutes of 2007).

The Commission adopts and amends regulations to implement the MISA (Public Resources Code section 71201.7). The ballast water management regulations for coastal vessels were adopted in 2006 (California Code of Regulations, title 2, section 2280 et seq.); ballast water discharge performance standards were codified in 2007 (California Code of Regulations, title 2, section 2291 et seq.); and the biofouling management regulations (see section 7.1) were adopted and implemented in 2017 (California Code of Regulations, title 2, section 2298.1 et seq.). These regulations were strengthened through the adoption of enforcement regulations in 2017 (California Code Regulations, title 2, section 2299.01 et seq.).

In 2019, the Commission sponsored AB 912 (Chapter 433, Statutes of 2019) which authorizes the Commission to:

- Adopt and enforce the federal ballast water discharge performance standards set forth in section 151.2030(a) of Title 33 of the Code of Federal Regulations; and
- Delay implementation of the interim and final California ballast water discharge performance standards to 2030 and 2040, respectively, due to a lack of available ballast water treatment technologies to enable vessels to meet the California standards.

In 2021, the Commission amended existing regulations (California Code of Regulations, title 2, section 2291 et seq.) to implement the requirements of AB 912.

Response to Comment 7

Section 4.5.2.3, page 4.5-186 – 187 of the Draft EIR is revised as follows:

California Public Resources Code

In addition to the definition of “unique archaeological resources” in PRC Section 21083.2, the sections of the California Public Resource Code applicable to the Project follow:

- PRC Title 14, Section 5097.5: any unauthorized removal or destruction of archaeological, paleontological resources on sites located on public lands is a misdemeanor.
- PRC Title 14, Section 5097.99: prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn; sets penalties.
- PRC Section 6313: the title to all abandoned shipwrecks and all archaeological sites and historic resources on or in the tide and submerged lands of California is vested in the state and subject to the control of the commission.

Section 4.14.2.3, page 4.14-425, end of paragraph 5 of the Draft EIR is revised as follows:

California Public Resources Code

In addition to the definition of “unique archaeological resources” in PRC Section 21083.2, the sections of the California Public Resource Code applicable to the Project follow:

- PRC Title 14, Section 5097.5: any unauthorized removal or destruction of archaeological, paleontological resources on sites located on public lands is a misdemeanor.
- PRC Title 14, Section 5097.99: prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn; sets penalties.
- PRC Section 6313: the title to all abandoned shipwrecks and all archaeological sites and historic resources on or in the tide and submerged lands of California is vested in the state and subject to the control of the commission.

Response to Comment 8

Section 4.5, *Cultural Resources*, Section 4.5.7, page 4.5-191 of the Draft EIR is revised as follows:

Mitigation Measure CUL-1: Inadvertent Discovery of Archaeological Resources

Pursuant to CEQA Guidelines Section 15064.5(f), “provisions for historical or unique archaeological resources accidentally discovered during construction” shall be instituted. In the event that any cultural resources are discovered during ground-disturbing activities, all work within 100 feet of the find shall be halted and Phillips 66 shall consult with the County and a qualified archaeologist (as approved by the County) to assess the significance of the find pursuant to CEQA Guidelines Section 15064.5. If cultural resources are recovered on State lands, submerged or tidal lands, all work within 100 feet of the find shall be halted and Phillips 66 shall consult with the California State Lands

Commission. If any find is determined to be significant, representatives of the County and the qualified archaeologist would meet to determine the appropriate course of action.

In addition, Section 4.14, Tribal Cultural Resources, page 4.14-430 is revised as follows:

Mitigation Measure TCR-3: Inadvertent Discoveries

- Phillips 66 shall develop a standard operating procedure, or ensure any existing procedure, to include points of contact, timeline and schedule for the project so all possible damages can be avoided or alternatives and cumulative impacts properly accessed.
- If potential tribal cultural resources, archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease in the immediate vicinity of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from an interested Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations will be documented in the project record. For any recommendations made by interested Native American Tribes which are not implemented, a justification for why the recommendation was not followed will be provided in the project record.
- If cultural resources are recovered on State lands, submerged or tidal lands, all work within 100 feet of the find shall be halted and Phillips 66 shall consult with the California State Lands Commission.

Response to Comment 9

Phillips 66 does not intend to use CSLC-owned portions of the Selby Slag site for equipment staging. Further, use of the Selby Slag site for Project staging would occur before the implementation of the Selby Slag Remedial Action Plan. See Response to Comment 10, for additional information regarding the Selby site.

Response to Comment 10

Remediation activities at the 66-acre Selby Slag site have not commenced. According to the Department of Toxic Substances Control (DTSC) EnviroStor records (DTSC 2022), the Remedial Action Plan is in the final review process. Remediation activities would commence after implementation of the Rodeo Renewed Project.

Section 6.4.1, Projects Considered in the Cumulative Analysis, page 6-3 is revised to read as follows:

6.4.1.1 Contra Costa County

Selby Slag Remedial Action is a 66-acre site remediation project located within unincorporated Contra Costa County adjacent to the southern shoreline of the San Pablo Bay and Carquinez Strait. The site is the location of a former smelting facility. The Remedial Action Plan identifies what actions need to take place to remediate the site.

- Application Status: The Remedial Action Plan and EIR is in draft form and under review by the DTSC. No remediation activities have been conducted.

Addition of the Selby Slag project to the cumulative list of projects does not alter the conclusions of the cumulative impact analysis in the Draft EIR.

Response to Comment 11

Refer to Response 18.

The Post-Project throughput at the Marine Terminal will include the feedstocks and products shown in Tables ES-1 and 3-2. The volume of products and/or feedstocks transported via the Marine Terminal will vary based upon market conditions. Impacts related to Marine Terminal activity are from the number of vessel and barge calls. Barge and vessel calls have been included in Tables ES-1 and 3-2 and impacts have been evaluated accordingly.

Also refer to Chapter 4, County-Initiated Updates and Errata to the Draft EIR that provides additional clarification to Tables ES-2 and 5-1.

Response to Comment 12

The source for vessel traffic information is the Phillips 66 Marine Terminal ship activity logs. Information regarding all vessels that dock at the Marine Terminal are accurately recorded in these logs.

Response to Comment 13

Tug visits are not excluded from the mode of transportation analysis. Tug visit impacts are associated with barge and vessel trips and are not separately quantified. It should be noted that tugs do not make separate visits to the Marine Terminal.

Response to Comment 14

Refer to Response 18.

Response to Comment 15

The value used in the Draft EIR is 80 tanker calls and 90 barge calls. This minor discrepancy is related to rounding and does not affect the Draft EIR conclusions.

Refer to Response to Comment 18.

Response to Comment 16

Refer to Response to Comment 18.

Response to Comment 17

Treated renewable feedstock shipped is not excluded from consideration in the alternative analysis. It was included as part of the analysis, but merely omitted from Tables ES-2 and 5-1.

Refer to Response to Comment 18.

Response to Comment 18

In Tables ES-2 and 5-1 is a typographical error. The value of 115,000 bpd represents crude, gas oil and gasoline blendstocks. The corrected crude and gas oil amounts have been included in a new row in the Tables ES-2 and 5-1.

In Tables ES-2 and 5-1 the 100,000 bpd value was mislabeled and incorrect. The corrected amounts have been included in a new row.

In Table ES-2, "Railcars" only includes rail at the Rodeo Site, not the Carbon Plant Site. The value of 5 railcars per day in Table ES-2 has been rounded up from the baseline value at the Rodeo Site of 4.7 railcars per day.

Also Refer to Master Response No. 2, CEQA Alternatives.

The Executive Summary, Table ES-1, and Chapter 3 Table 3-2, are revised as follows:

Table ES-1 and Table 3-2. Rodeo Refinery Pre- and Post-Project Operational Activity

	Baseline	Post-Project
Product Material Received		
Marine Terminal Crude and Gas Oil Received (1,000 bpd 12-month average)	35	0
Pipeline Crude Received (1,000 bpd 12-month average)	70	0
Renewable Feedstocks Received (1,000 bpd 12-month average) ^a	0	80
Gasoline and Blendstocks Received (1,000 bpd 12-month average)	10	38
Product Shipped		
Petroleum Products Shipped (1,000 bpd 12-month average)	121	40
Renewable Fuels Shipped (1,000 bpd 12-month average)	0	67
Treated Renewable Feedstock Shipped (1,000 bpd 12-month average)	0	25
Mode of Transportation		
Tanker Vessels (calls/year)	80	201
Barges (calls/year)	90	161
Carbon Plant Site Rail (average railcars per week)	6.96	0
Refinery Railcar Loading/Unloading Rack (average railcars per day)	4.7	16
Santa Maria Site Rail (railcars per year)	409	0
Refinery and Carbon Plant Truck Trips (roundtrips per year)	40,213	16,026
Santa Maria Site Truck Trips (roundtrips per year)	13,008	0
Rodeo Refinery Approximate Number of Employees and Contractors	650	650

The Executive Summary, Table ES-2, and Chapter 5, Alternatives Analysis, Table 5-1, Draft EIR are revised as follows:

Table ES-2 and 5-1. Summary of Alternatives

	Project	No Project ^a	Reduced Project	Terminal Only ^a	No Temporary Increase in Crude Oil ^b
Product Material Received/ Processed (bpd)					
<u>Crude and Gas Oil Received</u>	<u>0</u>	<u>105,000^e</u>	<u>0</u>	<u>0</u>	<u>0</u>
Renewable Feedstock Received/Processed	80,000 ^c	0	55,000	0	80,000 ^c
Gasoline Blendstocks Received/Processed	38,000	445,000 10,000	38,000	0 75,000 ^f	38,000
Existing Renewable Fuels Processed	13,000	13,000 ^{d,h}	13,000		13,000

	Project	No Project ^a	Reduced Project	Terminal Only ^a	No Temporary Increase in Crude Oil ^b
Product Produced (bpd)					
Renewable Fuels Produced/Shipped	55,000 ^c	0	50,000	75,000 ^f	55,000 ^c
Existing Renewable Fuels Produced	12,000	12,000 ^{d,h}	12,000		12,000
Conventional Fuels Petroleum Products Produced/Shipped	40,000	400 109,000	40,000		40,000
Treated Renewable Feedstock Shipped	<u>25,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Mode of Transportation^g					
Ships (annual visits)	201	80	165	70	201
Barges (annual visits)	161	90	161	40	161
Truck Trips (roundtrips/year)	16,026	53,221	11,230	0	16,026
Railcars (per day)	16	5	16	8	16
Employees	650	650	630	75	650

Notes:

- ^a No Project and Terminal Only Alternatives would transport blend stock and product by pipeline, marine vessel, and rail.
- ^b The No Temporary Increase in Crude Oil Alternative at full buildout is identical to the Project; it differs only in the temporary change in throughput of crude oil during the construction period, and associated vessel calls, which is not reflected in this table. This difference, however, is described in the following discussion.
- ^c Up to 25,000 bpd excess capacity of pre-treated feedstocks could be sold elsewhere.
- ^d As explained in the Project Description, Section 3.7, *Project Operation*, the facility currently has the capacity to produce approximately 12,000 bpd of renewable fuels from pretreated feedstocks using Unit 250, which was previously used to process petroleum-based feedstocks. Unit 250 is not included in the Project as the Project does not propose any changes for Unit 250 and it would continue to produce 12,000 bpd of renewable fuels. Given that Unit 250 is not part of the Project, Unit 250 feedstock and production numbers are not included in this chart under the No Project Alternative.
- ^e 70,000 bpd out of 105,000 bpd would arrive by pipeline, the rest would arrive through the Marine Terminal.
- ^f Blendstocks and product into the facility would arrive through the Marine Terminal and by rail, and products leaving the facility would be transported by pipeline and rail.
- ^g Reflects operations (not construction) of the Project and Alternatives.
- ^h The amount of existing renewable fuels produced (12,000 bpd) is less than the existing renewable feeds processed (13,000 gpd) due to losses that occur during the production process.

Response to Comment 19

Refer to Master Response No. 2, CEQA Alternatives. See edits to Tables ES-2 and 5-1, above, which indicate that 75,000 bpd of products will be received.

Response to Comment 20

Comment noted. See Response to Comment 21.

Response to Comment 21

The Project proposes to convert the rail loading stations to receive renewable feedstock, which does not include removal or modification to the butane spheres. The butane storage tank covered by the CSLC lease will not be taken out of service, demolished, altered or repurposed to store other materials as part of the Project. It will continue to store butane after the Project. A portion of the butane generated by the

facility will be temporarily stored in the tank and eventually added back to the facility fuel gas system as process operations dictate, blended into finished gasoline, or fed to the hydrogen plant as feed gas. The ability to add butane to fuel gas, blend with finished gasoline and use as hydrogen plant feed are all activities that occur currently at the Refinery and are not being changed as part of the Project. Therefore, discussion of the CSLC lease and its requirements related to the butane spheres is not discussed in the Draft EIR.

Response to Comment 22

Section 4.4.9 Impact 4.4-4, page 4.4-140, paragraph 2, Executive Summary page xxxviii, paragraph 4, and Summary of Environmental Impacts, page 2-12 of the Draft EIR is revised as follows:

Mitigation Measure BIO-3: Update and Review Facility Response Plan and Spill Prevention, Control, and Countermeasure Plan with OSPR

- The Facility Response Plan and Spill Prevention, Control, and Countermeasure (SPCC) Plan shall be updated to address the Project operational changes, including changes in proposed feedstocks and types of vessels and trips ~~change in proposed feedstocks~~. The SPCC shall address the operational changes of the Transitional Phase and post-Project. Phillips 66 will consult with OSPR during update of the SPCC Plan, especially adequacy of booms at the Marine Terminal to quickly contain a spill of renewable feedstocks.

Response to Comment 23

MM HAZ-1 as proposed will accomplish the required mitigation. As shown below, however, MM HAZ-1 has been updated to reflect that Phillips 66 agrees to engage CSLC, as the relevant regulatory authority, to discuss and evaluate the appropriateness of upgrading equipment to “meet up-to-date best achievable technology standards and best industry practices, including but not limited to consideration of equipment updates and operational effectiveness (e.g. visual and audible alarm options, data display location and functionality, optional system features).” In addition, the descriptions related to functionality and layout have been included in this requirement.

The term “manufacturers requirements” has been changed to “manufacturers recommendations” as well as other industry standards such as the Society of International Gas Tanker and Terminal Operators/Oil Companies International Marine Forum (SIGTTO/OCIMF) 2008 “Jetty Maintenance and Inspection Guide”.

Information on who is permitted to perform the routine inspection, testing and maintenance has been added to MM HAZ-1.

Pursuant to the modification to MM HAZ-1 discussed under response 3-26, the CSLC will ensure compliance to MOTEMS of all equipment at the Marine Terminal, including renewable products as well as feedstocks to the refinery to ensure the maximum protection of the environment from potential spills and resulting impacts.

Tables ES-3 and 2-1, and Section 4.9.7, Mitigation Measure HAZ-1 page 4.9-334, has been replaced with the following.

Mitigation Measure HAZ-1: Implement Release, Monitoring and Avoidance Systems

The following actions shall be completed by Phillips 66 prior to Project operations, including the transitional phase, and shall include routine inspection, testing and maintenance of all equipment and systems conducted in accordance with manufacturers' recommendations and industry guidance for effective maintenance of critical equipment at the Marine Terminal.

Feedstocks handled at the Marine Terminal are not regulated under the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (LKS Act) (e.g. renewable feedstocks such as soybean oil and tallow) and therefore not subject to OSPR oversight, and are also not subject to the CSLC oversight efforts (MOTEMS, Article 5, Article 5.3 and Article 5.5, depending on the materials handled). Yet materials may be detrimental to the environment if spilled.

Regulated products (i.e. "Oil" and "Renewable Fuels" defined in Pub. Resources Code sec. 8750) will continue to be transferred at the Marine Terminal, which do require MOTEMS-compliant Terminal Operating Limits for those products that reside within the jurisdiction of the CSLC. To ensure that Project operation continues to meet those standards, the following measures are required.

Applicability of MOTEMS, Article 5, 5.3, 5.5 and Spill Prevention Requirements

As some materials transferred at the terminal may be feedstocks or other non-regulated materials/feedstocks/products, Phillips 66 shall comply with the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (LKS Act) for all vessels calling at the Marine Terminal regardless of feedstock/material type. In addition, MOTEMS operational regulations, as codified in Article 5, Marine Terminals Inspection and Monitoring (2CCR §2300 et seq), Article 5.3 Marine Terminals Personnel Training and Certification (2CCR §2540 et seq), and Article 5.5 Marine Terminals Oil Pipelines (2CCR §2560 et seq), including items such as static liquid pressure testing of pipelines, shall be implemented for all operations at the Marine Terminal regardless of feedstock/material type and LKS Act regulatory status.

Upon request, Phillips 66 shall provide evidence to relevant regulatory agencies that these facilities, operational response plans, and other applicable measures have been inspected and approved by CSLC and OSPR and determined to be in compliance.

If terminal operations do not allow for regular compliance and inspection of LKS and MOTEMS requirements by the CSLC and OSPR, Phillips 66 shall employ a CSLC-approved third-party to provide oversight as needed to ensure the same level of compliance as a petroleum-handling facility, and to ensure maximum protection of the environment from potential spills and resulting impacts. Phillips 66 shall provide evidence of compliance upon request of relevant regulatory agencies.

Remote Release Systems

The Marine Terminal has a remote release system that can be activated from a single control panel or at each quick-release mooring hook set. The central control system can be switched on in case of an emergency necessitating a single release of all mooring lines. However, to further minimize the potential for accident releases the following is required:

- Provide and maintain mooring line quick release devices that shall have the ability to be activated within 60 seconds.
- These devices shall be capable of being engaged by electric/push button release mechanism and by integrated remotely-operated release system.

- Document procedures and training for systems use and communications between Marine Terminal and vessel operator(s).
- Routine inspection, testing and maintenance of all equipment and systems in accordance with manufacturers' recommendations and necessity, as well as guidance provided by SIGTTO/OCIMF 2008 "Jetty Maintenance and Inspection Guide" Section 2.3.1.1, 2.3.1.2 and 2.3.1.4, are required to ensure safety and reliability. The inspections, testing, and maintenance will be performed by Phillips 66 or its designated representatives.
- In consultation with the CSLC and prior to Project operation, Phillips 66 shall provide a written evaluation of their existing equipment and provide recommendations for upgrading equipment to meet up-to-date best achievable technology standards and best industry practices, including but not limited to consideration of equipment updates and operational effectiveness (e.g. visual and audible alarm options, data display location and functionality, optional system features). Phillips 66 shall follow guidance provided by SIGTTO/OCIMF 2008 "Jetty Maintenance and Inspection Guide" Section 2.3.1.1, 2.3.1.2 and 2.3.1.4.

Best achievable technology shall address:

- Functionality – Controlled release of the mooring lines (i.e. a single control system where each line can be remotely released individually in a controlled order and succession) vs. release all (i.e. a single control system where all lines are released simultaneously via a single push button). See SIGTTO/OCIMF 2008 "Jetty Maintenance and Inspection Guide" Section 2.3.1.2.1.
- Layout – The location(s) of the single control panel and/or central control system to validate that it is operationally manned such that the remote release systems can actually be activated within 60 seconds.

This measure would allow a vessel to leave the Marine Terminal as quickly as possible in the event of an emergency (fire, explosion, accident, or tsunami that could lead to a spill). In the event of a fire, tsunami, explosion, or other emergency, quick release of the mooring lines within 60 seconds would allow the vessel to quickly leave the Marine Terminal, which could help prevent damage to the Marine Terminal and vessel and avoid and/or minimize spills. This may also help isolate an emergency situation, such as a fire or explosion, from spreading between the Marine Terminal and vessel, thereby reducing spill potential. The above would only be performed in a situation where transfer connections were already removed and immediate release would not further endanger terminal, vessel and personnel.

Tension Monitoring Systems

- Provide and maintain Tension Monitoring Systems to effectively monitor all mooring line and environmental loads, and avoid excessive tension or slack line conditions that could result in damage to the Marine Terminal structure and/or equipment and/or vessel mooring line failures.
- Line tensions and environmental data shall be integrated into systems that record and relay all critical data in real time to the control room, Marine Terminal operator(s) and vessel operator(s).
- All systems data shall be required to be recorded and readily accessible to enable tasks such as: (1) verification that systems are routinely operated in compliance with the MM (e.g. vessels are berthing within the MOTEMS compliant speed and angle

- requirements), and (2) post-event investigation and root-cause analysis (e.g. vessel allision during berthing).
- System shall include, but not be limited to, quick release hooks only (with load cells), site-specific current meter(s), site-specific anemometer(s), and visual and audible alarms that can support effective preset limits and shall be able to record and store monitoring data.
 - Document procedures and training for systems use and communications between Marine Terminal and vessel operator(s).
 - Routine inspection, testing and maintenance of all equipment and systems in accordance with manufacturers' recommendations and necessity, as well as guidance provided by SIGTTO/OCIMF 2008 "Jetty Maintenance and Inspection Guide" Section 2.3.1.1, 2.3.1.2 and 2.3.1.4, are required to ensure safety and reliability. The inspections, testing, and maintenance will be performed by Phillips 66 or its designated representatives.
 - Install alternate technology that provides an equivalent level of protection.
 - All systems data shall be required to be recorded and readily accessible to enable tasks such as: (1) verification that systems are routinely operated in compliance with the MM, and (2) post-event investigation and root-cause analysis.

The Marine Terminal is located in a high-velocity current area and currently has only limited devices to monitor mooring line strain and integrated environmental conditions. Updated MOTEMS Terminal Operating Limits (TOLs), including breasting and mooring, provide mooring requirements and operability limits that account for the conditions at the terminal. The upgrade to devices with monitoring capabilities can warn operators of the development of dangerous mooring situations, allowing time to take corrective action and minimize the potential for the parting of mooring lines, which can quickly escalate to the breaking of hose connections, the breakaway of a vessel, and/or other unsafe mooring conditions that could ultimately lead to a petroleum product spill. Backed up by an alarm system, real-time data monitoring and control room information would provide the Terminal Person-In-Charge with immediate knowledge of whether safe operating limits of the moorings are being exceeded. Mooring adjustments can be then made to reduce the risk of damage and accidental conditions.

Allision Avoidance Systems

- Provide and maintain Allision Avoidance Systems (AASs) at the Marine Terminal to prevent damage to the pier/wharf and/or vessel during docking and berthing operations. Integrate AASs with Tension Monitoring Systems such that all data collected are available in the Control Room and to Marine Terminal operator(s) at all times and vessel operator(s) during berthing operations. The AASs shall also be able to record and store monitoring data.
- All systems data shall be required to be recorded and readily accessible to enable tasks such as: (1) verification that systems are routinely operated in compliance with the MM, and (2) post-event investigation and root-cause analysis (e.g. vessel allision during berthing).
- Document procedures and training for systems use and communications between Marine Terminal and vessel operator(s).
- Routine inspection, testing and maintenance of all equipment and systems in accordance with manufacturers' recommendations and necessity, as well as guidance provided by SIGTTO/OCIMF 2008 "Jetty Maintenance and Inspection Guide", are

required to ensure safety and reliability. The inspections, testing, and maintenance will be performed by Phillips 66 or its designated representatives.

- Velocity monitoring equipment is required to monitor reduced berthing velocities until permanent MOTEMS-compliant corrective actions are implemented.
- The systems shall also be utilized to monitor for vessel motion (i.e. surge and sway) during breasting/mooring operations to ensure excessive surge and sway are not incurred.

The Marine Terminal has a continuously manned marine interface operation monitoring all aspects of the marine interface. The Automatic Identification System is monitored through TerminalSmart and provides a record of vessel movements. Pursuant to the CSLC January 26, 2022 letter entitled Phillips 66 (P66) Rodeo Marine Terminal – Review of New September 2021 Mooring & Berthing Analyses and Terminal Operating Limits (TOLS), the single cone fenders shall not be used as the first point of contact during berthing operations. Therefore, all berthing operations shall utilize the double cone fenders. P66 shall incorporate TOL diagrams with landing point statements in the Terminal Information Booklet. For all vessels, a Phillips 66 Marine Advisor is in attendance and is in radio contact with the vessel master and pilot prior to berthing, reviewing initial contact point and then monitoring.

Excessive surge or sway of vessels (motion parallel or perpendicular to the wharf, respectively), and/or passing vessel forces may result in sudden shifts/redistribution of mooring forces through the mooring lines. This can quickly escalate to the failure of mooring lines, breaking of loading arm connections, the breakaway of a vessel, and/or other unsafe mooring conditions that could ultimately lead to a spill. Monitoring these factors will ensure that all vessels can safely berth at the Marine Terminal and comply with the standards required in the MOTEMS.

Response to Comment 24

See Response to Comments 23 and 25.

Response to Comment 25

See Response to Comment 23.

Response to Comment 26

Section 4.9.2.1, page 4.9-313, is revised as follows:

As per California Building Code Chapter 31f – Marine Oil Terminals, Section 3101F.2, the purpose of the code is to establish minimum engineering, inspection and maintenance criteria for Marine Oil Terminals in order to prevent oil spills and to protect public health, safety and the environment. The code defines “oil” as any kind of petroleum, liquid hydrocarbons, or petroleum products or any fraction or residues thereof, including but not limited to, crude oil, bunker fuel, gasoline, diesel fuel, aviation fuel, oil sludge, oil refuse, oil mixed with waste, and liquid distillates from unprocessed natural gas.

AB 148, adopted in 2021, defined the terms “renewable fuel,” “renewable fuel production facility,” and “renewable fuel receiving facility” for purposes of the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act and would include renewable fuel within the definition of “oil” for purposes of the act.

Also see Response to Comment 23.

Response to Comment 27

Refer to Response to Comment 26.

Response to Comment 28

Refer to Response 26.

Response to Comment 29

Refer to Response 23.

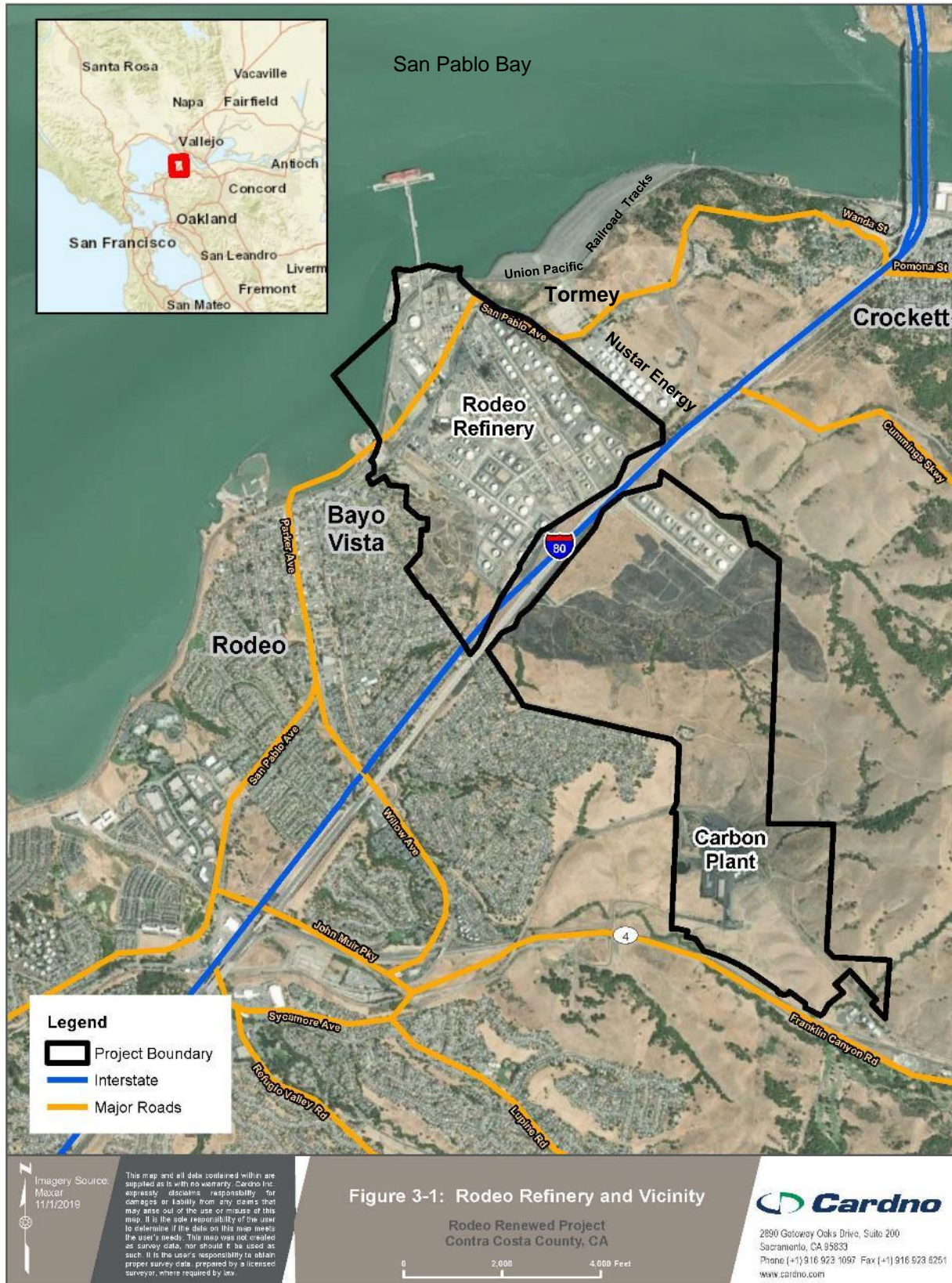
Response to Comment 30

Refer to Response 23.

Response to Comment 31

Figures 3-1 and 3-2 have been revised to show the locations of adjacent facilities (e.g. San Pablo Bay, NuStar Energy tank farm, Tormey, Union Pacific/Amtrak railroad).

Figures 3-1 and 3-2 are replaced with the following.





Response to Comment 32

Figure 3-1 is the general location of the project boundary based on the facility property line. The comment correctly identifies the butane storage tank and a portion of the railcar facility that is located on Parcel 1 of the CSLC lease. Refer to Response to Comment 3-21.

Response to Comment 33

Section 3.4.2.5, page 3-20, paragraph 2 of the Draft EIR is revised as follows:

3.4.2.5 Marine Oil Terminal Engineering and Maintenance

The California State Lands Commission (CSLC) developed Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) to establish standards for the design, construction, operation, and maintenance of marine oil terminals, berthing and cargo loading/unloading facilities. MOTEMS are comprehensive and contain requirements for assessment of the structural, mechanical, and electrical systems, including, but not limited to routine audits and inspections, geotechnical assessments, structural evaluations, seismic analyses, berthing and mooring analyses, fire protection, pipelines, mechanical and electrical equipment, and electrical systems. MOTEMS is intended to minimize the possibility of accidents at marine oil terminals during potentially damage causing events such as seismic activity, extreme weather events, tsunamis, vessel impacts, fires, and explosions extreme weather events and seismic activity that would lead to releases of petroleum substances to the environment. Compliance with MOTEMS is ongoing, as facilities are required to have routine audits and inspections to identify any deficiencies. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS. ~~which has been completed at~~ The Rodeo Refinery's Marine Terminal, and Phillips 66 will continue to work with the CSLC Marine Environmental Protection Division (MEPD) to take any necessary corrective actions to comply with MOTEMS requirements. The CSLC has regulatory authority over MOTEMS.

Section 4.9.2.7, page 4.9-301, paragraph 4 of the Draft EIR is revised as follows:

4.9.2.7 Marine Oil Terminal Engineering and Maintenance Standards

The Marine Terminal ~~operates as a MOTEMS-compliant facility, is required to and has ongoing compliance with MOTEMS,~~ meaning that its construction, materials, equipment, maintenance, and operating procedures meet the standards for marine terminals established by CSLC. The Marine Terminal undergoes routine audits and inspections to identify any deficiencies and comply with MOTEMS. The operating procedures are set forth in the Phillips 66 Rodeo Marine Terminal Handbook, which was revised and updated in 2016.

Section 4.9.2.11, page 4.9-313, paragraph 5 of the Draft EIR is revised as follows:

As per California Building Code Chapter 31F – Marine Oil Terminals, Section 3101F.2, the purpose of the code is to establish minimum engineering, inspection and maintenance criteria for Marine Oil Terminals in order to prevent oil spills and to protect public health, safety and the environment. The code defines “oil” as any kind of petroleum, liquid hydrocarbons, or petroleum products or any fraction or residues thereof, including but not limited to, crude oil, bunker fuel, gasoline, diesel fuel, aviation fuel, oil sludge, oil refuse, oil mixed with waste, and liquid distillates from unprocessed natural gas.

Section 4.10.2.11, page 4.10-354, paragraph 6 of the Draft EIR is revised as follows:

In addition, marine terminals located on lands under CSLC jurisdiction are subject to comply with the CSLC's Marine Facilities Division-developed MOTEMS. ~~For the existing Marine Terminal, these regulations establish standards for the maintenance of marine oil terminal berthing and cargo loading/unloading facilities. MOTEMS are intended to minimize the possibility of accidents at marine oil terminals during extreme weather events and seismic activity that would lead to releases of petroleum and oil based substances to the environment. Existing facilities are required to retrofit or~~

~~rebuild as necessary to meet MOTEMS, which the Rodeo Refinery's Marine Terminal has, and Phillips 66 would continue to comply. MOTEMS are comprehensive and contain requirements for assessment of the structural, mechanical, and electrical systems, including, but not limited to routine audits and inspections, geotechnical assessments, structural evaluations, seismic analyses, berthing and mooring analyses, fire protection, pipelines, mechanical and electrical equipment, and electrical systems. MOTEMS is intended to minimize the possibility of accidents at marine oil terminals during potentially damage causing events such as seismic activity, extreme weather events, tsunamis, vessel impacts, fires, and explosions that would lead to releases of petroleum substances to the environment. Compliance with MOTEMS is ongoing, as facilities are required to have routine audits and inspections to identify any deficiencies. Existing facilities are required to retrofit or rebuild as necessary to meet MOTEMS. The Rodeo Refinery's Marine Terminal and Phillips 66 will continue to work with the CSLC Marine Environmental Protection Division (MEPD) to take any necessary corrective actions to comply with MOTEMS requirements. The CSLC has regulatory authority over MOTEMS.~~

Response to Comment 34

As noted in the Draft EIR, as part of the Project, no physical changes are needed at the Marine Terminal. No mechanical or electrical components or systems need to be changed. No additional piping or changes to existing piping are required. Phillips 66 standard practice is for any piping taken out of service to be purged, gas-freed and physically isolated. Also see Response 23.

Response to Comment 35

Renewable diesel and biodiesel are not equivalent materials. However, both renewable diesel and biodiesel are considered biofuels. Under the Proposed Project, the types of biofuels allowed to be transferred at the Marine Terminal include renewable diesel, renewable jet fuel and potentially renewable naphtha. Other types of biofuels, including biodiesel, may be handled on a less frequent basis. References to the term "biodiesel" in Impact 4.4-7 and Impact 4.4-9 will be changed, as follows.

Page 4.4-144, Impact 4.4-7 of the Draft EIR is revised as follows:

While there are differences in behavior, fate and transport depending on type of oil spilled, substantial adverse effects would be expected in the event of a spill during the transitional phase (petroleum) or during Project operation (feedstocks, processed biodiesel fuels, renewable fuel gas or blending components).

Page 4.4-146, Impact 4.4-9 of the Draft EIR is revised as follows:

Substantial adverse impacts have the potential to occur in the event of a significant spill during the Project transitional phase (petroleum) or during Project operation (feedstock vegetable oils, animal fats, or processed biodiesel fuels, renewable fuel gas, renewable components for blending with other transportation fuels).

Refer to Master Response No. 4, Land Use and Feedstocks.

Response to Comment 36

No physical changes are being made at the Marine Terminal as part of the Project. The Fire Hazard Assessment and Risk Analysis (FHARA) was submitted to CSLC as part of the Rodeo 2020 MOTEMS audit. CSLC has made multiple comments regarding the FHARA. Phillips 66 has committed to revising the FHARA to address these comments.

Response to Comment 37

Comment noted. Refer to the previous Responses to Comments 25, 26, 29, and 33 and text changes above regarding CSLC jurisdiction and regulations.

Response to Comment 38

As part of the Project, neither vessel at-berth operating limits nor dredging activities will be modified. Vessel at-berth operating limits are modified as part of routine updates (not as a result of, or related to, the Project) to conform with the September 2021 TOLs. Permitted project depths are unchanged. Annual dredging activities will continue to utilize the permitted 44 feet Mean Lower Low Water (MLLW) depth “advanced maintenance” pocket comprising berths ROD3, ROD4, ROD5 to ensure that a level of 43 feet MLLW is maintained.

Response to Comment 39

Section 4.7.2.7, page 4.7-227-228, paragraph 5, 6-7 of the Draft EIR is revised as follows:

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, CBC Chapter 16, Section 1613, provides earthquake loading specifications for every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, which shall be designed and constructed to resist the effects of earthquake motions in accordance with ~~ASCE 7-05~~ ASCE/SEI 7-22.

The following paragraph is added between CBC Ch. 18 and CBC Ch. 33.

CBC Chapter 31F, administered by the Marine Environmental Protection Division on behalf of the CSLC contains requirements and specifications pertaining to Marine Terminal Structures; existing, new and modified. Nonstructural and nonbuilding components of marine terminals are included as well and required to comply with all regulations. Chapter 31F provides earthquake loading and geotechnical specifications.

Response to Comment 40

Draft EIR page, 4.9-300, first paragraph is revised as follows:

Design

As industrial facilities that handle hazardous chemicals, the Rodeo and Santa Maria Refineries must be constructed and operated in accordance with certain codes and standards that are enforced via administrative mechanisms such as internal audits, design reviews, and building inspections. Some of the main design standards include the American Petroleum Institute’s (API’s) Recommended Practice 750, Codes of Management Practices of the Chemical Manufacturers, the American National Standards Institute’s B31.1: Power Piping and B13.3: Petroleum Refinery Piping, National Fire Prevention Association 30, and the International Building Code. ~~Uniform Building Codes~~.

It is acknowledged that the IBC is the most current code; however there are other instances in the Draft EIR that reference the UBC, which are directly quoted from state (CEQA Guidelines) and local documents (General Plans).

Response to Comment 41

Refer to Response to Comment 33.

Response to Comment 42

Refer to Response to Comments 33 and 36.

Response to Comment 43

Section 4.9.7, page 4.9.329, paragraph 2 of the Draft EIR is revised as follows:

During the transitional phase, additional vessel traffic arriving at the Marine Terminal would increase from 80 tankers and 90 barges annually as part of the baseline, or about 3.3 vessels calls per week, to an estimated 96 tankers and 92 barges over the 7-month transitional period, or about 6.7 calls per week, with a total number of vessel calls over the transitional period producing an increase of ~~approximately 10 percent~~ 11 percent over the baseline entire-year vessel calls. This would produce a spill frequency of an in-transit spill of once every 1,076 years and a spill at the Marine Terminal of about once every year (note this is on an annualized basis utilizing the rate of vessel calls over the 7-month period).

Section 4.10., page 4.10-363, paragraph 5 of the Draft EIR is revised as follows:

Rodeo Refinery—Marine Terminal (spills)

During the 7-month transitional phase that would be concurrent with Rodeo Refinery construction, vessel traffic arriving at the Marine Terminal would increase from 80 tankers and 90 barges to an estimated 96 tankers and 92 barges, which is an increase of ~~approximately 10 percent~~ 11 percent over baseline conditions. Marine vessels would bring renewable feedstocks and gasoline-blending components. In the event of an accidental spill hazardous materials would discharge into waters of the San Pablo and San Francisco Bays.

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Comment Letter 3. Central Coast RWQCB (CCRWQCB)

COMMENT LETTER: 3

Gary Kupp

From: Olson, Tammie@Waterboards <Tammie.Olson@Waterboards.ca.gov>
Sent: Friday, December 17, 2021 9:21 AM
To: Gary Kupp
Cc: state.clearinghouse@opr.ca.gov; Kristen.M.Kopp@p66.com; Donald.G.Bowman@p66.com; James.O.Anderson@p66.com; sean.h.hunt@p66.com; smcmasters@co.slo.ca.us; lminnick@co.slo.ca.us; KTomita@trihydro.com; kswords@trihydro.com; Schroeter, Angela@Waterboards; Bishop, Greg@Waterboards; Lodge, Ryan@Waterboards; Hammer, Phillip@Waterboards; Wyatt-Mair, Arwen@Waterboards; Soderberg, Sheila@Waterboards; Sellinger, Amber@Waterboards
Subject: SCP: PHILLIPS 66 SANTA MARIA REFINERY, SAN LUIS OBISPO COUNTY – REVIEW AND COMMENT ON DRAFT ENVIRONMENTAL IMPACT REPORT (STATE CLEARINGHOUSE NO. 2020120330 COUNTY FILE NO. CDLP20-2040)
Attachments: 12-17-2021_SCP_Ph66_SMRRefinery_EIR.pdf

SITE CLEANUP PROGRAM: PHILLIPS 66 SANTA MARIA REFINERY, 2555 WILLOW ROAD, ARROYO GRANDE, SAN LUIS OBISPO COUNTY – REVIEW AND COMMENT ON PHILLIPS 66’S RODEO RENEWED PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT (STATE CLEARINGHOUSE NO. 2020120330 COUNTY FILE NO. CDLP20-2040)

The Central Coast Regional Water Quality Control Board is increasing its efforts to transmit correspondence and other information electronically, reducing the amount of paper used, and increasing the speed of which information is distributed. Therefore, you are receiving the attached correspondence for the subject site from the Central Coast Water Board in a Portable Data Format (PDF) and will not receive a hard copy unless requested. If you need help opening this document please refer to the link below:
<http://www.adobe.com/products/acrobat/readstep2.html>

COMMENT LETTER: 3



Central Coast Regional Water Quality Control Board

December 17, 2021

Mr. Gary Kupp
Contra Costa County
Department of Conservation and Development
30 Muir Road
Martinez, CA 94553
Email: gary.kupp@dcd.cccounty.us

Sent via Electronic Mail only

Dear Mr. Kupp:

SITE CLEANUP PROGRAM: PHILLIPS 66 SANTA MARIA REFINERY, 2555 WILLOW ROAD, ARROYO GRANDE, SAN LUIS OBISPO COUNTY – REVIEW AND COMMENT ON PHILLIPS 66’S RODEO RENEWED PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT (STATE CLEARINGHOUSE NO. 2020120330 COUNTY FILE NO. CDLP20-2040)

The Central Coast Regional Water Quality Control Board (Central Coast Water Board) has reviewed Cardno, Inc.'s Draft Environmental Impact Report (Draft EIR)¹ dated October 2021 that was submitted to the State Clearinghouse and Contra Costa County. As described in the Draft EIR, Phillips 66 Company proposes to repurpose the Rodeo Refinery to no longer process crude oil. Therefore, other sites owned and operated by Phillips 66 Company located throughout California would be affected, including the Santa Maria Refinery in San Luis Obispo County and two of the four pipelines (i.e., Lines 300 and 400) that transport crude oil and/or processed petroleum distillate from the Santa Maria Refinery in San Luis Obispo County to the Rodeo Refinery in Contra Costa County. As noted in the Draft EIR, Phillips 66 Company will obtain Central Coast Water Board stormwater and waste discharge permits for demolition.

The Central Coast Water Board is only providing comments on the Draft EIR related to the decommissioning of infrastructure within the Central Coast Region (i.e. San Luis Obispo and Santa Barbara counties). Based on our review of the Draft EIR, the Central Coast Water Board has the following comments for consideration:

1. Prior to the County of San Luis Obispo Planning and Building issuing demolition permits for the Santa Maria Refinery, the Central Coast Water Board would like to review and comment on Phillips 66 Company's proposed handling and disposal of the demolition-derived waste materials.

¹ The Draft EIR can be found at the following link: <https://ceqanet.opr.ca.gov/Project/2020120330>

COMMENT LETTER: 3

2. Prior to the County of San Luis Obispo Planning and Building Department and Santa Barbara County Planning Department issuing permits, the Central Coast Water Board would like to review and comment on Phillips 66 Company's plans for handling and disposal of the material removed from the pipelines located in San Luis Obispo and Santa Barbara counties. 3
3. The Santa Maria Refinery is an active cleanup case in the Central Coast Water Board's Site Cleanup Program². Contra Costa County and the County of San Luis Obispo should be aware that Phillips 66 Company has several ongoing environmental projects at the Santa Maria refinery:
- Northern Impacted Waste Site – excavation and offsite disposal of waste materials from this area on the refinery is expected to resume and be completed in 2022.
 - Slop Oil Line Release Area – installation of a groundwater extraction and treatment system in this area is scheduled for January 2022. The remediation system infrastructure and associated utilities necessary to operate the system will need to be protected from heavy equipment during decommissioning activities. In addition, Phillips 66 plans to operate the remediation system for several years beyond the proposed project. 4
 - Per- and polyfluoralkyl substances (PFAS) investigation³ – collection of groundwater, wastewater treatment plant influent and effluent, and stormwater samples from various areas on the refinery property is expected in first quarter 2022. Phillips 66 Company's consultants will sample and analyze the various media for PFAS compounds then prepare a summary report with recommendations if additional investigation is needed.

Thank you for the opportunity to comment on the Draft EIR. If you have any questions regarding this comment letter, please contact **Amber Sellinger at (805) 549-3866** or Sheila Soderberg at (805) 549-3592 (email addresses are below).

Sincerely,

for Matthew T. Keeling
Executive Officer

cc's on next page

² Additional information on the Site Cleanup Program cases can be found on GeoTracker at: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL203121248

³The PFAS Work Plan can be found in GeoTracker at: <https://geotracker.waterboards.ca.gov/?surl=qysvb>

COMMENT LETTER: 3

cc via email:

State Clearinghouse, Office of Planning and Research, state.clearinghouse@opr.ca.gov
Kristen Kopp, Phillips 66 Company, Kristen.M.Kopp@p66.com
Donald Bowman, Phillips 66 Company, Donald.G.Bowman@p66.com
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GeoTracker SCP files: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL203121248

Water Board internal file: r:\rb3\shared\scps\slo co\arroyo grande\2555 willow-sm refinery\correspondence\12-17-2021_scp_ph66_smrefinery_eir.docx

BizFlow Task: M30000 Site Cleanup Program DARTS: 2031200

Response to Comment 1

Comment noted.

Response to Comment 2

Phillips 66 will consult with the CCRWQCB regarding plans for the handling and disposal of any demolition material. A waste management plan will be developed to address the disposal and handling of demolition-derived waste materials.

Response to Comment 3

Phillips 66 will consult with the CCRWQCB regarding plans for the handling and disposal of any demolition material. A waste management plan will be developed.

Response to Comment 4

Phillips 66 is working with San Luis Obispo County to identify the potential impacts of the demolition of the Santa Maria Refinery through the County's Land Use permitting process. Remediation of historic conditions is ongoing and Phillips 66 will continue to work with the CCRWQCB to address these issues and maintain compliance with these requirements.

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Comment Letter 4. City of Richmond

COMMENT LETTER: 4

Gary Kupp

From: Floy Andrews <floyandrews@gmail.com>
Sent: Friday, December 17, 2021 2:26 PM
To: Gary Kupp
Subject: Comment Letter re Phillips 66 DEIR
Attachments: Rodeo Refinery DEIR 12.16.21.doc

Sent from my iPhone

COMMENT LETTER: 4



Councilmember Eduardo Martinez

December 16, 2021

Re: Draft EIR for the Proposed Conversion of the Phillips 66 Rodeo Oil Refinery to Biofuel Production (File No. LP20-2040) ("DEIR")

Dear Mr. Kupp:

The proposed conversion of Phillips 66 refinery to biofuel production will have direct, negative impact on local communities for decades. As such, a thorough analysis of environmental impacts, as required by the California Environmental Quality Act, is essential. Please address the following concerns and inadequacies of the DEIR submitted by project proponents.

1. **BASELINE:** The DEIR assumes that if Phillips 66 does not convert its production to biofuels, it will continue to refine crude oil at historic levels. Recent market changes and crude oil availability, as well as the repeated comments of Phillips 66 representatives demonstrate otherwise. Phillips 66 has repeatedly stated that it plans to shut down its Santa Maria location, which makes sense since both its Santa Maria and Rodeo refineries rely on fast-dwindling crude supplies. Since Santa Maria and Rodeo are joined by one pipeline, it's clear that when Santa Maria discontinues its crude refining operation, Rodeo will quickly follow suit. Therefore, any project emissions from biofuel production will be an *increase* over emission from a closed refinery. The DEIR must analyze the conversation in comparison to an idled refinery scenario. 1
2. **PUBLIC SAFETY:** I am worried about public safety from the biofuel refining process, which the DEIR fails to consider at all. You have data demonstrating that refining biofuels increases the incidence of flaring, but you did not consider it in the DEIR. 2
4. **LAND USE:** The DEIR does not consider the impact of a massive increase in use of food crops like soybean oil as a feedstock, which threatens to wreak havoc with agricultural land use. Current indications suggest the refinery could potentially use up to 40 percent of the nation's entire supply of soybean oil. Moreover, more environmentally sustainable feedstocks like waste oil are not available in the quantities contemplated by the project. 3
5. **PROJECT ALTERNATIVES:** The DEIR does not evaluate alternatives to the project in a way that makes sense. A green hydrogen alternative should have been considered for the project. 4

440 Civic Center Plaza, P.O. BOX 4046, Richmond, CA 94804

Tel: (510) 620-6593

Fax: (510) 620-6824

COMMENT LETTER: 4

6. **OPERATING WITHOUT A PERMIT:** The Bay Area Air Quality Management District (BAAQMD) is currently investigating whether Phillips 66 violated the law in starting its conversion of the refinery *before* receiving a permit. The previously converted unit (Unit 250) should be evaluated as part of this project. No permit should be issued if Phillips 66 is currently acting in violation of the law. 5
7. **CUMULATIVE IMPACTS:** All of these potential impacts are from just one project. The DEIR did not make any meaningful effort at all to evaluate the cumulative impacts of the project considered collectively with the impacts of the very similar Marathon Martinez refinery project, which is being evaluated at almost the same time. 6

I ask that this project not move forward until and unless these very serious potential impacts are fully analyzed and addressed. Additionally, given the enormous import of this project for the community, we believe a public hearing concerning the project and its environmental review would facilitate the purposes and goals of CEQA. We therefore request that you schedule such a hearing as soon as possible.

Sincerely,

Eduardo Martinez
City Council
440 Civic Center Plaza
P.O. Box 4046
Richmond, CA 94804-1630

440 Civic Center Plaza, P.O. BOX 4046, Richmond, CA 94804

Tel: (510) 620-6593

Fax: (510) 620-6824

COMMENT LETTER: 4

Councilmember Eduardo Martinez

Richmond City Council

440 Civic Center Plaza #110

P.O. Box 4046

Richmond, Ca. 94804-1630

Office: (510) 620-6593

Cell: (510) 712-4934

440 Civic Center Plaza, P.O. BOX 4046, Richmond, CA 94804

Tel: (510) 620-6593

Fax: (510) 620-6824

Response to Comment 1

Refer to Master Response No. 1, CEQA Baseline.

Response to Comment 2

Increased flaring is not part of the Project. Refer to Master Response No. 5, Renewable Fuels Processing.

Response to Comment 3

Refer to Master Response No. 4, Land Use and Feedstocks.

Response to Comment 4

Refer to Master Response No. 2, CEQA Alternatives.

Response to Comment 5

Refer to Master Response, No. 7, Project Description – Piecemealing.

Response to Comment 6

Refer to Master Response No. 3, Cumulative Impacts.

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Comment Letter 5. Contra Costa County Health Services (CCCHS)

COMMENT LETTER: 5

Gary Kupp

From: Michael Dossey <Michael.Dossey@cchealth.org>
Sent: Thursday, December 16, 2021 8:20 AM
To: Gary Kupp
Cc: Nicole Heath
Subject: Comments on Phillips 66 Rodeo Renewed Project DEIR

Hi Gary,

County Hazmat reviewed the DEIR and developed the following comments. Hope you are doing well. Let me know if you have any questions. Thanks

- 1 I • Table 1-1 (page 1-8), why would permits be needed from Shasta County?
- 2 I • In several locations the DEIR implies that the Santa Maria site supplies 70,000 bpd of oil via pipeline to Rodeo. The amount of oil supplied by Santa Maria to Rodeo is likely closer to 30,000 bpd. (pages xxii, 3-23).
- 3 I • Suggest “bbrl/d” be replaced with “bpd” (pages 3-23, 3-33).
- 4 I • Under the Federal Authority USEPA section (page 4.9-308), there is discussion of state and local authority for the Accidental Release Prevention (CalARP, CUPA and Cal-OSHA). These state and local authority discussions may be better made in their appropriate sections and referenced under the Federal Authority section as needed. Also, in addition to toxic substances the federal risk management program includes regulated flammable substances consistent with 29 CFR Part 1910.119.
- 5 I • Under the State Authority California Accidental Release Prevention Program section (page 4.9-311), suggest it be clarified that the CalARP is very similar to USEPA’s RMP as well as Cal/OSHA’s CCR T8 5189.1. Currently, both the Rodeo and Santa Maria refineries are subject to Program 4 requirements under the CalARP Program. Program 4 requirements are consistent with Cal/OSHA’s CCR T8 5189.1.
- 6 I • Under the Local Authority Contra Costa County Industrial Safety Ordinance section (page 4.9-317), third bullet, the human factors program is also to be incorporated into maintenance safe work practices and maintenance procedures.
- 7 I • Suggest “bbbs” be replaced with “barrels” (page 4.9-330).

Michael Dossey
Accidental Release Prevention Engineer
Contra Costa County Health Services
Hazardous Materials Programs
(925) 655-3237 d
(925) 766-6477 c

Response to Comment 1

Although permits would not be needed from Shasta County, the Shasta County Air Quality Management District is a relevant agency because, depending on rail line routes utilized, the Project may contribute to increased rail transport activity through Shasta County. Since it is unknown what the precise rail transport distribution would be in the future among the affected air basins statewide, a worst-case scenario is assumed that each rail route in California would accommodate full Project rail traffic. However, such a worst-case scenario would be unlikely to occur because future rail transport would be distributed in different general directions, north, south, and east of the San Francisco Bay Area.

Response to Comment 2

The 70,000 bpd references the amount of crude and gas oil received via pipeline at the Rodeo Refinery. The Santa Maria Refinery supplies closer to 30,000 bpd and the balance is received from other crude and gas oil sources via pipeline. The DEIR text has been revised to reflect these details.

Executive Summary, page xxii and Section 3.7.1 of the Project Description is revised as follows:

Pre- and post-Project operational activities are shown in Table ES-1. Once the Project is operational, no crude oil would be processed at the Rodeo Refinery. As shown in Table 3-2, the Rodeo Refinery would no longer receive crude oil and gas oil at its Marine Terminal (35,000 barrels per day [bpd] on a 12-month rolling average) or from pipelines connecting the Rodeo Refinery to Central California crude supplies and the Santa Maria Refinery (70,000 bpd).

3.7.1 Product Received

Once the Project is operational, no crude oil would be processed at the Rodeo Refinery. As shown in Table 3-2, the Rodeo Refinery would no longer receive crude oil and gas oil at its Marine Terminal (35,000 bpd on a 12-month rolling average¹⁰) or from pipelines connecting the Rodeo Refinery to Central California crude supplies and the Santa Maria Refinery (70,000 bpd). The Rodeo Refinery would receive 38,000 bpd gasoline and gasoline blendstocks, which is an increase over baseline of 28,000 bpd.

Response to Comment 3

Use of bbl/d is commonly used in the fuels industry, and specifically used in Phillips 66 application materials. As appropriate, minor changes have been made throughout the Final EIR to ensure consistency with these abbreviations.

Response to Comment 4

Section 4.9.2.11, page 4.9-308, paragraph 2 of the Draft EIR is revised as follows to clarify regulatory authority:

Accidental Release Prevention

The USEPA's Accidental Release Prevention/RMP rule, CalARP Program, and Cal/OSHA Process Safety Management (PSM) standard require that facilities assess the potential for accidental releases of toxic, reactive, flammable, or explosive chemicals and that programs be established to minimize the frequency and extent of accidental releases. The RMP and CalARP regulations are geared toward offsite consequences to protect the general public. PSM is geared toward workplace and employee safety. Enforcement of CalARP regulations is assigned to the Certified Unified Program Agencies (CUPA).

Risk Management Plan Rule

The 1990 Clean Air Act Amendments Section 112(r), Prevention of Accidental Releases and General Duty Clause, requires that facilities assess the potential for accidental releases of toxic, reactive, flammable, or explosive chemicals and that programs be established to minimize the frequency and extent of accidental releases. Facilities with the above hazard potential must develop and submit a Risk Management Plan (RMP) to the USEPA. A RMP will include a hazard assessment, prevention program, and emergency response program.

Crude oil is not a regulated substance under the federal USEPA Accidental Release Prevention/RMP Rule. Crude oil can contain hydrogen sulfide (H₂S), which can be captured by the RMP rule. However, the threshold determination for hydrogen sulfide in 40 CFR Section 68.115(b) is 1 percent by weight. Crude oil containing less than 1 percent hydrogen sulfide is not captured under the RMP Rule. ~~Pursuant to the Cal/OSHA PSM Standard, crude oil is not classified as an acutely hazardous material in the CCR Title 8, Section 5180.~~

Section 4.9.2.11, page 4.9-311, paragraph 5 of the Draft EIR is revised as follows:

California Accidental Release Prevention Program

California replaced the Risk Management and Prevention Program with the CalARP Program on January 1, 1997. ~~The CalARP Program is very similar to the USEPA's Risk Management Program with the following differences:~~ Enforcement of CalARP regulations is assigned to the Certified Unified Program Agencies (CUPA). CalARP is similar to USEPA's RPM (discussed in above Risk Management Plan Rule subsection) and Cal/OSHA's PSM (discussed in California Division of Occupational Safety and Health subsection below). Both CalARP Program and USEPA's RPM are geared toward offsite consequences to protect the general public but have the following differences:

- The list of toxic chemicals is larger—276 vs. 77
- The threshold quantities of the chemicals is smaller (e.g., chlorine federal threshold quantity is 2,500 pounds vs. California's threshold quantity of 100 pounds); the lower threshold quantities result in hydrogen sulfide and ammonia being listed as regulated substances at the Rodeo Refinery
- Requires an external events analysis be performed, including a seismic analysis
- More interaction with the public and agencies, including an RMP.

Section 4.9.2.11, page 4.9-313, paragraph 2 - 4 of the Draft EIR is revised as follows:

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the work place. Cal/OSHA and the federal OSHA are the agencies responsible for ensuring worker safety in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices within the state. ~~Cal/OSHA's PSM standard is discussed above in the Accidental Release Prevention subsection.~~ The Cal/OSHA Process Safety Management (PSM) Unit is responsible for inspections and enforcing all health and safety standards. Differing from CalARP and USEPA's RPM, Cal/OSHA PSM is geared toward workplace and employee safety.

Storage tank dikes and bulk storage tanks are examples of confined spaces. Worker entry into confined spaces must be performed in accordance with OSHA confined space procedures, including training for participants, planning, provisions for access/egress, monitoring, and supervision. Storage tank demolition, repair, and installation require hot work (e.g., cutting torches, welding, and grinding). Hot work within the refinery environment must be performed under the facility hot work program that is designed in accordance with OSHA requirements and industry guidelines. At sites known to have

hazardous materials present (e.g., hydrocarbons, lead-based paint, asbestos, and contaminated soil), a site safety plan must be prepared to protect workers. The site safety plan establishes policies and procedures to protect workers and the public from exposure to known and potential hazards.

The Rodeo Refinery is subject to CCR Title 8, Section 5189.1, Process Safety Management for Petroleum Refineries, of Cal/OSHA's General Industry Safety Orders, which is more stringent than and supersedes federal OSHA's Process Safety Management of Highly Hazardous Chemicals standard (29 CFR Section 1910.119). Pursuant to the Cal/OSHA PSM Standard, crude oil is not classified as an acutely hazardous material in the CCR Title 8, Section 5189.

Response to Comment 5

Refer to Response to Comment 4.

Response to Comment 6

Section 4.9.2.11, page 4.9-317, paragraph 3, bullet 3, of the Draft EIR is revised as follows to clarify an element of the County's Industrial Safety Ordinance:

- A Human Factors Program is required for the following elements: Process Hazard Analysis, Operating and Maintenance Procedures, Incident Investigation, training employees on the basics of the human factors and on the facility's human factors program, and managing change to the emergency response and operations organizations.

Response to Comment 7

The use of this acronym is consistent throughout the Draft EIR. No revision is necessary.

Comment Letter 6. East Bay Municipal Utility District (EBMUD)

COMMENT LETTER: 6

Gary Kupp

From: Drake, Ginelle <ginelle.drake@ebmud.com>
Sent: Monday, December 6, 2021 10:50 AM
To: Gary Kupp
Cc: don.a.bristol@p66.com; rich.g.harbison@p66.com
Subject: Notice of Availability for a Draft Environmental Impact Report for the Proposed Phillips 66 Rodeo Renewed Project
Attachments: sb21_331 Phillips 66 Rodeo Renewed Project NOA of DEIR Response.pdf

Hello,

Please see attached letter regarding the Proposed Phillips 66 Rodeo Renewed Project.

Thank you,

Ginelle Drake, Administrative Secretary II
Water Distribution Planning Division
510-287-1081 | ginelle.drake@ebmud.com

COMMENT LETTER: 6



December 6, 2021

Gary Kupp, Senior Planner
Contra Costa County
Department of Conservation & Development
Community Development Division
30 Muir Road
Martinez, CA 94553

Re: Notice of Availability for a Draft Environmental Impact Report for the Proposed Phillips
66 Rodeo Renewed Project (County File# LP20-2040)

Dear Mr. Kupp:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Draft Environmental Impact Report (EIR) for the Phillips 66 Rodeo Renewed Project located at 1380 San Pablo Avenue in Rodeo in unincorporated Contra Costa County (County). EBMUD commented on the Notice of Preparation of a Draft EIR for the project on January 20, 2021. EBMUD's original comments (see enclosure) still apply regarding water service, water recycling, and water conservation. EBMUD has the following clarifying comments on water recycling.

WATER RECYCLING

The proposed project presents opportunities to produce and serve significant amounts of recycled water for industrial and irrigation uses. EBMUD requests that an estimate of expected water demands for feasible recycled water applications be provided for the project. EBMUD also requests that Phillips 66 continue to coordinate closely with the EBMUD regarding specifications and infrastructure requirements in implementing a recycled water project when feasible to do so.

1

If you have any questions concerning this response, please contact Timothy R. McGowan, Senior Civil Engineer, Major Facilities Planning Section at (510) 287-1981.

Sincerely,

A handwritten signature in blue ink that reads 'David J. Rehnstrom'.

David J. Rehnstrom
Manager of Water Distribution Planning

DJR:KTL:djr
sb21_331.Phillips 66 Rodeo Renewed Project NOA of DEIR Response

Enclosure

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

Recycled Paper

COMMENT LETTER: 6

Gary Kupp, Senior Planner
December 6, 2021
Page 2

cc: Richard G. Harbison
Phillips 66 Company
1380 San Pablo Avenue
Rodeo, CA 94572

Don Bristol
Phillips 66 Company
1380 San Pablo Avenue
Rodeo, CA 94572

COMMENT LETTER: 6



January 20, 2021

Gary Kupp, Senior Planner
Contra Costa County
Department of Conservation & Development
Community Development Division
30 Muir Road
Martinez, CA 94553

Re: Notice of Preparation for a Draft Environmental Impact Report for the Proposed Phillips 66 Rodeo Renewed Project (County File# LP20-2040)

Dear Mr. Kupp:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the Phillips 66 Rodeo Renewed Project located at 1380 San Pablo Avenue in Rodeo in unincorporated Contra Costa County (County). EBMUD has the following additional comments.

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 near or within the EBMUD property will 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, any construction in the vicinity of the EBMUD property shall not undermine the integrity of the transmission pipelines and the surrounding soil. EBMUD requests that the project sponsor provide a set of plans of the proposed construction in any future environmental documentation to determine its proximity to EBMUD's property, right-of-ways, and pipelines.



WATER SERVICE

EBMUD's Maloney Pressure Zone, with a service elevation range between 0 and 200 feet, currently provides water service to the Phillips 66 Refinery. 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



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

COMMENT LETTER: 6

Gary Kupp, Senior Planner
January 20, 2021
Page 2

substantial lead time, which should be provided for in the project sponsor's development schedule.

↑ 3
cont'd

EBMUD's Standard Site Assessment Report indicates the potential for contaminated soils or groundwater to be present within the project site boundaries. The project sponsor should be aware that EBMUD will not install piping or services in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste or that may be hazardous to the health and safety of construction and maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping or services in areas where groundwater contaminant concentrations exceed specified limits for discharge to the sanitary sewer system and sewage treatment plants. The project sponsor must submit copies to EBMUD of all known information regarding soil and groundwater quality within or adjacent to the project boundary and a legally sufficient, complete and specific written remediation plan establishing the methodology, planning, and design of all necessary systems for the removal, treatment, and disposal of contaminated soil and groundwater.

4

EBMUD will not design piping or services until soil and groundwater quality data and remediation plans have been received and reviewed and will not start underground work until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists, or the information supplied by the project sponsor is insufficient, EBMUD may require the project sponsor to perform sampling and analysis to characterize the soil and groundwater that may be encountered during excavation, or EBMUD may perform such sampling and analysis at the project sponsor's expense. If evidence of contamination is discovered during EBMUD work on the project site, work may be suspended until such contamination is adequately characterized and remediated to EBMUD standards.

5

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.

6

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.

COMMENT LETTER: 6

Gary Kupp, Senior Planner
January 20, 2021
Page 3

WATER CONSERVATION

The proposed project presents an opportunity to incorporate water conservation measures. EBMUD requests that the County include in its conditions of approval a requirement that the project sponsor comply with Assembly Bill 325, "Model Water Efficient Landscape Ordinance," (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). 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 project sponsor's expense.

7

If you have any questions concerning this response, please contact Timothy R. McGowan, Senior Civil Engineer for Major Facilities Planning, at (510) 287-1981.

Sincerely,



David J. Rehnstrom
Manager of Water Distribution Planning

DJR:JRK:btf
sb21_004.doc

cc: Richard G. Harbison
Phillips 66 Company
1380 San Pablo Avenue
Rodeo, Contra Costa County 94572

Don Bristol
Phillips 66 Company
1380 San Pablo Avenue
Rodeo, Contra Costa County 94572

Response to Comment 1

The proposed Project does not involve any uses that would require new or expanded utilities and service systems, including water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, or the relocation of these facilities. No additional water supply or infrastructure is necessary for the Project. Phillips 66 will continue to coordinate with EBMUD to evaluate using recycled water as these service opportunities become available. No changes to the EIR are necessary.

Response to Comment 2

There are no plans for any Project construction activity or new structures near or within the EBMUD property. Any future activity potentially impacting the property described in this comment will be coordinated with EBMUD as applicable.

Response to Comment 3

As stated in Section 4.1.6, page 4-7 of the Draft EIR, the proposed Project does not involve any uses that would require new or expanded utilities and service systems, including water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, or the relocation of these facilities.

Response to Comment 4

There are no plans for any Project construction activity or new structures near or within the EBMUD property. Any future activity potentially impacting EBMUD property will be coordinated with EBMUD as applicable.

Response to Comment 5

Refer to Responses to Comments 1 through 4.

Response to Comment 6

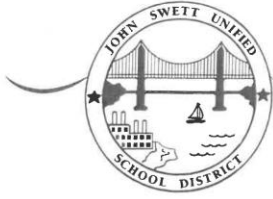
Comment noted.

Response to Comment 7

Comment noted. Also refer to Response to Comment 3.

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Comment Letter 7. John Swett Unified School District



COMMENT LETTER: 7
JOHN SWETT
UNIFIED SCHOOL DISTRICT

Office of the Superintendent
Charles Miller, Ed. D.
400 Parker Avenue, Rodeo, CA 94572
(510) 245-4300 • FAX (510) 245-4312

November 12, 2021

Gary Kupp
Department of Conservation and Development &
Community Development Division
30 Muir Road
Martinez, CA 94553
Via email to: Gary.Kupp@dcd.cccounty.us

Re: Support of Phillips 66 Rodeo Renewed Project

Dear Mr. Kupp:

On behalf of the John Swett Unified School District, I am writing to confirm our strong support of the Phillips 66 Rodeo Renewed project. Phillips 66 has been an important member of our community for many years. Please add our public comment in support of the Rodeo Renewed project. The Draft EIR demonstrates this project will benefit our community by reducing criteria pollutants while maintaining family-wage jobs.

Throughout the years we have forged a partnership and we are proud to work alongside Phillips 66 towards the betterment of our shared community. With the approval of the Rodeo Renewed project we can continue this great work which benefits residents, businesses, and community groups. As one of the largest employers in our area, we implore you to do all that you can to ensure their continued success which, in turn, supports the John Swett Unified School District.

The Rodeo Renewed Project is what the future *can* look like: industry, labor, local business and the community working together to help our State meet its renewable energy goals while maintaining solid economic growth. Phillips 66 has shown how innovative and well-designed technologies can reduce local criteria pollutants and produce lower carbon intensive fuels. What a great thing to celebrate here at home!

As shown in the Draft EIR, Rodeo Renewed plans to use existing facilities, repurposing the existing equipment currently in use today while also creating hundreds of construction jobs. These family-wage jobs not only benefit the worker, they also benefit the immediate community through the purchase of goods and services. Our local businesses count on this multiplier effect and we ask you to carefully consider these economic drivers and the impacts they have on our community.

Therefore, on behalf of the John Swett Unified School District we enthusiastically support and urge you to approve the Rodeo Renewed project

Sincerely,

Charles Miller
Superintendent

GOVERNING BOARD

Deborah Brandon

Amarjit Kaur

Jerrold Parsons

Marina Ramos

Stefanie Tavis

COMMENT LETTER: 7



JOHN SWETT
UNIFIED SCHOOL DISTRICT
Office of the Superintendent
400 Parker Avenue
Rodeo, CA 94572

Gary Kupp
Department of Conservation & Dev.
30 Muir Road
Martinez, CA 94553

OAKLAND CA 945
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Response to Comment 1

Comment noted.

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Comment Letter 8. San Francisco Bay Conservation and Development Commission (BCDC)

COMMENT LETTER: 8

Gary Kupp

From: Daysog, Anthony@BCDC <anthony.daysog@bcdcc.ca.gov>
Sent: Thursday, December 23, 2021 3:03 PM
To: Gary Kupp
Subject: FW: BCDC Comments for Draft Environmental Impact Report– Proposed Rodeo Renewed Project (County File #CDLP20 – 02040) (SCH #2020120330): Preliminary Comments, with additional comments to follow
Attachments: RevisedPhillip66-EIR-commentsv3--edited-reformatted.pdf

December 23, 2021

Gary Kupp
Department of Conservation and Development
Community Development Division
Contra Costa County

Mr. Kupp,

Attached please find an edited and reformatted version of our comments with respect to DEIR for the Phillips 66 project (“Proposed Rodeo Renewed Project”). This version does not add any new substantive content from the December 17 version. Instead, this is a reformatted version the edits of which involve removing certain parts from the December 17 version, as well as adding minor clarifying verbiage. Thank you.

/s/ Tony Daysog

From: Daysog, Anthony@BCDC
Sent: Friday, December 17, 2021 4:10 PM
To: gary.kupp@dcd.cccounty.us
Subject: FW: BCDC Comments for Draft Environmental Impact Report– Proposed Rodeo Renewed Project (County File #CDLP20 – 02040) (SCH #2020120330): Preliminary Comments, with additional comments to follow

From: Daysog, Anthony@BCDC
Sent: Friday, December 17, 2021 3:59 PM
To: gary.kupp@dcd.cccounty.us
Cc: Lavine, Ethan@BCDC <ethan.lavine@bcdcc.ca.gov>; Pan, Katharine@BCDC <katharine.pan@bcdcc.ca.gov>
Subject: BCDC Comments for Draft Environmental Impact Report– Proposed Rodeo Renewed Project (County File #CDLP20 – 02040) (SCH #2020120330): Preliminary Comments, with additional comments to follow

December 17, 2021

Contra Costa County
Department of Conservation and Development
Community Development Division

COMMENT LETTER: 8

30 Muir Road
Martinez, CA 94553
ATTN: Gary Kupp Project Planner

Attached please find our preliminary high level comments with respect to the DEIR for Proposed Rodeo Renewed Project (County File #CDLP20 – 02040) (SCH #2020120330). We anticipate following-up these comments with additional information next week, including possible format changes.

/s/ Tony Daysog
BCDC Shoreline Development Permit Analyst

COMMENT LETTER: 8

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

Original Submission: December 17, 2021

Edited/Reformatted version: December 23, 2021

Contra Costa County
Department of Conservation and Development
Community Development Division
30 Muir Road
Martinez, CA 94553
ATTN: Gary Kupp Project Planner

**SUBJECT: BCDC Comments for Draft Environmental Impact Report– Proposed Rodeo
Renewed Project (County File #CDLP20 – 02040) (SCH #2020120330)**

Dear Mr. Kupp,

Thank you for the opportunity to comment on Contra Costa County's Department of Conservation and Development's Draft Environmental Impact Report (DEIR) for the Proposed Rodeo Renewed Project (Project), County File #CDLP20 – 02040, State Clearinghouse Number 2020120330, Notice of Availability dated October 14, 2021.

The San Francisco Bay Conservation and Development Commission (BCDC or Commission) is providing the following comments as a responsible agency with discretionary approval power over aspects of the Project, as described below. BCDC will rely on the Final EIR when considering its approvals for the project, and we appreciate this opportunity to comment on information, analyses, and findings in the DEIR that are relevant to BCDC's jurisdiction and authority. The Commission has not reviewed the DEIR; the following comments are provided by staff based on the San Francisco Bay Plan (Bay Plan) as amended through May 2020 and the McAteer-Petris Act (MPA).



I. PROJECT DESCRIPTION SUMMARY

Applicants. Phillips 66 Refinery, Contra Costa County

Project. From our review of the project description, we understand that Phillips 66 proposes to repurpose the existing Rodeo Refinery into a facility that would process renewable feedstocks into renewable diesel fuel, renewable components for blending with other transportation fuels, and renewable fuel gas.¹ The following table lists repurposed, shuttered, and new facilities at proposed project site.²



COMMENT LETTER: 8

Table 1. Process Unit Changes for the Rodeo Renewed Project

Process Units	Existing Facilities	Rodeo Renewed Project: Post-Project
Unit 267 – Crude	Operational	Not Operational - Relinquish Permit
Unit 200 - Crude/Coker	Operational	Not Operational - Maintain Permit - Coker idled
Carbon Plant - Coke Calciner	Operational	Not Operational - Relinquish Permit
Units 236- Sulfur Recovery Unit	Operational	Not Operational - Relinquish Permit
Units 238 - Sulfur Recovery Unit	Operational	Not Operational - Relinquish Permit
Unit 244 - Reformer	Operational	Not Operational - Maintain Permit
MP-30 - Naphtha HT/Reformer	Operational	Not Operational - Maintain Permit
Unit 228 - Isomerization	Operational	Not Operational - Maintain Permit
Unit 233 - Fuel Gas Center	Operational	Operational
Unit 215 - Fractionation and Caustic Treatment	Operational	Not Operational - Maintain Permit
Unit 250 - DHT/Renewable Diesel	Operational	Operational
Unit 240 - Light Hydrocracker	Operational	Operational
Unit 246 - Heavy Hydrocracker	Operational	Operational
Unit 248 - Jet/Aromatics Saturation	Operational	Operational
Unit 235 - Sulfur Recovery	Operational	Operational
Unit 100 - Wastewater Treatment	Operational	Operational
Unit 110 - Hydrogen Plant	Operational	Operational
Unit 40/76/80 - Blending & Shipping	Operational	Operational
Marine Terminal	Operational	Operational
Railcar Loading/Unloading	Operational	Operational
Steam Power Plant - Cogen	Operational	Operational
Main and MP-30 Flares	Operational	Operational
Sulfur Treatment Unit	Not Present	New Construction
Feed Pre-Treatment Unit	Not Present	New Construction

2
cont'd

Changes in use of facilities, including the addition of new facilities such as the Sulfur Treatment Unit (STU) and Feed Pre-Treatment Unit (FTU), would allow the refinery to shift operations with respect to receiving, refining, and subsequently shipping product. Once the Project is operational, no crude oil would be processed at the Rodeo Refinery. The Rodeo Refinery would no longer receive crude oil and gas oil at its Marine Terminal or from the pipelines connecting the Rodeo Refinery to the Santa Maria Site. As Table 2 below shows, the total amount of product received would increase from 115,000 barrels per day (bpd) to 118,000 bpd, but within this change, the amount of crude oil and gas received would reduce from 105,000 bpd to 0, and renewable feedstock would increase from 0 to 80,000 bpd. In addition, the Project would be expected to increase the amount of product it ships, from 121,000 bpd to 132,000 bpd.³

COMMENT LETTER: 8

Table 2. Rodeo Refinery Pre- and Post-Project Operations: Product Received and Shipped

Product Transmission	Baseline Throughput	Post Project Throughput
Products Received		
Marine Term. Crude & Gas Oil (1000 bpd/yr)	35	0
Pipeline Crude Received (1000 bpd/yr)	70	0
Renewable Feedstocks Received (1000 bpd/yr)	0	80
Gasoline & Blendstocks Received (1000 bpd/yr)	10	38
Products Shipped		
Petroleum Products Shipped (1000 bpd/yr)	121	40
Renewable Fuels Shipped (1000 bpd/yr)	0	67
Treated Renewable Feedstock (1000 bpd/yr)	0	25

While the Project does not include the construction of new facilities, and/or substantial upgrade to existing facilities, in and around the Marine Terminal Complex, which includes the wharf, this part of the project site would experience considerable increase in activity. The number of tanker vessel calls per year would increase by 150 percent over the baseline as a result of the project, from 80 calls per year to 201 calls per year.⁴ The number of deep-draft vessels would increase by 54 percent.⁵ (It is important to note that DEIR may have incorrectly calculated the 54 percent change amount). Refinery railcars would increase by 240 percent, from 4.7 per day to 16 per day, although the number of train trips is projected to remain the same as current levels, or one per day.⁶ Truck traffic to the Rodeo Refinery site would increase by 52 percent, from 7,626 to 16,026 truck trips per year.⁷

Table 3. Rodeo Refinery Pre- and Post-Project Operations: Modes of Transportation

Modes of Transportation	Baseline	Post-Project
Tanker Vessels (calls/year)	80	201
Barges (calls/year)	90	161
Refinery Railcar Loading/Unloading Rack (average railcars per day)	4.7	16.0
Refinery Truck Trips (roundtrips per year)	7,626	16,026

II. BCDC'S ROLE

Jurisdiction and Permitting Authority. The McAteer-Petris Act of 1965 “empowers the Commission to issue or deny permits, after public hearings, for any proposed project that involves placing fill, extracting materials or making any substantial change in use of any water, land or structure” within its jurisdiction (California Government Code (CGC) § 66604). Note that “substantial change in use” includes projected changes to the type of use as well as intensity of use, e.g., substantial increase or decrease in population density or occurrence of an activity.



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Generally, BCDC's jurisdiction over San Francisco Bay extends from the Golden Gate to the confluence of the San Joaquin and Sacramento Rivers and includes tidal areas up to mean high tide, including all sloughs, and in marshlands up to five feet above mean sea level; a shoreline band consisting of territory located between the shoreline of the Bay and 100 feet landward and parallel to the shoreline; salt ponds; managed wetlands; and certain waterways that are tributaries to the Bay, such as Pacheco Creek. The Commission can grant a permit for a project if it finds that the project is either (1) necessary to the health, safety, and welfare of the public in the entire Bay Area, or (2) is consistent with the provisions of the McAtteer-Petris Act and the Bay Plan.

The Bay Plan also designates certain shorelines and waterways by priority use categories, in an effort to reserve areas with characteristics that support particular important and difficult-to-reproduce activities. Thus, the Bay Plan includes a priority use category called Water-Related Industry (WRI) Priority Use Area (PUA), which was crafted out of a recognition that certain water-related industries require access to deep water channels.⁸ The Project is sited within an area designated as a WRI PUA.⁹

Permitting History. Portions of the Project would take place within the Commission's Bay and 100-foot shoreline band jurisdictions. Given the proposed changes in use, the Project would require a permit or permit amendment from BCDC. Below is a list of BCDC permits associated with this site. It is important to note that, while work for a number of these permits has been completed, BCDC Permit Number M1974.069.15 authorizes this activity up to the year 2029.

14 Administrative permits for activities on or around pier:

- M1967.028.00 Dredge approx. 51,000 cy
- M1968.048.02 Perform maintenance dredging
- M1971.005.00 Construct concrete mooring on piles
- M1971.031.00 Drive four pre-stressed concrete piles
- M1972.041.00 Perform maintenance dredging
- M1972.079.00 Perform maintenance dredging
- M1973.008.00 Replace 42 damaged fender piles
- M1973.017.00 Repair existing salt water intake pipeline
- M1974.069.15 Dredge up to 20,000 cy per year over 2019-2029
- M1975.049.23 Maintain and improve existing wharf
- M1978.107.01 Dredge approx. 5,200 cy
- M1979.006.00 Place a mooring buoy covering
- M1987.087.01 Install a new wastewater outfall pipe
- M1990.087.00 Install hydrocarbon abatement equipment

5 Administrative permits for activities in the shoreline band:

- M1979.060.00 Replace electrical switchgear, motor controllers, etc.
- M1980.066.00 Repair and reconstruct an existing fire-damage wharf
- M1981.104.00 Demolish a two-story, 14,800-square-foot warehouse
- M1982.021.02 Maintenance of bulkhead, riprap and repair fence
- M2013.016.00 Repair section of existing shoreline protection

4 Regionwides permits:

- NOI2020.032.00 Repair an intake dam and install support structures
- NOI2018.024.00 Protect an outfall channel retaining wall

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cont'd

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- NOI2020.031.00 Modify a groundwater rem. system and install a pump
- NOI1998.004.00 Extend two existing butane railracks by 116 feet

↑ 3
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III. THE PROPOSED AND BCDC POLICIES

Generally speaking, the Commission's permitting process attempts to balance development with natural resource conservation and maximum feasible public access. The Bay Plan policies listed in this letter are not exhaustive. Our intention is to identify a selection of relevant policies which the DEIR has not already acknowledged or considered in all applicable contexts. The entirety of the Bay Plan and all relevant laws and policies are used to determine permit requirements of projects by BCDC. Note that BCDC previously submitted a response to Contra Costa County's Notice of Preparation for the DEIR during the public scoping period, dated January 26, 2020.

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A. BIOLOGICAL RESOURCES

Bay Plan Policies for Tidal Marshes and Tidal Flats.

- **Policy 1.** Tidal marshes and tidal flats should be conserved to the fullest possible extent, and that projects substantially harming these areas should be allowed only for purposes that provide substantial public benefits and only if there is no feasible alternative.¹⁰
- **Policy 3.** This policy encourages siting and designing of projects to either avoid or minimize adverse impacts on tidal habits.¹¹
- **Policies 6, 8 and 9:** With respect to preserving habitats, these policies together emphasize the importance of regional collaborations in designing and monitoring employing comprehensive and well-funded adaptive management plans.¹²

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Bay Plan Policies for Sub-Tidal Areas.

- **Policy 2.** Subtidal areas that are scarce in the Bay or have an abundance and diversity of fish, other aquatic organisms and wildlife (e.g., eelgrass beds, sandy deep water or underwater pinnacles) should be conserved. Filling, changes in use, and dredging projects in these areas should therefore be allowed only if: (a) there is no feasible alternative; and (b) the project provides substantial public benefits."¹³

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Bay Plan Policies for Fish, Aquatic Organisms, and Wildlife.

- **Policy 2.** Any proposed fill, diking, or dredging project should be thoroughly evaluated to determine the effect of the project on tidal marshes and tidal flats, and designed to minimize, and if feasible, avoid any harmful effects.
- **Policy 4.** Whenever a proposed project may adversely affect endangered or threatened plant, fish, other aquatic organisms or wildlife, the Commission should consult with federal and state resources agencies.¹⁴

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Further Analysis of Eelgrass. Among other things, the DEIR Biological Resources chapter examines whether the increase in the number of vessels poses a threat to biological resources within tidal areas and eelgrass areas. Of particular concern are mid- to deep-draft vessels, whose numbers will increase "substantially" by 54 percent, according to the DEIR.¹⁵ These vessels can potentially "disturb bottom habitats and resources directly, or by sediment resuspension and turbidity."¹⁶ The

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DEIR ultimately concludes that “the Project increase in deep-draft tanker vessel trips would be expected to contribute to an incremental increase in the frequency of temporary turbidity effects”, and that any resulting turbidity plumes would be expected to quickly dissipate to background concentration.¹⁷ As such, impacts with respect to sediment resuspension and depositions, and eelgrass, are less than significant, according to the DEIR.¹⁸

With respect to the eelgrass analysis, it appears that the “less than significant” determination rests in part on the applicability of the relationship between overall increase in eelgrass areas between 2004 and 2014, and the number of vessel traffic in the San Pablo Bay.

“Several hundred deep-draft vessels annually transit San Pablo Bay to and from upstream facilities and ports. The largest eelgrass bed in the San Francisco estuary is located in San Pablo Bay between Point Pinole and Point San Pablo. Eelgrass mapping between 2004 and 2014 indicates there were substantial increases in eelgrass from 1,514 to 2,330 acres, suggesting no substantial adverse effects from ongoing vessel traffic.”

“Based on the above considerations, no substantial adverse effects to eelgrass would be expected from the effects sediment resuspension due to increased vessel traffic. The impact would be less than significant, and no mitigation is required.”¹⁹

We appreciate the overall picture of deep-water vessel traffic, and how the refinery and the proposed project fit into overall traffic. We request that the impact analysis also analyzes impacts at the zone of impact, especially because of the significant amount of eelgrass within a half mile of the refinery and the wharf. Given that the DEIR notes eelgrass is considered essential fish habitat under NOAA, it is possible that additional minimization measures (e.g. silk curtains, turbidity studies, etc.) may be required to protect eelgrass. As an analysis of impacts is a requirement of mitigations, we would like to see in the Final EIR further analyses with respect to eelgrass and sediment resuspension.

Further Analysis on Dredging. Given the relationship between dredging, sediment, and turbidity, we also request additional analysis with respect to potential need for additional dredging in light of the increase in number of shipping vessels due to proposed project. The DEIR states, “Maintenance dredging of the federal channel within San Pablo Bay and in the maneuver and dock area of the Marine Terminal has occurred annually for more than 10 years. There would be no change to the frequency of maintenance dredging under the Project.”²⁰ However, it is not clear from the data or analysis why there would not be a need for additional dredging as a result of the Project. Currently, BCDC Permit No. M1974.069.15 authorizes up to 20,000 cubic yards (cy) of dredging per year for a 10-year period, from 2019 to 2029. Given the projected 150 percent increase in tanker vessel traffic²¹, and the substantial increase in mid- to deep-draft vessel traffic²², we request further analyses with respect to dredging, as well as an assessment as to the significance of impacts.

B. SEA LEVEL RISE

Bay Plan Climate Change Policies.

- Policy 2. Policy 2 states, in part, “A range of sea level rise projections for mid-century and end of century based on the best scientific data available should be used in the risk assessment.”²³



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- **Policy 3.** Pursuant to Climate Change Policy 3, if a risk assessment determines that a project could pose a risk to public safety or ecosystem services, the project should be resilient to mid-century and if the Project would last beyond mid-century, it should be adaptable to end-of-century sea level rise projections, including storms.²⁴

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The DEIR indicates that water levels would increase by approximately 2.7 feet by 2050, which, corresponds to 36 inches when taking into account the MHHW.²⁵ Taking into account 100-year flooding events, water could rise as high as 77 inches in a major storm event.²⁶ However, the project only describes plans for sea level rise projections to the year 2050. We would need additional information in the Final EIR as to the life of the proposed project, to determine if SLR analysis to the end of the century is needed. Additional information and analysis is also needed to determine if a SLR risk assessment would be required per BCDC Bay Plan Climate Change Policy 2.²⁷

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C. HAZARDS AND HAZARDOUS MATERIALS

Bay Plan Findings and Policies for Water Quality.

- **Finding A.** Pollutants are harmful substances that, when discharged into the environment, adversely affect the environment's physical, chemical, or biological properties. The San Francisco Bay Regional Water Quality Control Board's Water Quality Control Plan, San Francisco Bay Basin designates the beneficial uses of the waters of the Bay, such as recreational boating, swimming, fishing, navigation or aquatic habitat. Pollution occurs when pollutants unreasonably interfere with or adversely affect one or more of these beneficial uses.
- **Policy 1.** Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality.

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Further Analysis With Respect to Release of Hazards and Pollutants Due to Truck and Rail Accidents. Focusing on the transport of hazardous materials, the DEIR discusses trends and probabilities with respect to number of trips and accidents involving shipping vessels²⁸, trucks²⁹, and rail.³⁰ With respect to accidents involving trucks, while the DEIR identifies the total number of trucks, including trucks going to and from, as well as between, the refinery and the shuttering Carbon Plant, no accident data is presented. Thus, it is difficult to understand the baseline condition against which future impacts would be evaluated. Please include in the Final EIR separate baseline truck traffic accident data for the refinery and the Carbon Plant. Please discuss to what extent truck traffic would occur in the BCDC shoreline band jurisdiction, in the baseline and post-project phases. We note that that the DEIR projects truck transport of hazards to decrease with the new project, resulting in less than significant impacts.³¹

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With respect to the potential for rail accidents, the projected number of rail-related accidents stemming from the proposed project, according to the DEIR, is less than significant.³² This is so because, according to the DEIR, the railcars would carry less-hazardous or non-hazardous materials (i.e., renewable feedstocks) that do not meet the minimum hazard thresholds for USDOT regulations rather than the USDOT designated hazardous materials (butane) carried under baseline conditions. Thus, if an accident were to occur, whether at the Rodeo Refinery or along the rail lines

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throughout California leading to the Rodeo Refinery, the consequences to the public would be less than under baseline conditions, according to the DEIR.³³ Because renewable diesel fuel, renewable components for blending with other transportation fuels, and renewable fuel gas would pose potential harm to water quality, and plant and wildlife species, in the event of either a truck or rail accident, we encourage this section of the FEIR to reference BCDC Water Quality policies. One Water Quality finding states, "Pollutants are harmful substances that, when discharged into the environment, adversely affect the environment's physical, chemical, or biological properties." Accordingly, we would also request the Final EIR to include operational phase analyses and impacts with respect to rail transport and the potential for rail accidents, including assessments as to the significance of impacts.

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D. HYDROLOGY AND WATER QUALITY

Disaggregate Refinery and Carbon Plant Data Analysis and Impacts. With respect to the adequacy of the water quality impact analysis, it is difficult to understand how the proposed Project would affect water quality matters pertaining only to the refinery. This is so because, in the baseline situation, data for the Carbon Plant and the refinery are combined, whereas in the post-project phase, data only for the refinery is analyzed. For example, with respect to specific issue of groundwater supplies or groundwater recharge interference, the DEIR states, "the Rodeo Refinery would result in a decrease for the need of any groundwater with the demolition of the Carbon Plant."³⁴ Thus, we encourage the Final EIR to also disaggregate the water impact analysis for the Rodeo Refinery from the analysis for the Carbon Plant. In other words, as part of the Hydrology chapter of the Final EIR, we would request the inclusion of refinery-only data as part of the baseline and post-project set of information, as well analyses as to the significance of impacts associated with changes in refinery-only data.

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E. ENVIRONMENTAL JUSTICE

Bay Plan Policies on Environmental Justice

- **Policy 2.** Since addressing issues of environmental justice and social equity should begin as early as possible in the project planning process, the Commission should support, encourage, and request local governments to include environmental justice and social equity in their general plans, zoning ordinances, and in their discretionary approval processes.
- **Policy 3.** Equitable, culturally-relevant community outreach and engagement should be conducted by local governments and project applicants to meaningfully involve potentially impacted communities for major projects and appropriate minor projects in underrepresented and/or identified vulnerable and/or disadvantaged communities, and such outreach and engagement should continue throughout the Commission review and permitting processes. Evidence of how community concerns were addressed should be provided. If such previous outreach and engagement did not occur, further outreach and engagement should be conducted prior to Commission action.

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As part of a future BCDC Permit Application, the Project proponent should be prepared to describe how the proponent has connected with the nearby communities in furthering the community's engagement with the project and addressed any possible concerns. BCDC has been developing a

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mapping tool to help project proponents and other parties identify the populations that may be at risk around the Bay shoreline. The mapping tool is at: [://www.bcdc.ca.gov/data/community.html](http://www.bcdc.ca.gov/data/community.html).

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F. LAND USE

Bay Plan Policies on Water-related Industry.

- **Policy 4(a).** This policy identifies appropriate placement within a project area of new facilities in which raw materials and or fuel would be stored.³⁵

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We note that the Land Use chapter of DEIR refers to relevant BCDC policies, such as Water Quality Policy 3, Water-related Industry Policy 1 and 5.³⁶ We also encourage this chapter to reference Water-related Industry Policy 4.a. In addition, while the Land Use chapter of the DEIR references Water Quality Policy 2 (e.g. maintain and promoting beneficial uses of the Bay through coordination with the SWRCB and RWQCB), we are not entirely convinced this policy is correctly placed in this chapter, as the policy itself is about the agency-to-agency coordination by which BCDC promotes water quality, and less about land use planning.

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IV. Conclusion

In conclusion, while certain repair or replacement work may be covered by the existing permits, other aspects of the Project may require an authorization from BCDC in the form of a permit or a permit amendment. Please consult with BCDC regulatory staff to discuss the policies described in the letter, along with other policies, prior to submitting an application.

21

Once again, thank you for providing BCDC an opportunity to comment on the Phillips 66 Refinery Renewed Project. We hope these comments aid you in preparing the final EIR. If you, or the applicant, have any questions regarding this letter or the Commission's policies and permitting process, please do not hesitate to contact me at (415) 352-3622 or via email anthony.daysog@bcdc.ca.gov.

Sincerely,

TONY DAYSOG
Shoreline Development Permit Analyst

cc. State Clearinghouse

¹ DEIR PDF page 23

² DEIR PDF page 104

³ DEIR PDF page 24

⁴ DEIR PDF page 24

⁵ DEIR PDF page 236. Note: we believe the 54 percent calculation is incorrect. The correct amount is 23 percent.

⁶ DEIR PDF page 100

⁷ DEIR PDF page 186

⁸ BCDC, San Francisco Bay Plan (May 2020 edition), PDF page 6

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- ⁹ Bay Plan, PDF page 113
- ¹⁰ Bay Plan, PDF page 27
- ¹¹ Bay Plan, PDF page 27
- ¹² Bay Plan, PDF page 28
- ¹³ Bay Plan, PDF page 34
- ¹⁴ Bay Plan, PDF page 19
- ¹⁵ DEIR PDF page 236
- ¹⁶ DEIR PDF page 236
- ¹⁷ DEIR PDF page 252
- ¹⁸ DEIR PDF pages 257, 258, and 262
- ¹⁹ DEIR PDF page 259
- ²⁰ DEIR PDF page 237
- ²¹ DEIR PDF page 24
- ²² DEIR PDF page 236
- ²³ Bay Plan, PDF page 46
- ²⁴ Bay Plan, PDF page 46
- ²⁵ DEIR PDF pages 387, 391, and 395
- ²⁶ DEIR PDF pages 387
- ²⁷ http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf
- ²⁸ DEIR PDF page 409
- ²⁹ DEIR PDF page 412
- ³⁰ DEIR PDF page 413
- ³¹ DEIR PDF page 455
- ³² DEIR PDF page 454
- ³³ DEIR PDF page 454
- ³⁴ DEIR PDF page 477
- ³⁵ Bay Plan, PDF page 59
- ³⁶ DEIR PDF page 488

Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

Response to Comment 3

No construction activities associated with the Project are proposed within the 100-foot BCDC jurisdictional area.

Response to Comment 4

Comment noted.

Response to Comment 5

The Project does not propose any dredging, filling, or other activities within the Bay tidal marshes and tidal flats. The policies recommended for inclusion in the Draft EIR are therefore not relevant to the Project.

Response to Comment 6

The Project does not propose any dredging, filling, or other activities within sub-tidal areas. The policies recommended for inclusion in the Draft EIR are therefore not relevant to the Project.

Response to Comment 7

The Project does not propose any dredging, filling, or other activities within the Bay tidal marshes and tidal flats. Policy 2 is not relevant to the Project. However, Policy 4 is relevant.

Section 4.4, Biological Resources, Section 4.4.3.3, page 4.4-111, after paragraph 1 is revised as follows:

The following policies are relevant to the Project:

Fish, Other Aquatic Organisms and Wildlife

Policy 4: Consult with the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species;

Not authorize projects that would result in the "taking" of any plant, fish, other aquatic organism or wildlife species listed as endangered or threatened pursuant to the state or federal Endangered Species Acts, or the federal Marine Mammal Protection Act, or species that are candidates for listing under these acts, unless the project applicant has obtained the appropriate "take" authorization from the U.S. Fish and Wildlife Service, National Marine Fisheries Service or the California Department of Fish and Wildlife; and

Give appropriate consideration to the recommendations of the California Department of Fish and Wildlife, the National Marine Fisheries Service or the U.S. Fish and Wildlife Service in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat.

Response to Comment 8

Comment noted.

Response to Comment 9

Section 4.4, Biological Resources, Impact 4.4-6 addresses anticipated impacts to eelgrass related to sediment resuspension. This section incorrectly cross-referenced the preceding Impact 4.4-5 as including the detailed analysis of sediment resuspension.

Impact 4.4-6 page 4.4-143 is revised as follows:

As discussed under Impact ~~4.4-3~~ ~~4.4-5~~, deep-draft vessel propeller-induced water velocities, and resulting shear velocities, would be expected to scour sediment and resuspend sediments, causing turbidity plumes. Turbidity would be expected to be more pronounced during docking maneuvers and departures.

The discussion under Impact 4.4-3 (pages 4.4-135 to 137) includes a detailed analysis of the potential for sediment resuspension to modify habitat for candidate, sensitive or special status species. The detailed analysis concluded that potential impacts to eelgrass would be less than significant and not require additional mitigation measures because turbidity associated with vessel sediment resuspension would be expected to be temporary and quickly dissipate to ambient levels due to sediment type and currents in the project vicinity. While the increase in vessels calling at the Rodeo Facility was characterized as incremental (daily maximum will change from 1 to 2 under baseline to 2 during proposed full operation), it will be clarified that persistent vessel-induced turbidity from the proposed project would not be expected due to sediment type, currents, and daily tidal flushing. Based on the above-referenced analysis considerations as well as the cited general increase in eelgrass acreage in San Pablo Bay based on the most recent available data, additional mitigation measures do not seem warranted.

Response to Comment 10

The Project does not propose new dredging or fill activities. The post-Project dredging would be the same as under the baseline condition.

Response to Comment 11

The Draft EIR Sea Level Rise analysis is based on information required by the San Francisco Bay Regional Water Quality Control Board (RWQCB), per Water Code Section 13383, Order Requiring Submittal of Information on Climate Change Adaptation (refer to Appendix D-1 of the Draft EIR). As stated in the Order, the RWQCB considers the "... Ocean Protection Council's Sea-Level Rise Guidance to be the most current authoritative source supporting planning for sea level rise in California. In May 2020, the California Coastal Commission adopted Making California's Coast Resilient to Sea Level Rise: Principles for Aligned State Action. The California Environmental Protection Agency, including the State Water Resources Control Board, has endorsed these principles, which recommend using a minimum sea level rise target of 3.5 feet by 2050 for planning purposes. This target applies a safety factor to the California Ocean Protection Council's sea level rise estimates, which do not account for extreme storm surges, tides, or other weather events on top of sea level rise."

In addition, the sea level rise analysis specifically addresses the requirements of the BCDC's Adapting to Rising Tides Program, which provides guidance on understanding sea level rise flooding and how it will affect infrastructure.

As stated on BCDC's website, the San Francisco Bay Plan Climate Change Policy Guidance "... provides non-regulatory, but interpretive, information to assist in the development of prospective projects in relation to the requirements of the Climate Change policies with permit applicants, local jurisdictions, and the public at large."

The County has determined that the RWQCB requirements of sea level rise analysis is the most appropriate for the Draft EIR.

Response to Comment 12

Refer to Response to Comment 11.

Response to Comment 13

BCDC policies related to water quality are provided in Section 4.10, Hydrology and Water Quality, specifically page 4.10-355.

Response to Comment 14

As stated on page 4.9-297 of the Draft EIR, the potential for truck accidents involving hazardous materials is based on the Federal Motor Carrier Safety Administration statistics. The estimated accident rate for trucks (shipping non-hazardous materials) was 0.73 accident per million miles traveled. The average accident rate for trucks transporting hazardous materials (all hazard classes) was estimated to be 0.32 accident per million miles traveled (Federal Motor Carrier Safety Administration 2001).

As described in Section 3.7, Project Operation, in baseline year 2019, truck traffic associated with the Rodeo Refinery totaled 40,213 round trips. Over 80 percent of that traffic consisted of trailer trucks moving petroleum coke to the Carbon Plant and outside the Rodeo Refinery, specifically with 36 percent conveying raw petroleum coke from the Rodeo Refinery to the Carbon Plant and 44 percent consisting of petroleum coke deliveries outside the Rodeo Refinery. To some extent, that traffic is internal to the Rodeo Refinery, but coke trucks do use Cummings Skyway and State Route 4 to access the Carbon Plant. Other truck traffic in 2019 consisted of approximately 7,500 trucks bringing various materials, some of them hazardous, into the refinery and transporting wastes, some hazardous, out of the refinery.

Impacts are determined to be less than significant since the routine disposal of hazardous materials and waste would decrease compared to baseline conditions, and truck traffic related to feedstock transportation would also have a reduction in hazards. Therefore, regardless of historical accident history, the Project would reduce the potential for accidental release of hazardous materials involving trucks.

Response to Comment 15

Section 4.9, Hazards and Hazardous Materials, page 4.9-338 addresses operational impacts of transporting hazardous materials by rail. As stated:

The proposed Project would increase the number of railcars handled at the Rodeo Refinery's railcar unloading facility from an average of 4.7 per day under baseline conditions to 16 per day. However, the number of train trips per day would not change: the railcars would continue to be delivered and removed by no more than one train each day. Because the risk of an accident is based on train miles, rather than the number of cars on each train, the risk of an upset would be similar to the baseline conditions. Furthermore, the railcars would carry less-hazardous or non-hazardous materials (i.e., renewable feedstocks) that do not meet the minimum hazard thresholds for USDOT regulations rather than the USDOT designated hazardous materials (butane) carried under baseline conditions; if an accident were to occur, whether at the Rodeo Refinery or along the rail lines throughout California leading to the Rodeo Refinery, the consequences to the public would be less than under baseline conditions.

Response to Comment 16

Post-Project, the Carbon Plant would no longer exist, which is why it is not analyzed. Therefore, there is no need to disaggregate the impact analysis.

Response to Comment 17

Comment noted. See Response 18.

Response to Comment 18

Comment noted. Community engagement is an important component of the CEQA process. The surrounding communities have been given the opportunity to comment on proposed Project activities throughout this Project's CEQA review process.

Also see Response 11.

Response to Comment 19

Comment noted. See Response 20.

Response to Comment 20

Section 4.11, Land Use, Section 4.11.2.3, Regulatory Setting is revised as follows:

The San Francisco Bay Plan policies applicable to the Project include:

- **Water Quality Policy 2:** Water quality in all parts of the Bay should be maintained at a level that would support and promote the beneficial uses of the Bay as identified in the Basin Plan and should be protected from all harmful or potentially harmful pollutants. The policies, recommendations, decisions, advice, and authority of the SWRCB and the RWQCB should be the basis for carrying out the BCDC's water quality responsibilities.
- **Water Quality Policy 3:** New projects should be sited, designed, constructed, and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (1) controlling pollutant sources at the Project site; (2) using construction materials that contain non-polluting materials; and (3) applying appropriate, accepted, and effective BMPs, especially where water dispersion is poor and near shellfish beds and other significant biotic resources.
- **Water-Related Industry Policy 1:** Sites designated for both water-related industry and port uses in the San Francisco Bay Plan should be reserved for those industries and port uses that require navigable, deep water for receiving materials or shipping products by water in order to gain a significant transportation cost advantage.
- **Water-Related Industry Policy 4(a):** Water-related industry and port sites should be planned and managed so as to avoid wasteful use of the limited supply of waterfront land. The following principles should be followed to the maximum extent feasible in planning for water-related industry and port use:
 - a. Extensive use of the shoreline for storage of raw materials, fuel, products, or waste should not be permitted on a long-term basis. If required, such storage areas should generally either be at right angles to the main direction of the shoreline or be as far inland as feasible, so other use of the shoreline may be made possible.
- **Water-Related Industry Policy 5:** Water-related industry and port uses should be planned so as to make the sites attractive (as well as economically important) uses of the shoreline. The following criteria should be employed to the maximum extent possible:
 - Air and water pollution should be minimized through strict compliance with all relevant laws, policies, and standards. Mitigation, consistent with the BCDC's policy concerning mitigation, should be provided for all unavoidable adverse environmental impacts.

Response to Comment 21

Comment noted.

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Comment Letter 9. San Luis Obispo County Air Pollution Control District (APCD)

COMMENT LETTER: 9

Gary Kupp

From: Kristin A. Weeks <kweeks@co.slo.ca.us>
Sent: Friday, December 17, 2021 1:44 PM
To: Gary Kupp
Cc: don.a.bristol@p66.com; Dora Drexler; Karl Tupper; Carissa M. Reynolds; Vince Kirkhuff; Jedebra J. Robertson
Subject: APCD Comments Regarding the Phillips 66 Santa Maria Refinery Decommissioning and Demolition Project
Attachments: 4241-2 Comment Letter_Signed.pdf

Dear Gary,

Attached you will find the APCD's comments for Decommissioning the Phillips 66 Santa Maria Refinery. If you have any questions please call our office at 805-781-5912.

Thanks,

Kristin Weeks | *Administrative Assistant III*

SLO County Air Pollution Control District

3433 Roberto Court, SLO 93401

805-781-4101 • SLOCleanAir.org • SLOCarFree.org



COMMENT LETTER: 9

VIA EMAIL ONLY

December 17, 2021

Gary Kupp
Community Development Division
Contra Costa County, Department of Conservation and Development
30 Muir Road
Martinez, CA 94553
gary.kupp@dcd.cccounty.us

SUBJECT: APCD Comments Regarding the Phillips 66 Santa Maria Refinery
Decommissioning and Demolition Project (CDLP20-02040)

Dear Gary Kupp:

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We have completed our review of the Draft Environmental Impact Report (DEIR) for the proposed project at the Phillips 66 Santa Maria Refinery at 2555 Willow Road in Arroyo Grande, California. Phillips 66 proposes to modify their existing oil refinery in Rodeo, California into a repurposed facility that would process renewable feedstocks instead of petroleum products. As a result of that project, the Phillips 66 Santa Maria Refinery will be ceasing operations, decommissioning equipment, and demolishing support structures. Underground pipelines (Lines 300 and 400 in San Luis Obispo County) will also be decommissioned and/or sold.

APCD and San Luis Obispo County Planning and Building have had one preliminary meeting with Phillips 66 and our understanding is that decommissioning of the Santa Maria site will involve removal of above ground equipment and structures only, and that removal of below grade equipment or infrastructure and remediation would occur under a subsequent phase with a separate environmental review. The DEIR acknowledges that demolition of the Santa Maria site will undergo further California Environmental Quality Act (CEQA) review by the County of San Luis Obispo because it has authority to determine whether or how to approve demolition and issue required county permits; however, San Luis Obispo County has not yet received a project application for the Santa Maria site. The APCD reserves the right to provide modified or additional comments on any environmental review for demolition, remediation, or future development of the Santa Maria site. Any impacts analyzed in future environmental reviews would be compared against baselines existing at that time.

The Santa Maria site is approximately 245 acres with approximately 33 buildings totaling about 85,000 square feet. Most of the structures throughout the site that support



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industrial equipment and maintenance operations are proposed for demolition. Demolition activities at the Santa Maria site are expected to take approximately one year and are expected to begin in 2023. An estimated 5,800 cubic yards of material will be removed, involving approximately 731 one-way truck trips. The demolished structures, equipment and debris will be drained and cleaned prior to demolition and removed from the site to an appropriate disposal or recycling facility.

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The following comments are formatted into 3 sections. The **(1) General Comments** section states information pertinent to the applicant, lead agency, and/or public. The **(2) Air Quality** and **(3) Greenhouse Gas Emissions** sections may state mitigation measures and/or rules and requirements which the APCD recommends be set as conditions of approval for the project.

The **applicant** or **agent** should contact the APCD Engineering & Compliance Division about permitting requirements stated in the (1) General Comments section. The **lead agency** may contact the APCD Planning Division for questions and comments related to proposed conditions of approval in the (2) Air Quality and (3) Greenhouse Gas Emission sections. Both Divisions can be reached at 805-781-5912.

Please Note: The APCD recently updated the [Land Use and CEQA Webpage](#) on the [slocleanair.org](#) website. The information on the webpage displays the most up-to-date guidance from the SLO County APCD, including the [2021 Interim CEQA Greenhouse Gas Guidance](#), [Quick Guide for Construction Mitigation Measures](#) and [Quick Guide for Operational Mitigation Measures](#).

(1) General Comments

Decommissioning Permit Requirements

Based on the information provided, we are unsure of the types of equipment that may be present and operations that may occur during the project's decommissioning phase. The applicant must contact the APCD Engineering & Compliance Division and complete a permit application prior to commencing any decommissioning activities. The following list is provided as a guide to equipment and operations that may have permitting requirements but should not be viewed as exclusive:

- Portable Equipment
Portable equipment, 50 horsepower (hp) or greater, may require a California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit. An APCD permit is required for any equipment anticipated to be on site for 12 months or more. Equipment and operations that may require a permit include but are not limited to:
 - Power screens, conveyors, diesel engines, and/or crushers;
 - Portable generators and equipment with engines that are 50 hp or greater;
 - Electrical generation plants or the use of standby generators;
 - Internal combustion engines;
 - Rock and pavement crushing;
 - Unconfined abrasive blasting operation
 - Tub grinders;
 - Trommel screens; and

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- Portable plants (e.g. aggregate plant, asphalt batch plant, concrete batch plant, etc.)

For a more detailed listing, refer to the Technical Appendices, page 4-4, in the APCD's [CEQA Air Quality Handbook](#) (April 2012).

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- Odor Control Plan

An odor control plan must be reviewed and approved by the APCD prior to decommissioning, to include proactive measures to eliminate or reduce objectionable odors emanating from construction and decommissioning activities, and an action plan if odor issues or complaints arise.

4

- Proper Abatement of Asbestos-Containing Material (ACM)

Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, abatement, and disposal of ACM. ACM could be encountered during the demolition or remodeling of existing structures or the disturbance, demolition, or relocation of above or below ground utility pipes/pipelines (e.g., transite pipes or insulation on pipes). These activities are subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). NESHAP requirements include but are not limited to:

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- Written notification to the APCD, within at least 10 business days of activities commencing.
- Asbestos survey report conducted by a Certified Asbestos Consultant.
- Written work plan addressing asbestos handling procedures in order to prevent visible emissions.

Go to slocleanair.org/rules-regulations/asbestos.php for more information.

- Pipeline Purging Operations

The applicant must submit a Pipeline Purging Plan and permit application to the APCD. If the Pipeline Purging Plan includes the use of APCD permitted degassing systems, the APCD may issue a permit exemption for the project. A permit or permit exemption must be issued by the APCD prior to the start of any pipeline degassing and/or removal activities. Please allow 6 weeks for the permit processing. Information and downloadable application forms are available under the Library section of our website at slocleanair.org. For more information on these requirements, contact the APCD Engineering & Compliance Division.

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- Proper Abatement of Lead-Based Coated Structures

Demolition, remodeling, sandblasting, or removal with a heat gun can result in the release of lead-containing particles from the site. Proper abatement of lead-based paint must be performed to prevent the release of lead particles from the site. An APCD permit is required for sandblasting operations. For additional information regarding lead abatement, contact the San Luis Obispo County Environmental Health Department at 805-781-5544 or Cal-OSHA at 818-901-5403. Additional information can also be found online at epa.gov/lead.

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(2) Air Quality

South County Particulate Matter Expanded Air Quality Mitigation Measures

Environmental Setting

The proposed project is in an area that is impacted by periods of high particulate matter concentrations during blowing dust events. To keep the public informed of periods of deteriorating air quality, the APCD provides a daily air quality forecast for SLO County, which is partitioned into nine air quality forecast zones. Air quality forecast for a six-day period is provided for each zone. In the Nipomo Mesa area, there are four forecast zones as shown in the map on the following page. The zones are named for the monitoring stations that are located within each zone; CDF, Mesa 2, NRP and SLO:



The darker colors signify the typical location of the dust plume and the greater impacts during a typical blowing dust event. The public can experience adverse health impacts in areas with blowing dust. This proposed project is in the Mesa 2 zone.

The DEIR estimates that fugitive particulate matter emissions from construction and decommissioning activities will be less than significant. Still, construction and decommissioning activities can generate fugitive dust, which could be a nuisance to residents and businesses in close proximity to the proposed construction site. Due to the project's location within the Mesa 2 air quality forecast zone, the following expanded list of mitigation measures should be implemented to manage fugitive dust emissions such that they minimize nuisance impacts ([APCD Rule 402](#)) and do not exceed the APCD 20% opacity limit ([APCD Rule 401](#)):

- a. Reduce the amount of the disturbed area where possible;
- b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. Please note that when water use may be a concern due to drought conditions, the contractor or builder should consider use of a dust suppressant that is

COMMENT LETTER: 9

- effective for the specific site conditions to reduce the amount of water used for dust control. Please refer to the following link from the San Joaquin Valley Air District for a list of potential dust suppressants: [Products Available for Controlling Dust](#);
- c. All dirt stockpile areas should be sprayed daily and covered with tarps or other dust barriers as needed;
 - d. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible, and building pads should be laid as soon as possible after grading unless seeding or soil binders are used;
 - e. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) or otherwise comply with California Vehicle Code (CVC) Section 23114;
 - f. "Track-Out" is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in CVC Section 23113 and California Water Code 13304. To prevent 'track out', designate access points and require all employees, subcontractors, and others to use them. Install and operate a 'track-out prevention device' where vehicles enter and exit unpaved roads onto paved streets. The 'track-out prevention device' can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices need periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified;
 - g. All fugitive dust mitigation measures shall be shown on grading and building plans;
 - h. In support of APCD standard fugitive dust mitigation measures, the applicant shall designate a Visible Emission Evaluation certified person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize nuisance violations from dust complaints (Rule 402) and to reduce visible emissions below the APCD's limit of 20% opacity (Rule 401) for greater than 3 minutes in any 60-minute period. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Engineering & Compliance Division prior to the start of any grading, earthwork or demolition.
 - i. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities;
 - j. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;
 - k. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
 - l. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
 - m. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers shall be used with reclaimed water where feasible. Roads shall be pre-wetted prior to sweeping when feasible;
 - n. The APCD recommends construction activities that will generate dust should be limited to periods when good air quality is forecasted. The 6-day forecast for each forecast zone is available from the APCD website, slocleanair.org. This information should be used by all on-

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- site workers to plan construction activities for days when the air quality is forecasted to be good.
- o. Provide training to all site workers regarding dust control policies and practices and maintain records of training; and
 - p. Take additional measures as needed to ensure dust from the project site is not impacting areas outside the project boundary.

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Standard Mitigation Measures for Construction Equipment

The DEIR estimates that emissions from construction and decommissioning activities will be less than significant; however, APCD recommends reducing potential impacts by implementing the following Standard Mitigation Measures:

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel powered equipment with CARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet the CARB's 2010 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_x exempt area fleets) may be eligible by proving alternative compliance;
- All on and off-road diesel equipment shall not idle for more than 5-minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute idling limit;
- Diesel idling within 1,000 feet of sensitive receptors is not permitted;
- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
- Electrify equipment when feasible;
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and,
- Use alternatively fueled construction equipment on-site, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

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Hydrocarbon Contaminated Soil

Should hydrocarbon contaminated soil be encountered during project activities, the APCD must be notified as soon as possible and no later than 48 hours after affected material is discovered to determine if an APCD Permit will be required. In addition, the following measures shall be implemented immediately after contaminated soil is discovered:

- Covers on storage piles shall be maintained in place at all times in areas not actively involved in soil addition or removal;
- Contaminated soil shall be covered with at least six inches of packed uncontaminated soil or a non-permeable hydrocarbon barrier. No headspace shall be allowed where vapors could accumulate;
- Covered piles shall be designed in such a way to eliminate erosion due to wind or water. No openings in the covers are permitted;
- The air quality impacts from the excavation and haul trips associated with removing the contaminated soil must be evaluated and mitigated if total emissions exceed the APCD's construction phase thresholds;

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APCD Comments Regarding Phillips 66 Decommissioning and Demolition Project
December 17, 2021
Page 7 of 7

- During soil excavation, odors shall not be evident to such a degree as to cause a public nuisance; and,
- Clean soil must be segregated from contaminated soil.

The notification and permitting determination requirements shall be directed to the APCD Engineering & Compliance Division at 805-781-5912.

Limits of Idling

State law prohibits idling diesel engines for more than 5 minutes. All projects with diesel-powered construction activity shall comply with Section 2485 of Title 13 of the California Code of Regulations and the 5-minute idling restriction identified in Section 2449(d)(2) of the California Air Resources Board's In-Use Off-Road Diesel regulation to minimize toxic air pollution impacts from idling diesel engines. Regulations can be reviewed at: [Final Regulation Order Article 4.8](#).

Truck Routing

Proposed truck routes should be evaluated and selected to ensure routing patterns have the least impact to residential dwellings and other sensitive receptors, such as schools, parks, day care centers, nursing homes, and hospitals. If the project has significant truck trips where hauling/truck trips are routine activity and operate in close proximity to sensitive receptors, toxic risk needs to be evaluated.

(3) Greenhouse Gas Emissions

As a result of this project, the Santa Maria refinery will cease operations, which will eliminate a substantial volume of greenhouse gas (GHG) emissions. By comparison, the GHG emissions generated by the decommissioning activities are anticipated to be below the refinery's baseline GHG emissions. As such, GHG mitigation does not appear to be necessary for the Santa Maria refinery demolition project.

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at 805-781-5912.

Sincerely,



Vince Kirkhuff
Air Quality Specialist

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cc: Don Bristol, HSE Manager
Dora Drexler, Engineering & Compliance Division, APCD
Karl Tupper, Engineering & Compliance Division, APCD
Carissa Reynolds, Engineering & Compliance Division, APCD

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Response to Comment 1

Phillips 66 is currently preparing decommissioning plans for the Santa Maria Refinery. An application will be submitted to the SLOAPCD for review and permit approval, as required. Separate CEQA analysis will be conducted by San Luis Obispo County as the CEQA lead agency. During that process, the SLOAPCD will have another opportunity to comment on the proposed plans.

Response to Comment 2

Comment noted.

Response to Comment 3

As part of the development of the decommissioning plan, Phillips 66 will be contacting SLOAPCD Engineering and Compliance Division to determine the permit requirements.

Response to Comment 4

The minimization of odors and other air impacts during the shutdown and demolition of the facility will be addressed in collaboration with the SLOAPCD during the permitting process. See Response to Comment 1-3 regarding the Odor Management Plan for the Rodeo Refinery.

Response to Comment 5

Any asbestos containing material encountered during the demolition phase will be handled in compliance with standards under applicable regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (NESHAP), federal regulations at 40CFR61, Subpart M.

Response to Comment 6

Phillips 66 will contact SLOAPCD as necessary for any required permits.

Response to Comment 7

The comment is noted.

Page 4.9-327 of the Draft EIR acknowledges that demolition of the storage tanks at the Rodeo Site and of the entire Carbon Plant could release lead-based paint, which left uncontrolled could pose a hazard to people and the environment. However, hazardous wastes are subject to substantial regulatory controls that specify requirements for the safe handling, transport and disposal of hazardous wastes. These requirements would form part of the construction and demolition contracts. Contaminated soils would be disposed of at licensed landfills, and asbestos-containing materials, lead-based paint, and other hazardous materials would be abated by contractors licensed to handle hazardous waste. These contractors would dispose of them in approved hazardous waste handling facilities.

Response to Comment 8

Due to the project's location within the Mesa 2 air quality forecast zone, Phillips 66 will coordinate with the SLOAPCD on a fugitive dust mitigation plan that addresses the expanded list of mitigation measures described by the SLOAPCD in their comments.

Phillips 66 will coordinate with the SLOAPCD on a developing a Dust Control Plan for Project activities within the SLOAPCD.

Response to Comment 9

Refer to Response to Comment 1.

Response to Comment 10

As part of the development of the decommissioning plan, Phillips 66 will be contacting SLO APCD Engineering and Compliance Division to determine the permit requirements including the handling of any hydrocarbon contaminated soil that may be encountered.

Response to Comment 11

Refer to Response to Comment 1.

Response to Comment 12

While the potential health risk is less than significant (see Draft EIR [p.4.3-76]), Phillips 66 will work with the SLOAPCD to determine trucking routes relative to residences and other sensitive receptors to minimize potential health risks from diesel exhaust and road dust.

Response to Comment 13

As a result of this project, the Santa Maria refinery will cease operations, which will eliminate a substantial amount of greenhouse gas (GHG) emissions. By comparison, the GHG emissions generated by the decommissioning activities are expected to be below the Santa Maria Refinery's baseline GHG emissions. As such, GHG mitigation does not appear to be necessary for the Santa Maria refinery demolition project because the net impact would be negative. Further, decommissioning and demolition activities are temporary, short-term, and emissions will permanently cease upon completion of work.

Comment Letter 10. Santa Barbara County Air Pollution Control District (APCD)

COMMENT LETTER: 10

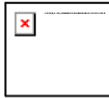
Gary Kupp

From: Emily Waddington <WaddingtonE@sbcapcd.org>
Sent: Thursday, December 16, 2021 10:31 AM
To: Gary Kupp
Subject: Santa Barbara County APCD Comments on the Rodeo Renewed Project Draft EIR
Attachments: 12-16-21 CDLP20-02040 Rodeo Renewed Draft EIR Comments.pdf

Good Morning Gary,

Please find attached the Santa Barbara County Air Pollution Control District's comments on the referenced Draft EIR. If you have any questions on our letter, please do not hesitate to reach out.

Best,



Emily Waddington

Air Quality Specialist
Air Pollution Control District
Santa Barbara County

WaddingtonE@sbcapcd.org
(805) 961-8878

ourair.org [@OurAirSBC](https://twitter.com/OurAirSBC)  

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COMMENT LETTER: 10

December 16, 2021

Gary Kupp
Community Development Division
Contra Costa County, Department of Conservation and Development
30 Muir Road
Martinez, CA 94533

Sent email only: gary.kupp@dcd.cccounty.us

Re: Santa Barbara County Air Pollution Control District Comments on the Draft Environmental Impact Report for the Phillips 66 Rodeo Renewed Project, CDLP20-02040

Dear Gary Kupp:

The Santa Barbara County Air Pollution Control District (District) has reviewed the Draft Environmental Impact Report (EIR) for the referenced project, which consists of the modification of the existing Rodeo Refinery in Rodeo, CA into a repurposed facility that would process renewable feedstocks. The Santa Maria Refinery in San Luis Obispo County would be demolished. Pipeline 300, which partly runs beneath the Santa Maria Valley in Santa Barbara County would be decommissioned. The pipeline would be cleaned and taken out of service or sold, but not excavated. The collection points would be purged with nitrogen and cleaned with pipeline inspection gauges (PIGs). Material removed from the pipelines would be processed as much as possible in the Phillips 66 refining facilities and disposed of in approved facilities. Construction and modification at the pipeline sites are not proposed. Existing equipment at pipeline sites such as pumps, tanks, fugitive components, and boilers located at pumping stations would also be decommissioned. Line 300 is located in the north-western part of Santa Barbara County, extending through the communities of Santa Maria, Sisquoc, and Orcutt.

The District has the following comments on the Draft EIR:

- 1. Section 4.3 Air Quality, Impact 4.3-5, Page 4.3-79:** In order to prevent odors from causing a violation of District Rule 303, *Nuisance*, the District recommends that carbon canisters be employed to control vapors released during pipeline decommissioning activities. Please ensure the use of carbon canisters is included in the project, such as by inclusion in the project description, as a mitigation measure, or by some other enforceable mechanism.



The District has the following regulatory advisories for the proposed project activities taking place within Santa Barbara County:

- 1. District Permits and CEQA Role:** Based on the project description and information that has been provided, the proposed project may include equipment or operations subject to District permit requirements and prohibitory rules. Therefore, the District may be a responsible agency under the California Environmental Quality Act (CEQA), and will rely on the EIR when evaluating any District permits for proposed equipment. The EIR should include the air pollutant emissions for all proposed equipment to avoid additional CEQA documentation requirements related to District permit issuance. In addition, if an evaluation of health risk is required for District



COMMENT LETTER: 10

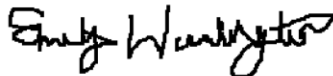
permitting, we recommend including the health risk assessment (HRA) results in the EIR to ensure that project-related equipment will not result in a significant impact. Specifically:

- a. **Existing Permits:** There are several pump stations and pipelines associated with Line 300 that are currently under permit with the District. Proposed activities may require District permit modifications. The applicant is advised to contact William Sarraf, Engineering Division Supervisor at SarrafW@sbcapcd.org or (805) 961-8888, to discuss the District permitting requirements for the proposed project.
- b. **Diesel Engines:** All portable diesel-fired construction engines rated at 50 brake horsepower or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or District permits prior to grading/building permit issuance. Construction engines with PERP certificates are exempt from the requirement to obtain a District permit, provided they will be on-site for less than 12 months. Additional information is available at www.ourair.org/portable-equipment-registration-program-perp/.
- c. **Pigging:** New pig launchers and/or receivers will require a District permit. Proposals to increase pigging activity onsite that exceed permissible activities under the current District permit will require a permit modification.

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If you or the project applicant have any questions regarding these comments, please feel free to contact me at (805) 961-8878 or via email at WaddingtonE@sbcapcd.org.

Sincerely,



Emily Waddington
Air Quality Specialist
Planning Division

cc: Planning Chron File
William Sarraf, Supervisor, District Engineering Division [email only]
David Harris, Manager, District Engineering Division [email only]
Don Bristol, Phillips 66

Response to Comment 1

Refer to Response to Comment 1-3, which revises Mitigation Measure AQ-4. Phillips 66 will employ carbon canisters during pipeline decommissioning to reduce the potential for odorous emissions.

Response to Comment 2

None of the activities mentioned in the comment are anticipated. Therefore the HRA is sufficient. Any additional permit modifications beyond the current project description that are deemed necessary would require new and separate analysis.

Comment Letter 11. Santa Barbara County Fire Department

COMMENT LETTER: 11

Gary Kupp

From: McGinty, Jasmine <jmcginty@countyofsb.org>
Sent: Wednesday, December 8, 2021 11:46 AM
To: Gary Kupp
Cc: Nuckols, Greg; Anderson, Nancy; Plowman, Lisa; Klemann, Daniel; Carlson, Zoe
Subject: Phillips 66 Rodeo Project EIR - Reportback
Attachments: CEO Cover Letter 12821.pdf; Phillips 66 No Comment Letter_Fire.pdf

Good Morning Mr. Kupp,

Thank you for the opportunity to comment on the Draft Environmental Impact Report for the Phillips 66 Rodeo Renewed Project. At this time, the County submits comments from the Fire Department. Please confirm receipt of this email and let me know if you have any questions.

Regards,

Jasmine McGinty

Principal Analyst – County Executive Office
County of Santa Barbara
105 E. Anapamu St., Suite 406
Santa Barbara, CA 93101
jmcginty@countyofsb.org
805-448-4028



COMMENT LETTER: 11

December 8, 2021

Gary Kupp, Senior Planner
Community Development Division
Contra Costa County, Department of Conservation and Development
30 Muir Road, Martinez, CA 94553

RE: Notice of Availability of Draft Environmental Impact Report for the Phillips 66 Rodeo
Renewed Project

Dear Mr. Kupp:

Thank you for the opportunity to comment on the Draft Environmental Impact Report for the Phillips 66 Rodeo Renewed Project. At this time, the County submits comments from the Fire Department.

If you should have further questions, please do not hesitate to contact my office directly, or Captain Greg Nuckols, at (805) 681-5500.

Sincerely,



Jasmine McGinty
Principal Analyst

cc: Captain Greg Nuckols, Santa Barbara County Fire Department

Enclosure: Santa Barbara County Fire Department Letter, dated December 3, 2021

COMMENT LETTER: 11

Memorandum

DATE: December 3, 2021
TO: Gary Kupp
Community Development Department
Contra Costa County
FROM: Greg Nuckols, Captain
Santa Barbara County Fire Department
SUBJECT: Project Description: Phillips 66 Rodeo Renewed Project



Some portions of the above project are located within the jurisdiction of the Santa Barbara County Fire Department. To comply with the established standards, we submit the following with the understanding that the Fire Protection Certificate application may involve modifications, which may determine additional conditions.

GENERAL NOTICE

The Santa Barbara County Fire Department has no comment or conditions for the proposed project.

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ADVISORY

If the proposed project involves the use and storage of hazardous materials / hazardous wastes, permits are required prior to operation.

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These conditions apply to the project as currently described. Future changes, including but not limited to further division, change of occupancy, intensification of use, or increase in hazard classification, may require additional mitigation to comply with applicable development standards in effect at the time of change.

As always, if you have any questions or require further information, please telephone 805-681-5500.

cc Zoë Carlson, Senior Planner, Planning & Development, Long Range Planning

Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

Comment Letter 12. Santa Barbara County Planning

COMMENT LETTER: 12

Gary Kupp

From: Zorovich, John <Jzoro@countyofsb.org>
Sent: Monday, December 13, 2021 4:09 PM
To: Gary Kupp
Cc: Plowman, Lisa; Wilson, Jeffrey
Subject: Phillips 66 Rodeo Renewed Project Draft EIR - Comment Letter
Attachments: Phillips 66 Rodeo Comment Letter 12.13.21.pdf

Hello Mr. Kupp,

As a follow-up to our conversation last week, attached is a comment letter from Santa Barbara County Planning & Development Department. We request that you please confirm receipt of this email.

Regards,



John Zorovich
Deputy Director
Planning & Development
County of Santa Barbara
123 E. Anapamu St.
Santa Barbara, CA 93101
805-568-2519
jzoro@countyofsb.org
<http://sbcountyplanning.org/>

COMMENT LETTER: 12



**County of Santa Barbara
Planning and Development**

Lisa Plowman, Director
Jeff Wilson, Assistant Director

December 13, 2021

Via Email: gary.kupp@dcd.cccounty.us

Gary Kupp, Senior Planner
Contra Costa County – Department of Conservation & Development
30 Muir Road
Martinez, CA 94553

RE: Phillips 66 Rodeo Renewed Public Draft EIR Comments

Dear Mr. Kupp,

The Santa Barbara County Planning & Development Department (P&D) appreciates the opportunity to provide comments on the Phillips 66 Rodeo Renewed project public Draft EIR. The purpose of the project is to convert use of the existing Rodeo Refinery operated by Phillips from the production of petroleum based products from crude oil to a facility that would process renewable feedstocks into renewable fuels. In part, the project description states that the applicant will market for sale various “pipeline sites” including the Phillips 66 Line 300 pipeline system and its associated pump stations in Santa Barbara County. However, for purposes of environmental analysis, the DEIR assumes that Phillips will decommission the pipeline sites including the Line 300 system. While the DEIR does identify these assets as being decommissioned, the description of this work and its resulting impacts is vague and more detail is needed. Ultimately, if these assets within Santa Barbara County are to be decommissioned, Phillips 66 will need to obtain a Demolition and Reclamation Plan permit from the County. As part of the process of this potential future permit request, the County could rely on this EIR for environmental review of said decommissioning if sufficient analysis is included in the EIR. Therefore, we are submitting the following comments related to the proposed project description and impact analysis.

1. Page 3-31 (Project Description) includes a brief description of the existing “Pipeline Sites” and states that each would be decommissioned including the Line 300 system which is located within Santa Barbara County. This pipeline system currently serves three active oilfields (onshore and offshore) which input their produced oil into the system via direct connection. This system also serves dozens of other producers via the Santa Maria Pump Station which offloads crude oil from tanker trucks which originate from within and outside of Santa Barbara County. The Line 300 system also includes several other storage tanks and

123 E. Anacapa Street, Santa Barbara, CA 93101 • Phone: (805) 569-3009 • FAX: (805) 568-3030
511 W. Porter Road, Santa Maria, CA 93455 • Phone: (805) 924-0230 • FAX: (805) 934-9218
www.sbcplanning.org

COMMENT LETTER: 12

Phillips 66 Rodeo Renewed Draft EIR Comment Letter
December 13, 2021
Page 2

pump stations which help keep the line pressurized as the crude oil is transported north toward the Santa Maria Refinery in San Luis Obispo County.

The project description states that the pipeline would be cleaned and then abandoned in place. It does not describe how the other features such as the existing pump stations, storage tanks, etc. would be decommissioned. Further, because several storage tanks, pumps and supplemental piping have been operated as part of this pipeline system for several decades, there is a strong potential for the presence of contaminated soils around these features. The project description should include more detail on how the existing pipeline system features would be decommissioned and what would be done to test for the presence of, and ultimately remediate any soils contaminated by historic use of the lines.

2
cont'd

2. In relation to comment 1 above, the impacts associated with decommissioning of the pipeline assets should be analyzed and disclosed in more detail within the applicable sections of the EIR. Decommissioning activities which would include demolition, removal and abandonment of these pipeline features have the potential to impact almost all issue areas discussed in the EIR. Additionally, because the likelihood of contaminated soils is high, the EIR should also analyze how such soils would be remediated and disclose the impacts associated with these activities as well. The DEIR does not currently contemplate the presence of contaminated soils or address these impacts.

3

In conclusion, the DEIR should be revised to include a more thorough description of pipeline site decommissioning activities and their related environmental impacts. We appreciate the opportunity to provide comments on the Phillips 66 Rodeo Renewed project. We look forward to reviewing the revised document to understand how our comments are addressed. If you have any questions, please feel free to contact me (805) 568-2519.

Sincerely,



John Zorovich
Deputy Director
Energy Minerals & Compliance Division
Planning & Development Department

Response to Comment 1

The Project does not include removal of any pipelines, including the Line 300 system in Santa Barbara County. As stated in Draft EIR Section 3.9.4, Pipeline Sites:

For purposes of analysis, it is assumed that Phillips 66 would decommission the Pipeline Sites. The pipelines would be cleaned and taken out of service, or sold; they would not be excavated as part of this Project. Phillips 66 would empty and clean the collection points with pipeline inspection gages (PIGs)...

The Draft EIR does address potential impacts of taking the pipelines out of service, and as concluded significant impacts would not occur.

Response to Comment 2

The Project does not propose to remove any components of the Pipeline Sites, such as pump stations or storage tanks. The Draft EIR Project Description accurately describes that the Pipeline Sites would be cleaned and taken out of service, and no excavation is proposed as part of the Project.

Response to Comment 3

Refer to Response to Comment 2.

Comment Letter 13. Stanislaus County Dept. of Environmental Resources

COMMENT LETTER: 13

Gary Kupp

From: Stephanie Freier <sfreier@envres.org>
Sent: Wednesday, December 1, 2021 4:17 PM
To: Gary Kupp
Cc: Jeremy Ballard; Gloria Romero
Subject: Emailing: No Comment - Contra Costa County_Phillips 66 Rodeo Renewed Project
Attachments: No Comment - Contra Costa County_Phillips 66 Rodeo Renewed Project.pdf; ERC-21. Contra Costa County_Phillips 66 Rodeo Renewed Project.pdf

Good afternoon Gary,
Please see the attached No Comment document from the Stanislaus County Department of Environmental Resources - Hazardous Materials Division for the Contra Costa County_Phillips 66 Rodeo Renewed Project and contact me should there be any questions.

Best regards,
Steph Freier
Sr. Hazardous Materials Specialist
Stanislaus County Dept. of Environmental Resources
3800 Cornucopia Way, Suite C
Modesto, CA 95358
Direct: (209)-525-6828 (or Cisco ext. 56828)
Cell: (209) 202-7296
sfreier@envres.org

COMMENT LETTER: 13



**STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE
REFERRAL RESPONSE FORM**

TO: Stanislaus County Planning & Community Development
1010 10th Street, Suite 3400
Modesto, CA 95354

FROM: Stanislaus County, Department of Environmental Resources - Hazardous Materials Division

SUBJECT: ENVIRONMENTAL REFERRAL – CONTRA COSTA COUNTY – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PHILLIPS 66 RODEO RENEWED PROJECT

Based on this agency's particular field(s) of expertise, it is our position the above described project:

- Will not have a significant effect on the environment.
- May have a significant effect on the environment.
- No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) – (attach additional sheets if necessary)

- 1.
- 2.
- 3.
- 4.

Listed below are possible mitigation measures for the above-listed impacts *PLEASE BE SURE TO INCLUDE WHEN MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

- 1.
- 2.
- 3.
- 4.

In addition, our agency has the following comments (attach additional sheets if necessary).

Response prepared by:

Stephanie Freier	Senior Hazardous Materials Specialist	12/1/2021
_____ Name	_____ Title	_____ Date

ATTACHMENTS
EMAIL TO ERC

I:\Planning\Commissions - Committees\ERC\ERC REFERRAL LETTERS\2021\WORD\Contra Costa County\ERC-21. Contra Costa County_Phillips 66 Rodeo Renewed Project.docx

Response to Comment

Comment noted.

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Comment Letter 14. Stanislaus County Environmental Review Committee



COMMENT LETTER: 14

CHIEF EXECUTIVE OFFICE

Jody L. Hayes
CHIEF EXECUTIVE OFFICER

Patrice M. Dietrich
ASSISTANT EXECUTIVE OFFICER

Raul L. Mendez
ASSISTANT EXECUTIVE OFFICER

STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE

December 9, 2021

Gary Kupp, Senior Planner
Contra Costa County, Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

SUBJECT: ENVIRONMENTAL REFERRAL – CONTRA COSTA COUNTY – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PHILLIPS 66 RODEO RENEWED PROJECT

Mr. Kupp:

Thank you for the opportunity to review the above-referenced project.

The Stanislaus County Environmental Review Committee (ERC) has reviewed the subject project and has no comments at this time.

The ERC appreciates the opportunity to comment on this project.

Sincerely,

A handwritten signature in blue ink that reads "Patricia Lord".

Patricia Lord
Management Consultant
Environmental Review Committee

PL:ah

cc: ERC Members



1010 10TH STREET, STE. 6800, MODESTO, CA 95354
POST OFFICE BOX 3404, MODESTO, CA 95353
PHONE: 209.525.6333, FAX: 209.558.4423
STANCOUNTY.COM



COMMENT LETTER: 14

Gary Kupp

From: Adriana Harakh <harakha@stancounty.com>
Sent: Monday, December 13, 2021 3:28 PM
To: Gary Kupp
Cc: Patricia Lord; Patrick Cavanah
Subject: ERC Referral: Contra Costa County - Notice of Availability of a Draft Environmental Impact Report for the Phillips 66 Rodeo Renewed Project
Attachments: Environmental Referral - Contra Costa County - Notice of Availability of a Draft Environmental Impact Report for the Phillips 66 Rodeo Renewed Project.pdf

Hello Gary,

The Stanislaus County Environmental Review Committee (ERC) has reviewed the subject project and has no comments at this time. The original letter will follow via mail.

The ERC appreciates the opportunity to comment on this project.

Thank you,

Adriana Harakh

Executive Assistant
Community and Economic Development
Chief Executive Office | Stanislaus County
Office: 209. 525. 4312 | Cell: 209.338.7564
harakha@stancounty.com

Response to Comment

Comment noted.

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Comment Letter 15. Stanislaus County, Community and Economic Development



COMMENT LETTER: 15

CHIEF EXECUTIVE OFFICE

Jody L. Hayes
CHIEF EXECUTIVE OFFICER
Patrice M. Dietrich
ASSISTANT EXECUTIVE OFFICER
Raul L. Mendez
ASSISTANT EXECUTIVE OFFICER

STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE

December 9, 2021

Gary Kupp, Senior Planner
Contra Costa County, Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

SUBJECT: ENVIRONMENTAL REFERRAL – CONTRA COSTA COUNTY – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PHILLIPS 66 RODEO RENEWED PROJECT

Mr. Kupp:

Thank you for the opportunity to review the above-referenced project.

The Stanislaus County Environmental Review Committee (ERC) has reviewed the subject project and has no comments at this time.

The ERC appreciates the opportunity to comment on this project.

Sincerely,

A handwritten signature in blue ink that reads 'Patricia Lord'.

Patricia Lord
Management Consultant
Environmental Review Committee

PL:ah

cc: ERC Members



1010 10TH STREET, STE. 6800, MODESTO, CA 95354
POST OFFICE BOX 3404, MODESTO, CA 95353
PHONE: 209.525.6333, FAX: 209.558.4423
STANCOUNTY.COM



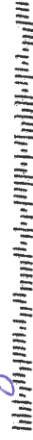
COMMENT LETTER: 15

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Gary Klupp
Contra Costa County
Dept of Conservation & Development
30 Muir Road
Martinez, CA 94553



94553-460130

101204-015120
Stanislaus County
Chief Executive Officer
P.O. Box 3404
Modesto, California 95353-3404

RETURN SERVICE REQUESTED

CONTRA COSTA
2021 DEC 16 10:46
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT

Response to Comment

Comment noted.

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Comment Letter 16. Stanislaus County, Dept. of Environmental Resources

COMMENT LETTER: 16

Gary Kupp

From: Parminder Dhillon <pdhillon@envres.org>
Sent: Friday, December 17, 2021 1:38 PM
To: Gary Kupp
Cc: MARY-KATE COOK
Subject: FW: Stanislaus County ERC Referral - Contra Costa County _ Phillips 66 Rodeo Renewed Project - Respond by December 17, 2021
Attachments: ERC-21. Contra Costa County_Phillips 66 Rodeo Renewed Project.pdf; ENVIRONMENTAL REFERRAL – CONTRA COSTA COUNTY – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PHILLIPS 66 RODEO RENEWED PROJECT.pdf
Importance: High

Hello Mr. Gary Kupp,

Please consider out attached response for the above noted project.

Thank you,

Parminder Dhillon, R.E.H.S.

Senior Environmental Health Specialist
Stanislaus County Department of Environmental Resources
Environmental Health Division
3800 Cornucopia Way, Suite C
Modesto, CA 95358-9494
Office Phone: (209) 525-6796
Email: pdhillon@envres.org
Permits: DER-EHpermits@envres.org

From: Planning <planning@stancounty.com>
Sent: Tuesday, October 26, 2021 9:08 AM
To: Adriana Harakh <harakha@stancounty.com>; Patricia Lord <lordp@stancounty.com>; Patrick Cavanah <cavanahp@stancounty.com>; Angela Freitas <ANGELA@stancounty.com>; Kristin Doud <Doudk@stancounty.com>; Jeremy Ballard <BALLARDJ@stancounty.com>; Miguel Galvez <GALVEZM@stancounty.com>; Kamal Bagri <kbagri@stancounty.com>; Dan Bernaciak <danielb@stancounty.com>; Judith Arroyo <juditha@stancounty.com>; Matthew Jenkins - SO; Erik Klevmyr <eklevmyr@stancounty.com>; Michael Ziman <zimanm@stancounty.com>; Robert Kostlivi <rkostlivi@envres.org>; RACHEL RIESS <rariess@envres.org>; JANIS MEIN <JMEIN@envres.org>; KIT MCCLURG <KMCCLURG@envres.org>; WALLACE LOW <WLOW@envres.org>; Ryan Barney <rbarney@envres.org>; WALEED YOSIF <WYOSIF@envres.org>; Walter Ward <wward@envres.org>; KARL QUIINN <KQUINN@envres.org>; Lane Avilla <lavilla@envres.org>; MARY-KATE COOK <MKCOOK@envres.org>; Parminder Dhillon <pdhillon@envres.org>; Mandip Dhillon <mdhillon@envres.org>; Yama Noorzai <YNoorzai@envres.org>; ALVIN LAL <ALAL@envres.org>; Gloria Romero <gromero@envres.org>; Stephanie Freier <sfreier@envres.org>; Michael Parker; raduncan@ucanr.edu; Frederic Clark <CLARKF@stancounty.com>; Ramon Salinas <SALINASR@stancounty.com>; Lynnette Henson <hensonl@stancounty.com>; David Leamon <Leamond@stancounty.com>; Andrew Malizia <Maliziaa@stancounty.com>; Sara Lytle-Pinhey <pinheys@stancounty.com>; Javier Camarena <camarenaj@stancounty.com>; Erica Inacio <inacioe@stancounty.com>
Cc: Arcelia Garcia <garciaar@stancounty.com>; Deborah Trujillo <trujillod@stancounty.com>

COMMENT LETTER: 16

Subject: Stanislaus County ERC Referral - Contra Costa County _ Phillips 66 Rodeo Renewed Project - Respond by December 17, 2021

Importance: High

Good morning ERC Members,

ERC-21. Contra Costa County – Notice of Availability of a Draft EIR for the Phillips 66 Rodeo Renewed Project is attached for your review and comments.

Please note that your response is due by **December 17, 2021**.

The Draft EIR can be viewed online at the following link: www.contracosta.ca.gov/RodeoRenewed

Thank you,
Stanislaus County Department of Planning and Community Development

Due to high volume, appointments are strongly recommended and will be given priority over walk-ins. For information on how to schedule an appointment please go to <http://www.stancounty.com/planning/phone-mail-options.shtm>.



COMMENT LETTER: 16

DEPARTMENT OF ENVIRONMENTAL RESOURCES
3800 Cornucopia Way, Suite C Modesto, CA 95358
Phone: 209.525.6700 Fax: 209.525.6700

**STANISLAUS COUNTY ENVIRONMENTAL REVIEW
COMMITTEE REFERRAL RESPONSE FORM**

TO: Gary Kupp, Senior Planner
Community Development Division
Contra Costa County, DCD
30 Muir Road, Martinez, CA 94553

FROM: Stanislaus County Department of Environmental Resources

SUBJECT: **ENVIRONMENTAL REFERRAL – CONTRA COSTA COUNTY – NOTICE OF
AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PHILLIPS
66 RODEO RENEWED PROJECT**

Based on this agency's particular field(s) of expertise, it is our position the above described project:

- Will not have a significant effect on the environment.
 May have a significant effect on the environment.
 No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) – (attach additional sheet if necessary)

1.

Listed below are possible mitigation measures for the above-listed impacts: *PLEASE BE SURE TO INCLUDE WHEN THE MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

1.

In addition, our agency has the following comments (attach additional sheets if necessary).

Response modified by: _____ Date: 12/17/2021

Parminder Dhillon, R.E.H.S.
Senior Environmental Health Specialist
Stanislaus County Department of Environmental Resources



COMMENT LETTER: 16

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

1010 10th Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

**STANISLAUS COUNTY ENVIRONMENTAL REVIEW
COMMITTEE REFERRAL**

DATE: October 26, 2021

TO: Agricultural Commissioner – Dan Bernaciak
Chief Executive Office – Patrick Cavanah
Cooperative Extension – Roger Duncan
County Counsel – Michael Ziman
Environmental Resources – Parminder Dhillon
Hazardous Materials – Alvin Lal
Stanislaus Fire Prevention Bureau – Matthew Jenkins
Public Works – Ramon Salinas
Sheriff Dept. – Lt. Mike Parker

FROM: Department of Planning and Community Development – Jeremy Ballard

SUBJECT: ENVIRONMENTAL REFERRAL – CONTRA COSTA COUNTY – NOTICE OF
AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PHILLIPS
66 RODEO RENEWED PROJECT

Stanislaus County has established an Environmental Review Committee, which consists of representatives of the Departments of Public Works, Planning and Community Development, Environmental Resources, Fire Safety, County Counsel, and the Chief Executive Office. The ERC meets every other Wednesday at 9:30 AM in the Planning Department Conference Room at 1010 10th Street, Modesto. The primary purpose of the ERC is to provide a unified County review and response to environmental issues associated with projects which are referred to the County. The Planning Department has been designated as the County Agency responsible for coordinating the review process. This referral may also be forwarded to you as part of the California Environmental Quality Act (CEQA) review process.

Each agency should review the projects from the point of view of impacts on its own areas of responsibility. Please be as specific as possible in the expected degree of impacts including costs of providing services and possible methods of mitigating the impacts to acceptable levels including mitigation fees. Please complete the attached response form or provide a written response within two weeks.

The California Environmental Quality Act establishes very tight time frames for review. For that reason, it is very important that a prompt response be provided. It is our hope that all County responses can be sent to the referring agencies as a package. However, in some instances the time for review does not permit that to happen. Some responses will have to go directly to the agency, with a copy to County Planning, while others can come back to Planning. Please note below the date responses are needed and where to send them. PLEASE SEND THE ORIGINAL OF ANY COMMENTS YOU MAY HAVE DIRECTLY TO THE AGENCY LISTED BELOW AND A COPY TO THE STANISLAUS COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT. Please contact me if you have any questions.

PROJECT AGENCY
Contra Costa County
Department of Conservation
and Development
30 Muir Road
Martinez, CA 94553
Phone: 1-855-323-2626

RESPOND TO
Gary Kupp, Senior Planner
Community Development Division
Contra Costa County, DCD
30 Muir Road
Martinez, CA 94553
Email: gary.kupp@dcd.cccounty.us
Phone: (925) 655-2871

RESPONSE DATE
December 17, 2021

STRIVING TOGETHER TO BE THE BEST!

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COMMENT LETTER: 16



**STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE
REFERRAL RESPONSE FORM**

TO: Stanislaus County Planning & Community Development
1010 10th Street, Suite 3400
Modesto, CA 95354

FROM: _____

SUBJECT: ENVIRONMENTAL REFERRAL – CONTRA COSTA COUNTY – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PHILLIPS 66 RODEO RENEWED PROJECT

Based on this agency's particular field(s) of expertise, it is our position the above described project:

- _____ Will not have a significant effect on the environment.
- _____ May have a significant effect on the environment.
- _____ No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) – (attach additional sheets if necessary)

- 1.
- 2.
- 3.
- 4.

Listed below are possible mitigation measures for the above-listed impacts *PLEASE BE SURE TO INCLUDE WHEN MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

- 1.
- 2.
- 3.
- 4.

In addition, our agency has the following comments (attach additional sheets if necessary).

Response prepared by:

Name Title Date

ATTACHMENTS

EMAIL TO ERC

I:\Planning\Commissions - Committees\ERC\ERC REFERRAL LETTERS\2021\WORD\Contra Costa County\ERC-21. Contra Costa County_Phillips 66 Rodeo Renewed Project.docx

COMMENT LETTER: 16

GRC

**Department of
Conservation and
Development**

30 Muir Road
Martinez, CA 94553

Phone: 1-855-323-2626

**Contra
Costa
County**



John Kopchik
Director

Aruna Bhat
Deputy Director

Jason Crapo
Deputy Director

Maureen Toms
Deputy Director

Amalia Cunningham
Assistant Deputy Director

October 14, 2021

**NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE
PHILLIPS 66 RODEO RENEWED PROJECT**

State Clearinghouse# 2020120330

County File No. CDLP20-02040

Pursuant to the State of California Public Resources Code and the "Guidelines for Implementation of the California Environmental Quality Act of 1970" as amended to date, this is to advise you that the Community Development Division of the Department of Conservation and Development of Contra Costa County has prepared an Environmental Impact Report for the following project:

PROJECT TITLE: Phillips 66 Rodeo Renewed Project

APPLICANT: Phillips 66
Attn: Don Bristol, Ph. (510) 245-5825
1380 San Pablo Avenue
Rodeo, CA 94572

LOCATION: The Rodeo Refinery is located at 1380 San Pablo Avenue in Rodeo, California, and comprises approximately 1,100 acres of land. The main components of the Project would be located within the 495-acre developed area of the property northwest of Interstate 80 (I-80). This area is referred to as the Rodeo Site. The Rodeo Site is currently covered by a mixture of impervious surfaces associated with process equipment, parking areas, roads, and other pervious surfaces. The remaining portion of the Rodeo Refinery, southeast of I-80, consists of a tank farm, the Carbon Plant Site, and undeveloped land that serves as a buffer zone.

Primary access to the Rodeo Refinery, used by refinery support trucks and workers, is provided by Cummings Skyway between I-80 and the Rodeo Site's north gate. Secondary access is from San Pablo Avenue, which runs parallel to and a short distance inland from the waterfront from which several roads and entry gates lead into various areas of the Rodeo Site. San Pablo Avenue is a four-lane arterial that connects numerous East Bay communities between

COMMENT LETTER: 16

Oakland, approximately 18 miles south of Rodeo, and the Carquinez Bridge in Crockett, approximately 2 miles northeast of Rodeo.

Because the Project would discontinue processing crude oil at the Rodeo Refinery, other sites owned and operated by Phillips 66 located throughout the state would be affected. Therefore, the Project consists of activities at the following four sites (see attached site maps):

- Rodeo Site (1380 San Pablo Ave, Rodeo, CA 94572)—described above, refers to the 495-acre area within the Rodeo Refinery where the main Project activities would occur.
- Carbon Plant Site (2101 Franklin Canyon Rd, Rodeo, CA 94572)—refers to the current location of the Carbon Plant in Franklin Canyon (within the 1,100-acre Rodeo Refinery). Under the Project, the Carbon Plant would no longer be necessary and would be demolished.
- Santa Maria Site (2555 Willow Rd, Arroyo Grande, CA 93420)—refers to the Santa Maria Refinery, including the applicant-owned buffer land, located near Nipomo, San Luis Obispo County. The Santa Maria Site would no longer be necessary to provide semi-refined feedstock to the Rodeo Refinery and would be demolished under the Project.
- Pipeline Sites—refers to four pipelines (i.e., Lines 100, 200, 300, and 400) that provide crude oil from the Santa Maria Site to the Rodeo Refinery. The pipeline sites would cease to be used under the Project.

PROJECT DESCRIPTION:

Phillips 66 proposes to modify the existing Rodeo Refinery into a repurposed facility that would process renewable feedstocks into renewable diesel fuel, renewable components for blending with other transportation fuels, and renewable fuel gas. Repurposing of the Rodeo Refinery would assist California in meeting its stated goals of reducing greenhouse gas emissions and ultimately transitioning to carbon neutrality. It would also provide a mechanism for compliance with California's Low-Carbon Fuel Standard and Cap and Trade programs and the federal Renewable Fuels Standard, while continuing to meet regional market demand for transportation fuels.

Once the Project is in operation, no crude oil would be processed at the Rodeo Refinery. As the Rodeo Refinery transitions from a facility that refines petroleum feedstocks to one that processes renewable feedstocks, the refinery may temporarily increase deliveries of crude oil and gas oil feedstocks by tanker vessel, resulting in increased annual vessel calls to the Marine Terminal compared to baseline conditions. This temporary increase of crude and gas oil feedstocks at the Marine Terminal would not increase the amount of crude and gas oil that can be processed at the Rodeo Refinery, but it would shift the source of these materials from the Pipeline Sites to the Marine Terminal. The temporary or transitional increase in vessel traffic is estimated to last 7 months in the year prior to Project startup, and would occur parallel to the end of the construction period. No modifications to the Marine Terminal or Marine Oil Terminal Engineering and Maintenance Standards Program are proposed.

Up to 80,000 barrels per day (bpd), on a 12-month rolling average, of renewable feedstocks could arrive at the Rodeo Refinery and would be processed in the proposed Feed Pre-treatment Unit (PTU). The majority

COMMENT LETTER: 16

of the time, the feedstocks treated by the PTU would be processed on site to produce renewable fuels. In situations where excess treated feedstock produced by the PTU is not processed onsite, this material could be exported from the Rodeo Refinery via the Marine Terminal. Marine traffic would increase relative to the baseline period. Marine traffic would include tanker vessels and barges used to import renewable feedstocks and gasoline blendstocks, and export renewable fuels and feeds. Baseline vessel traffic consists of 80 tankers of various sizes and 90 barges and is estimated to increase to a total of 201 Handymax tankers and 161 articulated tug barges at full Project operation. No physical changes are needed at the Marine Terminal as part of the Project.

Under the Project, the Rodeo Refinery would supply up to 107,000 bpd (12-month rolling average) of renewable and petroleum-based transportation fuels. The Project would produce up to 55,000 bpd, on a 12-month rolling average basis, of a variety of renewable transportation fuels from renewable feedstocks. The Rodeo Refinery as a whole would produce up to 67,000 bpd, on a 12-month rolling average basis, of renewable fuels. To maintain the current facility capacity to supply regional market demand for transportation fuels, including renewable and conventional fuels, the Rodeo Refinery could receive, blend, and ship up to 40,000 bpd, on a 12-month rolling average, of gasoline and gasoline blendstocks.

The Project has the following objectives:

- Convert the Rodeo Refinery to a renewable transportation fuels production facility;
- Provide/maximize production of renewable fuels to assist California in meeting its goals for renewable energy, greenhouse gas emission reductions, and reduced Carbon Intensity for transportation fuels;
- Convert existing equipment and infrastructure to produce transportation fuels from non-hazardous renewable feedstocks and discontinue the processing of crude oil at the Rodeo Refinery;
- Preserve and protect existing family-wage jobs in Contra Costa County during and after the transition to a renewable transportation fuels production facility;
- Repurpose and reuse the facility's existing equipment capacity, including the Marine Terminal and Rail Butane Loading Rack;
- Preserve marine, rail, and truck offloading facilities to access national/international renewable feedstocks to provide renewable transportation fuels and conventional fuels and conventional fuel components;
- Provide the ability to process a comprehensive range of renewable feedstocks, including treated and untreated feedstocks;
- Maintain the facility's current capacity to supply regional market demand for transportation fuels, including renewable and conventional fuels;
- Ensure California transportation fuel supply needs are met during the transition to a renewable fuels facility by temporarily (approximately 7 months) increasing gas oil and crude deliveries at the Marine Terminal to maintain current transportation fuel production at the Rodeo Refinery;
- Provide a beneficial use for recyclable fats, oil, and grease within the state of California; and
- Provide a mechanism for compliance with the federal Renewable Fuel Standard and the state Low-Carbon Fuel Standard through processing facilities in California.

COMMENT LETTER: 16

SITE AND AREA DESCRIPTION:

The Project consists of activities at four sites: Rodeo Site, Carbon Plant, Santa Maria Site, and Pipeline Sites. The Rodeo Refinery, consisting of the Rodeo Site and Carbon Plant Site, is bordered by San Pablo Bay on the north and west, the NuStar Energy tank farm on the northeast, the Bayo Vista residential area of Rodeo to the southwest, and the residential enclave of Tormey, located east and adjacent to the Nustar Energy tank farm. The remaining portion of the Rodeo Refinery, southeast of I-80, consists of a tank farm and undeveloped land that serves as a buffer zone.

The Santa Maria Site is surrounded by a buffer area of open space grassland on most sides. To the north and east are residential communities mixed with heavier commercial uses, such as stockyards and truck storage areas. To the south are agricultural fields and to the west is an open space area that transitions into dunes towards the Pacific Ocean. While there is development in the area, it remains largely dominated by open space with mesa and dune habitats and agricultural fields. Highway 1 skirts around the Santa Maria Site to the north, and moves slightly inland, perpendicular to the coast, and then to the east as it turns back and runs parallel to the coast.

The Pipeline Sites are located throughout the state in San Luis Obispo, Santa Barbara, Kern, Kings, Fresno, Merced, Stanislaus, San Joaquin, Alameda, and Contra Costa Counties. The Project would not involve any physical modifications at the Pipeline Sites.

ENVIRONMENTAL EFFECTS OF THE PROJECT:

This Draft Environmental Impact Report (EIR) has been prepared pursuant to Public Resources Code Section 21080(d) of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The Draft EIR describes the proposed Project; analyzes and identifies the environmental impacts that may result from the proposed Project; identifies measures to mitigate adverse environmental impacts; and evaluates alternatives to the proposed Project.

The Draft EIR for the proposed Project identified significant impacts that cannot be fully mitigated to less-than-significant levels with implementation of identified mitigation measures. These significant and unavoidable impacts include marine biological resources, hazards, and hydrology and water quality related to marine vessel accidents, and air quality related to rail emissions outside the San Francisco Bay Area Air Basin. The Draft EIR also identifies potentially significant impacts related to: construction-related air emissions, odor; marine biological resources (non-spill related); cultural resources; seismicity; transportation and traffic; and tribal cultural resources. However, mitigation measures are identified for these impacts that ensure the Project will not cause a significant impact on the environment.

WHERE TO REVIEW THE DRAFT EIR:

To help slow the spread of COVID-19 in accordance with the County Health Officer's Shelter Order of March 10, 2021, the Draft EIR can be viewed online at the following link:

www.contracosta.ca.gov/RodeoRenewed

Any sources of information referenced in the Draft EIR can be provided upon request by contacting the project planner, Gary Kupp.

COMMENT LETTER: 16

PUBLIC COMMENT PERIOD:

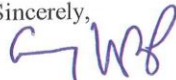
Prior to adoption of the Draft EIR, the County will be accepting comments on the adequacy of the document during a 60-day public comment period; the Draft EIR and a Final EIR may be certified at a future date in a public hearing following the public comment period.

The period for accepting comments on the adequacy of the environmental document will begin on **Monday, October 18, 2021** and extends to **Friday, December 17, 2021 until 4:00 P.M.** Any comments should be in writing and submitted to the following address:

**Gary Kupp, Senior Planner
Community Development Division
Contra Costa County, Department of Conservation and Development
30 Muir Road, Martinez, CA 94553**

OR via email to gary.kupp@dcd.cccounty.us

Sincerely,



Gary Kupp
Senior Planner
(925) 655-2871
gary.kupp@dcd.cccounty.us

cc: County Clerk's Office (2 copies)
Adjacent Occupants and Property Owners
Notification List

attach: Site Maps

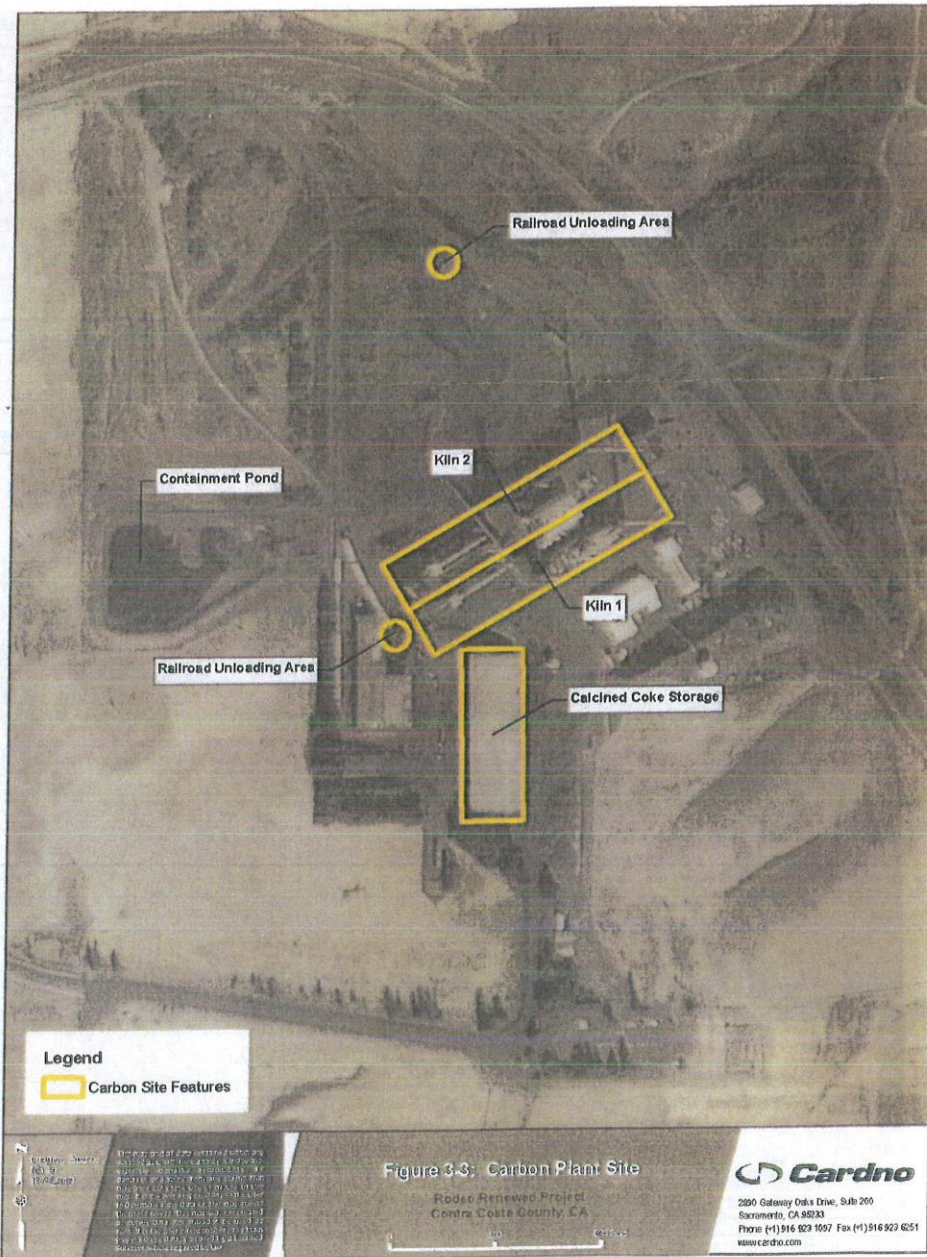
COMMENT LETTER: 16



Rodeo Site

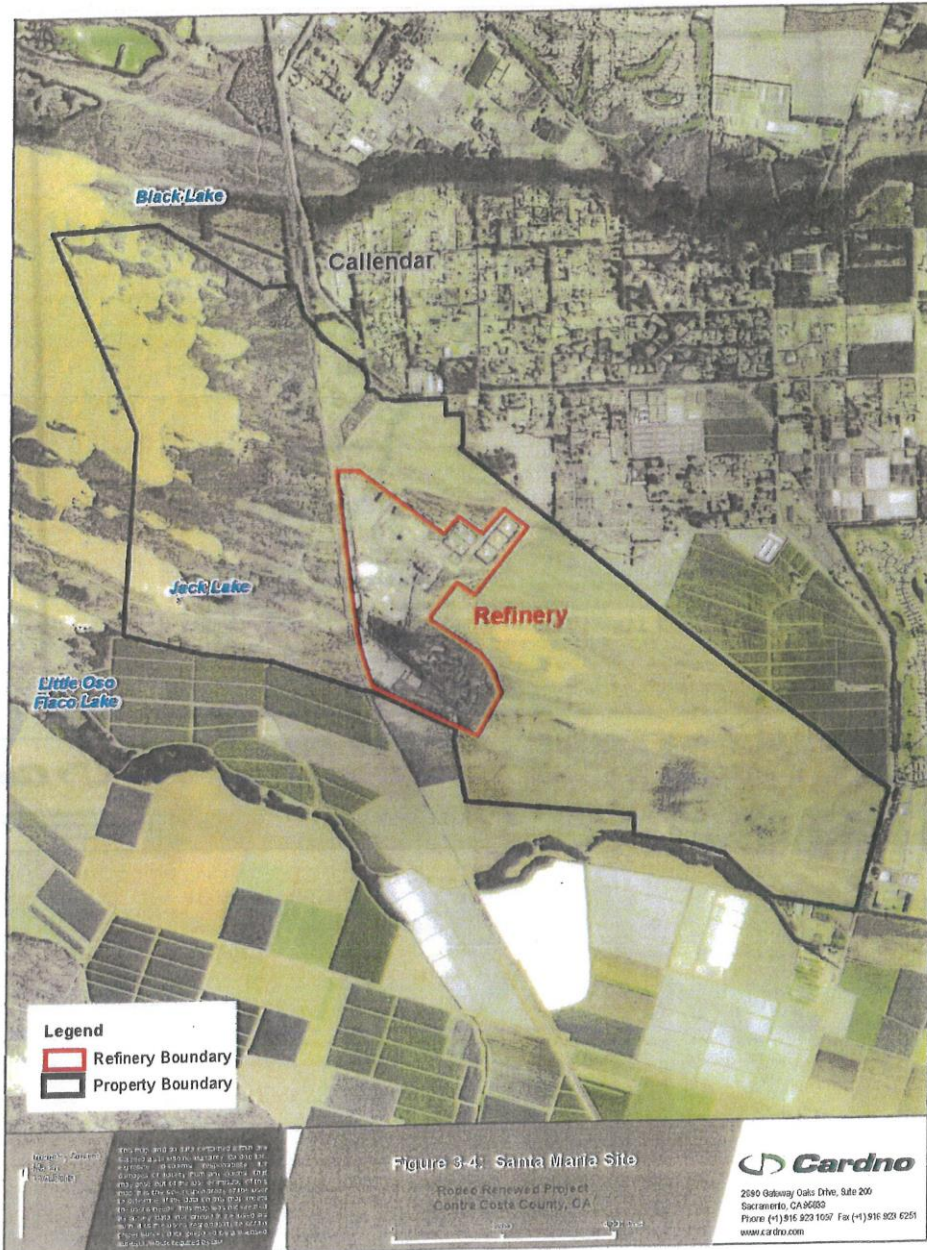
1380 San Pablo Ave, Rodeo, CA 94572

COMMENT LETTER: 16



Carbon Plant Site 2101 Franklin Canyon Rd, Rodeo, CA 94572

COMMENT LETTER: 16



Santa Maria Site 2555 Willow Rd, Arroyo Grande, CA 93420

COMMENT LETTER: 16

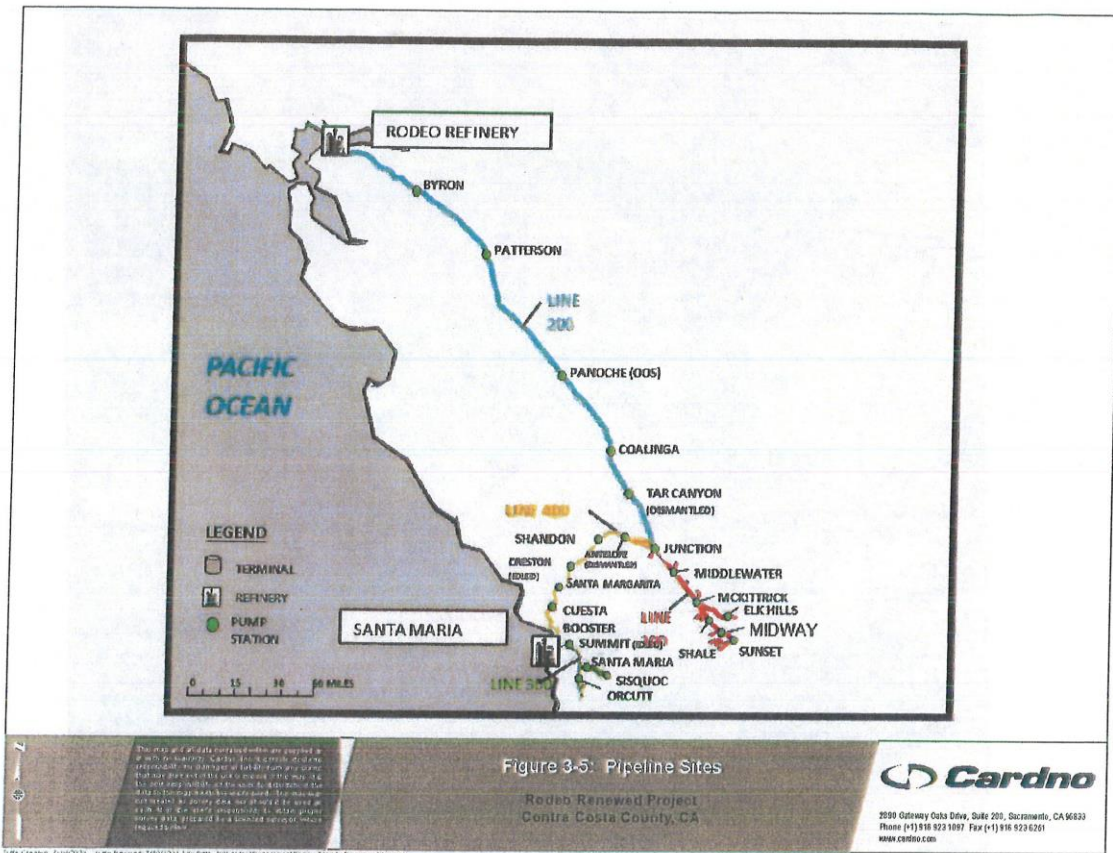


Figure 3-5: Pipeline Sites

Rodeo Renewed Project
 Contra Costa County, CA



2500 Gateway Oaks Drive, Suite 200, Sacramento, CA 95833
 Phone: (+1) 916 923 1097 Fax: (+1) 916 923 6261
 www.cardno.com

Pipeline Sites

Response to Comment

Comment noted.

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Comment Letter 17. Rodeo Hercules Fire Protection

COMMENT LETTER: 17



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

CONTRA COSTA COUNTY
2021 OCT 26 P 3: 36

DEPARTMENT OF
CONSERVATION
AND DEVELOPMENT

October 21, 2021

Gary Kupp
Department of Conservation and Development
Community Development Division
30 Muir Road
Martinez, CA 94553
Gary.Kupp@dcd.cccounty.us

Re: Support of Phillips 66 Rodeo Renewed Project

Dear Mr. Kupp:

On behalf of the Rodeo-Hercules Fire Protection District, I am writing to confirm our strong support of the Phillips 66 Rodeo Renewed project. Phillips 66 has been an important member of our community for many years. Please add our public comment in support of the Rodeo Renewed project. The Draft EIR demonstrates this project will benefit our community by reducing criteria pollutants while maintaining family-wage jobs.

Throughout the years, we have forged a partnership and we are proud to work alongside Phillips 66 towards the betterment of our shared community. With the approval of the Rodeo Renewed project we can continue this great work which benefits residents, businesses, and community groups. As one of the largest employers in our area, we implore you to do all that you can to ensure their continued success which, in turn, supports our Fire District.

The Rodeo Renewed Project is what the future *can* look like: industry, labor, local business and the community working together to help our State meet its renewable energy goals while maintaining solid economic growth. Phillips 66 has shown how innovative and well-designed technologies can reduce local criteria pollutants and produce lower carbon intensive fuels. What a great thing to celebrate here at home!

As shown in the Draft EIR, Rodeo Renewed plans to use existing facilities, re-purposing the existing equipment currently in use today while also creating hundreds of construction jobs. These family-wage jobs not only benefit the worker, they also benefit the immediate community through the purchase of goods and services. Our local businesses count on this multiplier effect and we ask you to carefully consider these economic drivers and the impacts they have on our community.

Therefore, on behalf of the Rodeo-Hercules Fire Protection District, we enthusiastically support and urge you to approve the Rodeo Renewed project.

Sincerely,


Bryan Craig
Fire Chief

Response to Comment

Comment noted.

Comment Letter 18. Apache Industrial United

COMMENT LETTER: 18



3690 Sprig Drive, Ste A
Benicia, CA 94510
(707) 590-9301
www.apacheip.com

Contra Costa County Dept. of Conservation &
Development Community: Development Division
Attention Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553

November 8, 2021

Dear Mr. Kupp:

I write to offer my strong support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo. In response to the Draft EIR, I am submitting this letter to be entered into the administrative record.

My name is **Travis Coutts**, a contractor employee who has worked in Contra Costa County for 15 Years through various contractor organizations. Currently, I represent **Apache Industrial United Inc.** in California. **Apache Industrial United Inc.** provides scaffolding, insulation, painting, fireproofing, and lead/asbestos abatement services. We are a nationwide contractor that employs over **6,000 people**. These people are our greatest assets and through these people we have the best in the industry **3-Year TRIR average of 0.06**. To provide livable family wages for these hardworking people, who often are the sole provider for their families, we rely on organizations like Phillips 66 and projects like Rodeo Renewed that not only provide steady and secure work for our workforce but also support the community and environment. I fully support Rodeo Renewed and believe the Draft EIR accurately represents this positive and responsible project.

Rodeo Renewed serves the best interests of our employees, and the working men and women of Contra Costa County. The refinery's direct and indirect employment have an economic multiplying effect that impacts the entire Bay Area and California as a whole. ¹

Rodeo Renewed positions Phillips 66 to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve local air quality. This project preserves the livelihood of Phillips 66 employees as well as ours at **Apache Industrial United Inc.**

The future of Phillips 66's Rodeo Refinery directly links to the future of employees at companies like mine and numerous contractors, vendors and the surrounding community – Rodeo Renewed is our future, too.

Therefore, I strongly support Phillips 66 and the Draft EIR and ask that you approve the EIR and the Rodeo Renewed project as soon as possible.

Thank you,

Travis Coutts
Apache Industrial United Inc.
Business Development Manager
Mobile: (925) 980-6936
Email: tcoutts@apacheip.com

SCAFFOLDING | REFRACTORY | FIREPROOFING | COATINGS | INSULATION | TECHNICAL SERVICES | TANK SERVICES

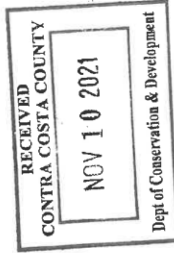
COMMENT LETTER: 18

Apache Industrial United Inc.
Travis Courts
3690 Sping Dr.
Suite A
Benicia, CA 94510

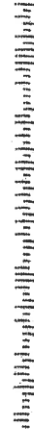
OAKLAND CA 945
9 NOV 2021 PM 5 L



Contra Costa County Dept. of Conservation & Development Community: Development Division
Attention: Gary Kopp
30 Murr Road
Martinez, CA 94553



94553-460130



Response to Comment 1

Comment noted.

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Comment Letter 19. Bay Front Chamber of Commerce

COMMENT LETTER: 19



December 12, 2021

Gary Kupp
Contra Costa County Dept. of Conservation &
Development Community: Development Division
30 Muir Road
Martinez, CA 94553

Re: Support of Phillips 66 Rodeo Renewed Project

Dear Mr. Kupp

On behalf of the Bay Front Chamber of Commerce, I am writing to confirm our strong support of the Phillips 66 Rodeo Renewed project. Phillips 66 has been an important member of our community for many years. Please add our public comment in support of the Rodeo Renewed project. The Draft EIR demonstrates this project will benefit our community by reducing criteria pollutants while maintaining family-wage jobs.

1

Throughout the years we have forged a partnership and we are proud to work alongside Phillips 66 towards the betterment of our shared community. With the approval of the Rodeo Renewed project we can continue this great work which benefits residents, businesses, and community groups. As one of the largest employers in our area, we implore you to do all that you can to ensure their continued success which, in turn, supports the Bay Front Chamber of Commerce.

2

The Rodeo Renewed Project is what the future *can* look like: industry, labor, local business and the community working together to help our State meet its renewable energy goals while maintaining solid economic growth. Phillips 66 has shown how innovative and well-designed technologies can reduce local criteria pollutants and produce lower carbon intensive fuels. What a great thing to celebrate here at home!

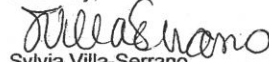
3

As shown in the Draft EIR, Rodeo Renewed plans to use existing facilities, repurposing the existing equipment currently in use today while also creating hundreds of construction jobs. These family-wage jobs not only benefit the worker, but they also benefit the immediate community through the purchase of goods and services. Our local businesses count on this multiplier effect, and we ask you to carefully consider these economic drivers and the impacts they have on our community.

4

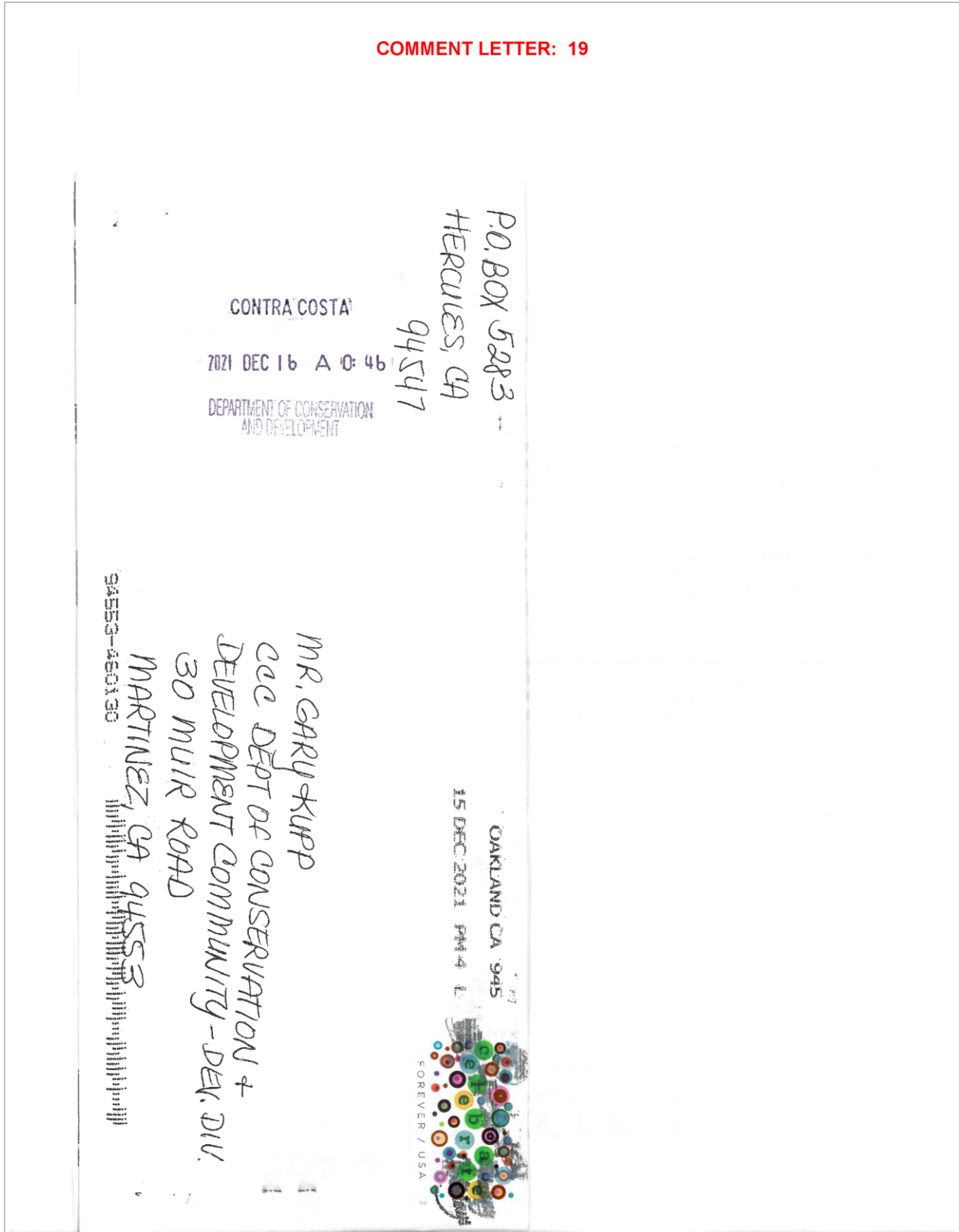
Therefore, on behalf of the Bay Front Chamber of Commerce, we enthusiastically support and urge you to approve the Rodeo Renewed project

Sincerely,


Sylvia Villa-Serrano
Executive Director
Bay Front Chamber of Commerce

P.O. Box 5283, Hercules, CA 94547 * 510-741-7945
BayFrontChamber.com * admin@bayfrontchamber.com

COMMENT LETTER: 19



Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

Response to Comment 3

Comment noted.

Response to Comment 4

Comment noted.

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Comment Letter 20. Chevron

COMMENT LETTER: 20

Gary Kupp

From: Haugeberg, Troy <THaugeberg@chevron.com>
Sent: Thursday, December 16, 2021 2:08 PM
To: Gary Kupp
Cc: McDonald, Michael; Flores, Jerry; Sean Tully
Subject: Phillips 66 Rodeo Renewed Project (County File #CDLP20-02040) - DEIR Summary Project Description of Chevron Avon Connectivity Project - Description Revision Request

Gary Kupp,

Chevron requests that the summary project description for the Chevron Avon Connectivity project found in the cumulative impact segment of the Phillips 66 Rodeo Renewed Project (County File #CDLP20-02040) be updated and revised with the following statement in the DEIR:

Chevron Products Company, the project applicant, proposes to add a second connection from the existing Bay Area Products Line to flow refined liquid product to the Chevron Avon Terminal at 611 Solano Way, Martinez, CA 94553. This second connection associated with the Avon Connectivity Project would, if completed, enable Chevron to directly transport refined liquid products from the Avon Terminal to the Kinder Morgan Concord Terminal located in unincorporated Contra Costa County near the City of Concord and would also allow Chevron to directly transport such products from the Avon Terminal to TransMontaigne Partners' Martinez Oil Terminal located in the City of Martinez.

Let me know if this proposed language meets the needs of the County for the intended purpose in the DEIR. Also, can you please confirm receipt of this email.

Regards,

Troy Haugeberg
Sr. Project Manager

Chevron

Response to Comment 1

The text of the Draft EIR Section 6.4.1.1, under the description of the Chevron Pipe Line Company, page 6-5 is revised as follows:

- The TransMontaigne Partners Pipeline is an existing bi-directional pipeline located immediately adjacent to the western boundary of the Avon Terminal. Presently, neither the Bay Area Products Line nor the facilities at the Avon Terminal connect to the TransMontaigne Partners Pipeline.
- Application Status: Initial Study in process.

The project applicant proposes to add a second connection from the existing Bay Area Products Line to flow refined liquid product to the Chevron Avon Terminal at 611 Solano Way, Martinez, CA 94553. This second connection associated with the Avon Connectivity Project would, if completed, enable Chevron to directly transport refined liquid products from the Avon Terminal to the Kinder Morgan Concord Terminal located in unincorporated Contra Costa County near the City of Concord and would also allow Chevron to directly transport such products from the Avon Terminal to TransMontaigne Partners' Martinez Oil Terminal located in the City of Martinez.

The summary description of the Chevron project has been updated. This revision does not affect the analyses of cumulative impacts in the Draft EIR.

Comment Letter 21. Bay Planning Coalition

COMMENT LETTER: 21

Gary Kupp

From: Roman Berenshteyn <Roman@bayplanningcoalition.org>
Sent: Friday, November 19, 2021 2:40 PM
To: Gary Kupp
Subject: Comments in Support of Rodeo Renewed
Attachments: BPC Support Phillips 66 Rodeo Renewed.pdf

Good afternoon,

On behalf of John Coleman and the Bay Planning Coalition, attached is a comment letter pertaining to the Draft EIR for the Phillips 66 Rodeo Renewed Project. Please let me know if you have any questions or concerns.

All the best,

Roman Berenshteyn | Policy and Development Lead | **Bay Planning Coalition**
1970 Broadway, Suite 940 | Oakland, CA 94612
O: 510-768-8312 | roman@bayplanningcoalition.org

COMMENT LETTER: 21

November 19, 2021

Gary Kupp, Senior Planner
Community Development Division
Contra Costa County, Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

RE: Phillips 66 Rodeo Renewed Project

Dear Mr. Kupp:

On behalf of Bay Planning Coalition, a membership-based, policy advocacy organization that advocates for strong economic growth while protecting the environmental sustainability of the San Francisco Bay, we write to express our support for the Phillips 66 Rodeo Renewed Project (Rodeo Renewed), and encourage you to move this project forward.

1

The findings of the Draft Environmental Impact Report for Rodeo Renewed indicate a movement towards a more environmentally sustainable future while also safeguarding our major regional economic assets. Rodeo Renewed would provide phenomenal benefits to the area, including diversifying the regional economy, positioning the Bay Area to be a powerhouse in renewable fuels production while asserting our region's global leadership in sustainability, and helping California move towards its greenhouse gas emission reduction targets while also helping meet energy and fuel demands. Moreover, it is an investment in an already existing facility where much of the required infrastructure already exists, including human capital. The list of pros goes on.

2

Thank you for the opportunity to comment on this important milestone. We reiterate our support for Rodeo Renewed and urge you to help move this critical project forward. If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,



John A. Coleman
Chief Executive Officer

Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

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Comment Letter 22. Carpenters Local No. 152

COMMENT LETTER: 22

Gary Kupp

From: Steve Bell <sbell@nccrc.org>
Sent: Tuesday, November 2, 2021 3:34 PM
To: Gary Kupp
Cc: SupervisorMitchoff; District5; Supervisor Candace Andersen; Supervisor_Burgis; John Gioia
Subject: Rodeo Renewed Letter of Support Carpenters Local 152
Attachments: Rodeo Renewed Letter of Support.pdf

Contra Costa County Dept. of Conservation & Development
Community Development Division
Attention: Gary Kupp, Senior Planner

Please see the attached letter of support from Carpenters Local #152.

All the best,

Steve Bell
Senior Field Representative
Financial Secretary/Treasurer
Carpenters Local #152
Cell: 925-570-4190
Office: 925-228-1858
Carpenters152.org

COMMENT LETTER: 22



**UNITED BROTHERHOOD
CARPENTERS AND JOINERS OF AMERICA Local Union No. 152**

MARTINEZ OFFICE
3780 Alhambra Avenue
Mailing Address
P.O. Box 4040
Martinez, CA 94553
Phone (925) 228-1858
Fax (925) 229-4382

MANTECA OFFICE
1421 Moffat Boulevard
Manteca, CA 95336
Phone (209) 239-3232
Fax (209) 239-5128

November 2, 2021

Department of Conservation and Development &
Community Development Division
Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

On behalf of the 3,843 members of the Carpenters Local 152 we offer our strong support of Phillips 66's Rodeo Renewed project at the San Francisco Refinery in Rodeo. In response to the Draft EIR, we officially submit these public comments to be entered into the record.

Rodeo Renewed is among the first renewable transportation fuels projects in Contra Costa County and positions Phillips 66 to be a world leader in renewable energy production while preserving, family-wage jobs and helping to improve local air quality. **We fully support Rodeo Renewed and believe the Draft EIR is an accurate representation of this positive and responsible plan.**

Approval of this project will not only serve the best interests of the working men and women of Carpenters Local 152, but Contra Costa County, the Bay Area and California as a whole. Rodeo Renewed will help achieve California's low-carbon goals while also creating renewable energy jobs.

Phillips 66's Rodeo Refinery is celebrating their 125th Anniversary this year, and we want to ensure its ability to contribute to the Contra Costa County economy for many years to come is retained. This includes its long legacy of providing family-wage jobs, not only for the men and women within the refinery, but also for the members of Carpenters Local 152, numerous contractors, vendors, and the surrounding community.

Rodeo Renewed, will help support our local economy by creating more than 500 construction jobs, during the conversion, and supporting ~650 renewable energy jobs upon completion. As essential workers, the refinery is vital to keeping California moving. Projects like this also have multiplier effects, meaning for each job the refinery provides, many additional jobs are supported. The benefits extend well beyond the immediate employment within the refinery.

We appreciate the robust discussions surrounding the overall energy transition in California, and we want to be part of this great effort. But we must be thoughtful in our approach and utilize new technologies that support the transition while preserving local, family-wage jobs and supporting the local economy.

COMMENT LETTER: 22

Therefore, the members of Carpenters Local 152 stand in solidarity with Phillips 66 as it ushers in the next generation of renewable fuel production in California. We ask that Contra Costa County approve the Rodeo Renewed project.] 4

Thank you for your consideration,


Steve Bell
Senior Field Representative

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

Response to Comment 3

Comment noted.

Response to Comment 4

Comment noted.

Comment Letter 23. Center for Biological Diversity

COMMENT LETTER: 23

Gary Kupp

From: Andrea Weber <aweber@biologicaldiversity.org>
Sent: Friday, December 17, 2021 1:43 PM
To: Gary Kupp
Cc: Victoria Bogdan Tejada; Hollin Kretzmann
Subject: comments re Phillips 66 Rodeo Biofuels Project
Attachments: CBD et al comments re P66 Rodeo Biofuels Project CDLP20-02040.pdf

Dear Gary Kupp,
Please find attached comments regarding the following project:
Phillips 66 Rodeo Biofuels Project, File No. CDLP20-02040

References cited in our comments can be accessed through this box.com link:
<https://diversity.box.com/s/cib57k9mfugl1zam7j7ktzcz2nv7xawd>

Please let me know if you have any questions or issues accessing the references.

Thank you.

Andrea Weber
Senior Paralegal
Center for Biological Diversity
1212 Broadway, Suite 800
Oakland, CA 94612
ph: 510-844-7111

COMMENT LETTER: 23

December 17, 2021

Via Email and File Transfer of References

Attn: Gary Kupp, Senior Planner
Contra Costa County
Department of Conservation and Development
Community Development Division
30 Muir Rd.
Martinez, CA 94553
gary.kupp@dcd.cccounty.us

Re: Phillips 66 Rodeo Biofuels Project, File No. CDLP20-02040

To the Department of Conservation and Development:

On behalf of the Sunflower Alliance, Rodeo Citizen's Association, Biofuelwatch, and the Center for Biological Diversity, I am writing to urge the Department to *reject* the proposed biofuel conversion for the Rodeo refinery and instead begin plans for a full decommissioning of the facility. Communities have suffered from the pollution from these refineries for far too long. Prolonging their operation would only continue the harm to public health and the environment. Addressing climate change, industry pollution, and environmental justice are monumental challenges for the county, but biofuel refining is not a solution to any of these problems. The County should require Phillips 66 to fully decommission the facility and move us toward a healthier and truly sustainable future.

The decommissioning process should make all efforts to ensure that workers and former workers at the refineries can rely on family-sustaining incomes and benefits moving forward. This can include requirements for Phillips 66 to execute the decommissioning plan using current and former refinery workers wherever possible, funding adequate pension plans for workers to retire, wage and benefit replacement when needed, and worker training and placement programs to match workers skills with good, high-road jobs in clean renewable energy and other growing sectors.

I. The Proposed Project

Phillips 66 proposes to convert its existing crude oil refinery in Rodeo into the largest biofuels refinery in the world, processing tens of billions of barrels of biofuels per year. The facility in its new form would require The draft environmental impact report (Draft EIR), however, ignores and understates the significant harms to public health and the environment that this conversion would cause.

1

2

COMMENT LETTER: 23

II. The County Should Reject the Project and Begin Decommissioning

Residents of Contra Costa County and the Bay Area have endured decades of adverse health and environmental harms stemming from the polluting activities of the area's refineries. Air pollution, water degradation, ecosystem harms, and adverse effects to public health have been the inevitable and direct result of allowing Phillips 66's refineries and other similar facilities nearby to continuously operate.

By rejecting the proposed project, the County has an opportunity to make significant progress in prioritizing public health and moving toward a healthier and more resilient future. The County has discretionary authority over land use permits, and it should exercise that discretion in favor of denying the project. The climate crisis is affecting every aspect of life, and the County has a responsibility to do everything in its power to reduce greenhouse gas emissions as much as possible. The California Environmental Quality Act (CEQA) requires that the County make a "good faith effort, based to the extent possible on scientific and factual data," to assess the total greenhouse gas emissions of the project.¹

Under CEQA, the County must consider a "no project" alternative, a scenario under which a proposed project does not move forward.² Here, the no project alternative is one in which the Rodeo refinery does not obtain the necessary permits to convert to a biofuel refining facility and is instead decommissioned to meet California's air quality and greenhouse gas goals.

Decommissioning the refinery and restoring the site to its original condition would be a years' long, labor-intensive undertaking, capable of creating a significant number of local jobs. A recent report estimates that that for every \$1 million invested in pollution cleanup would result in 12.3 jobs, while ecosystem restoration would result in 18.6 jobs.³ Thus, in addition to dismantling the existing facility, site remediation will add even more jobs for the county. Wherever possible, the county must use its full authority to ensure that these are good, high-road jobs with family-sustaining wages and benefits.

III. Biofuels Are a False Solution to the Climate Crisis

Renewable and sustainable electricity must be the focus of any long-term energy plan. California is moving in that direction. The state has already required all light-duty vehicles to be zero emission by 2035, and medium- and heavy-duty vehicles to be zero emission by 2045.⁴ The California Air Resources Board (CARB) projects that aggressive action on greenhouse gas reduction will require significantly limited liquid transportation fuel consumption.⁵ A dramatic increase in biofuels production at the Rodeo refinery and other facilities would veer us off CARB's pathways to achieving California's climate goals. In fact, an over-reliance on biofuels

¹ 14 Cal. Code Regs., § 15064.4 (CEQA Guidelines).

² *Id.* § 15126.6(c)(1).

³ Pollin, R. et al., A Program for Economic Recovery and Clean Energy Transition in California, Political Economy Research Institute (2021) at p. 80 Table 4.4 (includes direct, indirect, and induced jobs).

⁴ Governor Gavin Newsom, Executive Order N-79-20. Executive Department, State of California, <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>

⁵ Mahone, Amber et al., Achieving Carbon Neutrality in California: PATHWAYS Scenarios Developed for the California Air Resources Board, Energy and Environmental Economics, Inc. (DRAFT: August 2020), https://ww2.arb.ca.gov/sites/default/files/2020-08/e3_cn_draft_report_aug2020.pdf

COMMENT LETTER: 23

could very well lead to emissions greater than those produced from conventional oil refining, in direct contradiction to California’s climate targets.

The energy required to refine biofuels is in fact comparable or in some cases more carbon-intensive than crude oil refining when direct and indirect emissions are taken into account. Due in large part to the energy needed to create hydrogen required to refine biofuel feedstocks, the Phillips 66 refinery will emit more carbon per barrel than average crude oil refining.⁶ The emissions from the refinery itself represent only part of the project’s climate damage. The feedstocks will likely come from soybean and other crops. Given the projected size of Phillips 66’s biofuels operation (and the Marathon Martinez biofuels conversion proposal), the increased demand for these crops will foreseeably lead to converting additional land to agricultural production, destroying carbon-sequestering forests, wetlands, and other preserved areas. In addition, a dramatic increase in the supply of biofuels is likely to impede California’s goals for electrifying its transportation sector. California’s EV market must greatly expand in order for the state to achieve its climate goals. Flooding the market with biofuel as a transportation fuel alternative will undermine the EV effort if consumers begin opting for biofuels instead.

4
cont'd
5

IV. The Project’s Environmental and Health Harms Are Significant

The environmental and health harms of the project are numerous and significant. The Center joins separate comments (submitted December 17, 2021 by Natural Resources Defense Council) describing in greater detail the significant air quality, water quality, wildlife, public health, and climate change impacts of the project.

As discussed in that letter, the outsized impacts to species are significant and inadequately covered in the Draft EIR. Phillips 66 is proposing to prolong and expand refinery operations in an area that serves as highly valuable remaining habitat for endangered and other imperiled species of plants and wildlife, including the salt marsh harvest mouse, delta smelt, California ridgeway rail. The construction and operation threaten to harm these species through air, water, light, noise, and vibration pollution. Increased vessel traffic would add sedimentation and noise to the sensitive habitat and raise the risk of ship strikes for species along the shipping routes. A single spill could have catastrophic consequences for the remaining species populations in the area. The Draft EIR admits that “adverse impacts to special status species, protected habitats, and migratory corridors and nursery sites for native species as a result of a major spill would remain significant and unavoidable” regardless of spill response plans. Gambling with the survival of numerous species populations is inimical to efforts to save and recover those imperiled species. Furthermore, the increased demand for cropland spurred by the project will lead to serious indirect harms to species outside of Contra Costa County. A lead agency must consider such indirect environmental impacts, defined as a change in the physical environment that is not immediately related to the project but that is indirectly caused by the project, in an EIR.⁷ Examples of indirect impacts include “growth-inducing effects and other effects related to

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⁶ CO₂ emissions from U.S. petroleum refineries averaged 41.8 kg per barrel crude feed from 2015-2017 (the most recent data available). By contrast, HEFA production emits 55-80 kg per barrel biomass feed associated with increased hydrogen production *alone* – such exceeding petroleum refining carbon intensity by 32-91 percent. See Karras, G, Changing Hydrocarbons Midstream (technical report and accompanying supporting material, submitted to this docket by the Natural Resources Defense Council (December 2021)).

⁷ CEQA Guidelines, § 15064(d)(2).

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induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.”⁸ When evaluating the significance of the environmental effects of a project, the lead agency must consider all indirect impacts that are “reasonably foreseeable” and “caused by the project.”⁹ Indirect impacts are not limited by geographic scope, and may occur later in time or farther removed in distance than direct environmental impacts.¹⁰

The Draft EIR fails to analyze the project’s indirect land use impacts, in particular the induced growth of croplands, and how that will decrease habitat for species. Numerous threatened species are vulnerable to soy and corn crop expansion driven by biofuel production, particularly in the prairie habitat of the Midwest and Great Plains. For example, many pollinating insects such as butterflies and bumble bees are threatened by habitat loss and fragmentation from the continuing conversion of native prairie patches to industrial cropland, as well as heavy pesticide use for crop production including herbicides, insecticides, and fungicides. The threatened Dakota skipper butterfly (*Hesperia dacotae*) was extirpated from half of its recorded range in the Midwest due to the replacement of its native mixed and tallgrass prairie habitat with row-crop agriculture, paired with poisoning from pesticides.¹¹ Other listed pollinators facing similar threats from biofuel crop expansion and associated pesticide use include the Poweshiek skipperling (*Oarisma poweshiek*), rattlesnake-master borer moth (*Papaipema eryngii*), rusty patched bumble bee (*Bombus affinis*), and the candidate monarch butterfly (*Danaus plexippus*). Threatened prairie plants imperiled by habitat destruction from biofuel crop expansion include the Eastern prairie fringed orchid (*Platanthera leucophaea*), leafy prairie-clover (*Dalea foliosa*), prairie bush-clover (*Lespedeza leptostachya*), and Western prairie fringed orchid (*Platanthera praeclara*). Grassland birds are also highly threatened by the destruction of their prairie feeding and nesting habitat due to cropland conversion. Grassland birds are among the most imperiled bird group in the U.S., with a more than 50% drop in overall population since 1970¹² and three of four species in decline.¹³ One iconic endangered species, the whooping crane (*Grus americana*), was driven to near-extinction by conversion of its prairie habitat to row-crop agriculture in the northern Great Plains of the U.S. and Canada, including harms from draining wetlands, fencing, sowing, human disturbance, and pesticide use.¹⁴ Other examples of species threatened by biofuel crop expansion include the Great Lakes gray wolf (*Canis lupus*), American burying beetle



⁸ *Id.* § 15358(a)(2)

⁹ *Id.* § 15064(d)(2).

¹⁰ *Id.* § 15358(a)(2).

¹¹ U.S. Fish and Wildlife Service, Species status assessment report for the Dakota skipper (*Hesperia dacotae*) (2018),

https://www.fws.gov/midwest/endangered/insects/dask/pdf/Species_Status_Assessment_Dakota_Skipper_September_2018.pdf.

¹² North American Bird Conservation Initiative (NABCI), State of the Birds (2019),

<https://www.stateofthebirds.org/2019/steep-declines/>.

¹³ Stanton, R.L. et al., Analysis of trends and agricultural drivers of farmland bird declines in North America: A review, 254 *Agriculture, Ecosystems, and Environment* 244 (2018),

<https://www.sciencedirect.com/science/article/pii/S016788091730525X>.

¹⁴ Canadian Wildlife Service and U.S. Fish and Wildlife Service, International recovery plan for the whooping crane, Recovery of Nationally Endangered Wildlife (RENEW), and U.S. Fish and Wildlife Service, Albuquerque, New Mexico (2006),

<https://www.fws.gov/uploadedFiles/WHCR%20RP%20Final%207-21-2006.pdf>.

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(*Nichrophorus americanus*), and Indiana bat (*Myotis sodalis*). Ending the destruction and degradation of prairie habitat by cropland conversion and restoring damaged habitat are critical for the recovery and survival of these threatened species. Other species may be at risk if significant amounts of feedstock are derived from outside the U.S. The County must fully describe, analyze and mitigate to the extent feasible these reasonably foreseeable impacts. In addition, the Draft EIR does not consider whether these harms to species would conflict with federal protections under the Endangered Species Act or Migratory Birds Treaty Act.¹⁵ For example, the destruction of Midwestern habitat to make room for more biofuel feedstock cropland would harm recovery efforts for the Whooping crane,¹⁶ which relies on wetlands in Wisconsin, Illinois, Nebraska and other states in which corn and soy cropland is already substantial. (See Figures 1 and 2, below). The project will likely trigger further land conversions to agricultural use, diminishing available habitat for the whooping crane and other migratory birds.

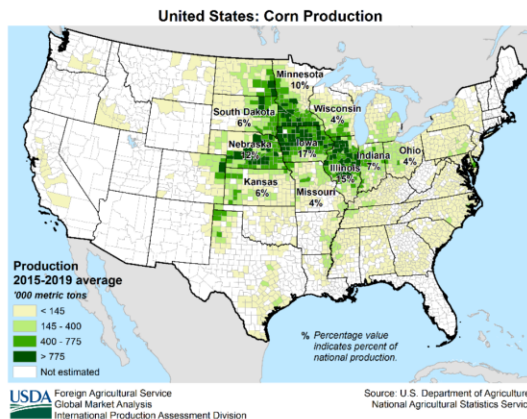


Figure 1: U.S. Corn production¹⁷

¹⁵ 16 U.S.C. §§ 1531 *et al.*; *id.* §§ 703-712.

¹⁶ Listed at 50 C.F.R. § 10.13.

¹⁷ U.S. Dept of Agriculture, Crop Production maps, *available at* https://ipad.fas.usda.gov/rssiws/al/us_cropprod.aspx (Accessed Dec. 13, 2021).

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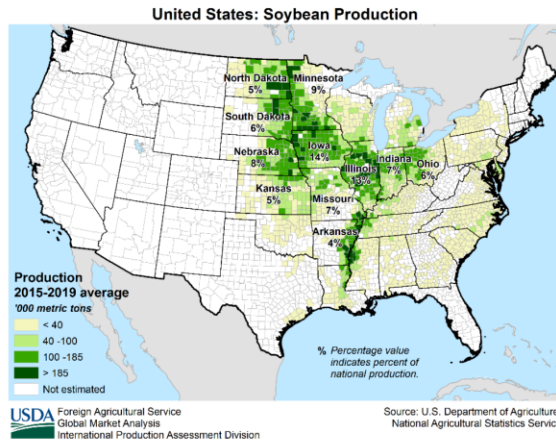


Figure 2: U.S. Soybean production¹⁸

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V. The Project's Cumulative Impacts Are Significant

The Bay Area air basin contains four other refineries that contribute to local pollution, and the air basin does not meet state and federal minimum standards for pollutants including ozone and particulate matter.¹⁹ On their own and in this context, the project's cumulative impacts on air quality, climate change, and other environmental factors would be significant, yet the EIR fails to analyze these impacts.

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The Draft EIR mentions only the nearby Marathon refinery conversion and fails to quantify the combined impacts of what would be two large-scale biofuel refineries in close proximity. Further, the Draft EIR also fails to analyze the cumulative impact of the project together with other nearby refineries: Chevron in Richmond, PBF in Martinez and Valero in Benicia. These and other major sources of pollution contribute significant amounts of pollution to the region, increase the risk of spills, harm local and migratory wildlife, and increase truck, rail, and ship traffic for the area. Such impacts must be evaluated together for the public to have even a minimum understanding of the environmental harms from this project.

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The Draft EIR must also disclose the upstream land use conversions that are foreseeable for the project when combined with the Marathon refinery conversion, which plans to refine even more crop-based feedstock after its conversion. The Rodeo and Marathon refinery conversions are just two of many current or planned biofuel projects across the county, all of which will be in competition with another and drive demand for crops to new heights. The cumulative land conversion will have a significant impact on species that rely on previously undisturbed habitat, or may experience habitat fragmentation, or have migratory corridors cut off by new agriculture. See Section IV, *supra*. The areas lost to crop conversion also must include the edge effects, whereby wildlife are affected by air, light, noise and other pollution well beyond the boundaries

¹⁸ *Id.*

¹⁹ See Bay Area Air Quality Management District, Air Quality Standards and Attainment Status, <https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status> (accessed December 13, 2021).

COMMENT LETTER: 23

of new development. For example, in the Marcellus Shale, while each drilling pad and associated infrastructure results in the clearing of 8.8 acres of forest, each drilling pad affects 30 acres of forest after accounting for ecological edge effects.²⁰

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VI. The Project Conflicts with Local Laws

CEQA requires that an EIR “discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans” as part of the project’s environmental setting.²¹ Based on this review, a project may have a significant adverse impact if it conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.²²

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Courts have interpreted CEQA’s land use “consistency” requirement as asking “whether the project is *compatible with*, and *does not frustrate*, the general plan’s goals and policies.” *Napa Citizens for Honest Gov’t v. Napa Cty. Bd. of Supervisors*, 91 Cal. App. 4th 342, 378, 110 Cal. Rptr. 2d 579, 605-06 (2001) (emphasis added) (invalidating Napa County’s certification of an EIR due to inconsistencies between the county’s general plan); *accord San Franciscans Upholding the Downtown Plan v. City & Cty. of S.F.*, 102 Cal. App. 4th 656, 678, 125 Cal. Rptr. 2d 745, 760 (2002).

The Draft EIR is inconsistent with the Contra Costa General Plan (“the General Plan”), and therefore, in violation of CEQA. While the Draft EIR claims—without elaboration or evidence—that the refinery conversion “would be consistent with . . . the Contra Costa General Plan because by providing renewable fuels it would help businesses, government entities, and consumers to reduce reliance on non-renewable energy sources and promote the use of renewable fuels,” (Draft EIR at p. 4.6-213), this blanket statement ignores the General Plan’s specific goals and policies that would be plainly frustrated by the proposed Project.

12

First, the General Plan states that “development shall be planned within a framework of maintaining a healthy and attractive environment.”²³ The proposed Project fails this standard because both the construction and operational phases will produce emissions of harmful air pollutants, such as volatile organic compounds (“VOCs”), particulate matter (“PM”), sulfur dioxide (“SO₂”), carbon monoxide (“CO”), and nitrogen oxide (“NO_x”). (Draft EIR at p. 4.3-58 (“Construction and operation of the Project would result in the release of [toxic air contaminants]”); *see also id.* at pp. 4.3-62—64 (noting that construction would result in significant emissions of PM_{2.5} and PM₁₀ and other criteria pollutants); *see also id.* at Table 4.3-15 (providing estimated operational emissions)). While the Draft EIR attempts to minimize the air pollution impacts by measuring emissions against a 2019 baseline, this ignores that *any* contribution of harmful air pollutants makes for an unhealthy environment, and a comparison to past operations is irrelevant.

Second, the General Plan’s Renewable Energy Resources Goals include encouraging “the use of renewable resources where they are compatible with the maintenance of environmental quality.”²⁴ Putting aside the misleading characterization that biofuels are “renewable,” the

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²⁰ Johnson, N., Pennsylvania energy impacts assessment: Report 1: Marcellus shale natural gas and wind, Nature Conservancy – Pennsylvania Chapter (2010).

²¹ CEQA Guidelines, § 15125(d).

²² *Id.*, Appx. G at XI.

²³ General Plan, Conservation Element at 8-3 (Jan. 18, 2005).

²⁴ *Id.* at 8-31.

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proposed Project is incompatible with the goal of maintaining environmental quality. The Draft EIR describes how the refinery conversion will result in greatly increased tanker vessel and barge trips, an impact that will lead to air and water pollution, as well as an increased likelihood of ship strikes of marine mammals. (See Draft EIR at Table ES-3). Further, even if the Draft EIR fails to analyze emissions from particular feedstocks, the refinery will emit—whatever the feedstock—harmful air emissions into communities already overburdened and long-exposed to harmful air pollution. (*Id.* at 4.3-71).

Third, while CEQA requires that projects are compatible with regional plans—including “plans for the reduction of greenhouse gas emissions,”²⁵—the Draft EIR erroneously dismisses this requirement by asserting that Contra Costa’s 2015 Climate Action Plan (“CAP”) does “not apply to process changes at an industrial facility.” (Draft EIR at p. 4.3-48). The Draft EIR’s contention makes no sense. Applicability of the CAP isn’t triggered by construction of new facilities. Instead, the CAP makes clear that it “serves as the County’s qualified GHG reduction strategy” by providing “reduction target[s], and a set of strategies to respond to local contributions to climate change.”²⁶ Further, the CAP proposes measures “to ensure that climate-change related health responses are adequately incorporated into future planning efforts.”²⁷ The CAP does not narrowly define “future planning” to exclude alterations to existing facilities. Moreover, the CAP identifies the Philips 66 refinery as one of the largest stationary sources of greenhouse gases in the County.²⁸ Thus, so-called “process changes” do not put the project outside of the CAP’s reach, and instead, the Draft EIR must take a close look at the CAP and analyze the proposed Project’s greenhouse gas impacts with respect to the CAP, and discuss whether the proposed Project frustrates the CAP’s goals. Moreover, the County expects to complete an updated CAP in 2022, which will reflect the more recent understanding of the climate emergency and is likely to contain more aggressive greenhouse gas reduction targets for the county.

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²⁵ 14 Cal. Code Regs., § 15125(d).

²⁶ Contra Costa County, CAP at 10 (Dec. 15, 2015).

²⁷ *Id.* at 44.

²⁸ *Id.* at 8.

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VII. Conclusion

The County should reject Phillips 66's proposed project and deny the application for a land use permit. Contra Costa County and the Bay Area should move past its legacy of dirty refineries and fully commit to devising a just transition plan that ensures workers and communities can thrive without recommitting to environmentally detrimental industries. The region does not need to add decades more pollution, contribute further to climate change, or induce deforestation and other habitat destruction.

16

Respectfully submitted,



Hollin Kretzmann
Staff Attorney
Center for Biological Diversity

Shoshana Wechsler, Sunflower
Alliance

Janet PyeGeorge, Rodeo Citizen's
Association

Gary Hughes, Biofuelwatch

Cited references submitted via File Transfer

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LIST OF REFERENCES

- Bay Area Air Quality Management District, Air Quality Standards and Attainment Status, <https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status>
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Response to Comment 1

Comment noted.

The Draft EIR evaluated but dismissed from further consideration an alternative to decommission all facilities. (Draft EIR, Section 5.4.4.2.) As explained in that analysis, "Phillips 66 is not proposing to decommission the existing and operating Rodeo Refinery, and this alternative would conflict with the fundamental purpose of the Project, which is to convert the facility to a renewable transportation fuels facility." (Draft EIR, page 5-9.) Among the reasons provided for dismissing this alternative from further consideration is that "the failure to re-use the facilities and equipment at the Rodeo Refinery undermines the state's ability to produce renewable diesel as compared to biodiesel." (Draft EIR, page 5-9.)

Also refer to Master Response No. 2, CEQA Alternatives.

Response to Comment 2

The County disagrees with this general assessment. Refer to the other responses to comments, which provide additional information or clarification to comments that request specific information.

Response to Comment 3

Refer to Response to Comment 1, and Master Response No. 2, CEQA Alternatives.

Response to Comment 4

Comment noted.

Refer to Master Response No. 6, Purpose of Project and Master Response No. 5, Renewable Fuels Processing.

Response to Comment 5

Refer to Master Response No. 5, Renewable Fuels Processing and Master Response No. 4, Land Use and Feedstocks.

Response to Comment 6

See Responses to Comments for Letter 36.

Response to Comment 7

Refer to Master Response No. 3, Cumulative Impacts, and Master Response No. 4, Land Use and Feedstocks.

Response to Comment 8

Refer to Master Response No. 5, Renewable Fuels Processing.

Response to Comment 9

Refer to Master Response No. 3, Cumulative Impacts.

Response to Comment 10

Refer to Master Response No. 4, Land Use and Feedstocks.

Response to Comment 11

Comment noted.

Response to Comment 12

The County disagrees with these comments. The Draft EIR specifically addresses the Project's potential impacts to the health and aesthetic values of the community. CEQA does not require a lead agency to analyze the "attractiveness" of a Project, but rather how the Project would affect existing identified scenic resources, views from state scenic highways, conflicts with scenic quality zoning and regulation, and the introduction of new light and glare. As analyzed in Section 4.2, Aesthetics, the Project would not result in significant impacts related to existing visual quality.

Regarding a "healthy environment", the Draft EIR specifically addresses potential human health impacts associated with the Project. The Draft EIR includes the conclusions of a project-specific Health Risk Assessment (HRA). The HRA assesses the incremental change in health risks due to the project changes to the facility. The Impact Summary on page 4.3-78 states: "As shown above, the HRA results of Project construction and operation do not indicate exceedances of applicable cancer risk, non-cancer chronic hazard index, annual average PM2.5 concentration, and acute hazard index thresholds and the project-level or community cumulative-level. Thus, the impact would be less than significant and no mitigation is required." Also refer to Master Response No. 5, Renewable Fuels Processing.

Regarding using a 2019 baseline, refer to Master Response No. 1, CEQA Baseline.

Response to Comment 13

Comment noted. The County Planning Commission will determine whether the benefits of the Project outweigh the potential impacts to the environment.

Response to Comment 14

With regard to the type of renewable feedstocks being processed at the Refinery post-project, any emissions and/or potential impacts associated with processing would be correlated with how much material is being processed and handled, rather than the specific type of material. The pre-treatment and hydrotreating units used to convert the renewable feeds to renewable fuels would have operations influenced by the throughput of feedstock versus type of feedstock. For example, heater firing rates and subsequent combustion emissions would be the same for a given throughput rate at the unit regardless of the type of feedstock being run at the time. At the facility processing level, the type of feedstocks being processed would not alter any of the Project effects and potential impacts that are being evaluated.

The Draft EIR addresses human health related to Project emissions, both stationary and non-stationary sources, in Section 4.3, Air Quality. The Rodeo Refinery currently processes a variety of petroleum-based products (mainly fuels) and byproducts from crude oil and other petroleum-based feedstocks (such as pressure distillate and gas oils). Under the Project, petroleum-based feedstocks would be replaced with renewable feedstocks. As stated under Impact 4.3-3, Operational Components Emissions, the Project at full capacity would result in decreases in annual and daily average emissions of all criteria pollutants relative to the baseline. Therefore, impacts from these Project operations would remain below the thresholds and are estimated to be less than significant.

Response to Comment 15

GHG emissions are evaluated in Section 4.8 of the Draft EIR. The Contra Costa County CAP contains a checklist of measures to be assessed for applicability as a tool to determine consistency. The items in this checklist are generally directed to residential, commercial, or industrial land use development projects. Regardless, GHG emissions from the proposed Project do require evaluation of potential conflict with GHG reduction targets in the Contra Costa County CAP and other statewide legislation and executive orders governing GHG emissions. Accordingly, Section 4.8 of the Draft EIR presents a complete technical analysis of the Project's GHG emissions from Project construction and operation. As

proposed, the Project would lower facility-wide GHG emissions by about 24,000 MT per year compared to baseline operations. Refer to Table 4.8-5 in the Draft EIR “Annual Project Operational GHG Emissions”.

Response to Comment 16

Comment noted. Refer to the Air Quality and GHG analyses in the Draft EIR, which address the Project’s potential air quality impacts and contribution to climate change. As stated, the Project would not result in significant air quality impacts, and would provide an overall reduction of emissions contributing to climate change. Also refer to Master Response No. 5, Land Use and Feedstocks.

Comment Letter 24. Contra Costa Building and Construction Trades Council

COMMENT LETTER: 24

Gary Kupp

From: Tesse Perez <tperez@ccbtrades.com>
Sent: Wednesday, October 27, 2021 10:10 AM
To: Gary Kupp
Cc: John Gioia; Candace Andersen; Supervisor_Burgis; SupervisorMitchoff; District5
Subject: Letter of Support of P66 Rodeo Renewed Project
Attachments: 102521 support p66 renewed project-10252021143738.pdf

Mr. Kupp,

On behalf of Mr. Bill Whitney, please find attached support letter regarding the Phillips 66 Rodeo Renewed project.

Should you have any questions, please don't hesitate to contact Mr. Whitney on his cell phone at 707-246-0950.

Thank you for your time,

Tesse Perez
Contra Costa Building and
Construction Trades Council
2727 Alhambra Ave., Suite 5
Martinez, CA 94553
925-228-0900
tperez@ccbtrades.com



COMMENT LETTER: 24

Contra Costa Building and Construction Trades Council

2727 Alhambra Ave. Suite 5
Martinez, CA 94553
FAX (925) 372-7414



Bill Whitney
C.E.O.
Phone (925) 228-0900

October 25, 2021

Contra Costa County
Department of Conservation and Development &
Community Development Division
Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

On behalf of the 35,000 men and women of the Contra Costa Building and Construction Trades Council, we write to you today to offer our strong and unwavering support for the Phillips 66 Rodeo Renewed project at the San Francisco Refinery in Rodeo. 1

In response to the Draft EIR, we officially submit these public comments to be entered into the record.

Rodeo Renewed is a renewable transportation fuels project in Contra Costa County that positions Phillips 66 to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve local air quality. **We believe the Draft EIR is a factual and accurate representation of this positive and responsible plan.** 2

Approval of this project will provide new green jobs for the working men and women of the Contra Costa Building Trades, of which 65% of our members are women and men of color, and indigenous people. Contra Costa County, the Bay Area, and California will also benefit from the Rodeo Renewed project, which will help achieve California's low-carbon goals.

Phillips 66's Rodeo Refinery is celebrating its 125th Anniversary this year. The Contra Costa Building Trades recognizes and applauds P66's decades-long record of creating thousands of working-class jobs for middle-class Americans. As we advance, P66 is critically important to sustaining the vibrancy of the local Contra Costa economy. Jobs are what sustains local economies. P66's long legacy of providing family-wage jobs must not be curtailed or derailed. 3

Rodeo Renewed will support more than 500 construction jobs and 650 renewable energy jobs upon completion. It is also known that projects like this have a multiplier effect. Thousands of additional jobs are supported or created for each job the refinery provides (construction and post-construction).

COMMENT LETTER: 24

Contra Costa County must encourage and embrace the utilization of new technologies that will support society's transition to new green energy sources and create real, new, and green jobs while preserving local, middle-class, family-wage jobs. For this reason, the Contra Costa Building and Construction Trades Council stands in solidarity with Phillips 66 as it ushers in the next generation of renewable fuel production in California.

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We ask that the Contra Costa County Board of Supervisors votes to approve the Rodeo Renewed project as soon as possible.

I appreciate your consideration,



Bill Whitney, CEO

Contra Costa Building and Construction Trades Council

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

Response to Comment 3

Comment noted.

Comment Letter 25. Contra Costa County Building & Trade Council

COMMENT LETTER: 25

Contra Costa Building and Construction Trades Council

2727 Alhambra Ave. Suite 5
Martinez, CA 94553
FAX (925) 372-7414



Bill Whitney
C.E.O.
Phone (925) 228-0900

October 25, 2021

Contra Costa County
Department of Conservation and Development &
Community Development Division
Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553

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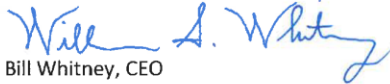
COMMENT LETTER: 25

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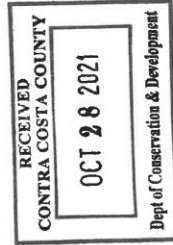
Bill Whitney, CEO

Contra Costa Building and Construction Trades Council

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

COMMENT LETTER: 25

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\$0.730
US POSTAGE
FIRST CLASS
FROM 94553
OCT 27 2021
stamps
endicia



**Contra Costa Building and
Construction Trades Council**
AFL-CIO

2727 Alhambra Avenue, Suite No. 5
Martinez, California 94553



**Contra Costa County Dept. of Conservation
Attention: Gary Kupp, Senior Planner
30 Muir Road
Martinez CA 94553-4601**



945534601 0029

Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

Response to Comment 3

Comment noted.

Comment Letter 26. Contra Costa Electric



COMMENT LETTER: 26

Contra Costa Electric, Inc.
825 Howe Road
Martinez, CA 94553
Ph: 925.229.4250
Fax: 925.228.3265

Contra Costa County
Dept. of Conservation & Development - Community Development Division
Attention: Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

I wish to express our complete support of the Rodeo Renewed Project at Phillips 66 Refinery in Rodeo. Kindly enter this letter into the administrative record.

1

I am Bob Lilley employed by Contra Costa Electric, Inc, a contractor which was founded and has operated in Contra Costa County for 75 years. We employ 550 employees – most of them county residents – who proudly and accurately claim to have built and maintained much of the industrial footprint of the East Bay. We also live and raise our families here.

As we move toward a cleaner, reduced-carbon future, it is important that the transition be responsible and with a minimum of upset. I believe the Draft EIR accurately represents this positive and responsible project.

The working men and women of Contra Costa County combined with the refinery's direct and indirect employment have an economic multiplying effect that impacts the entire Bay Area and California as a whole.

2

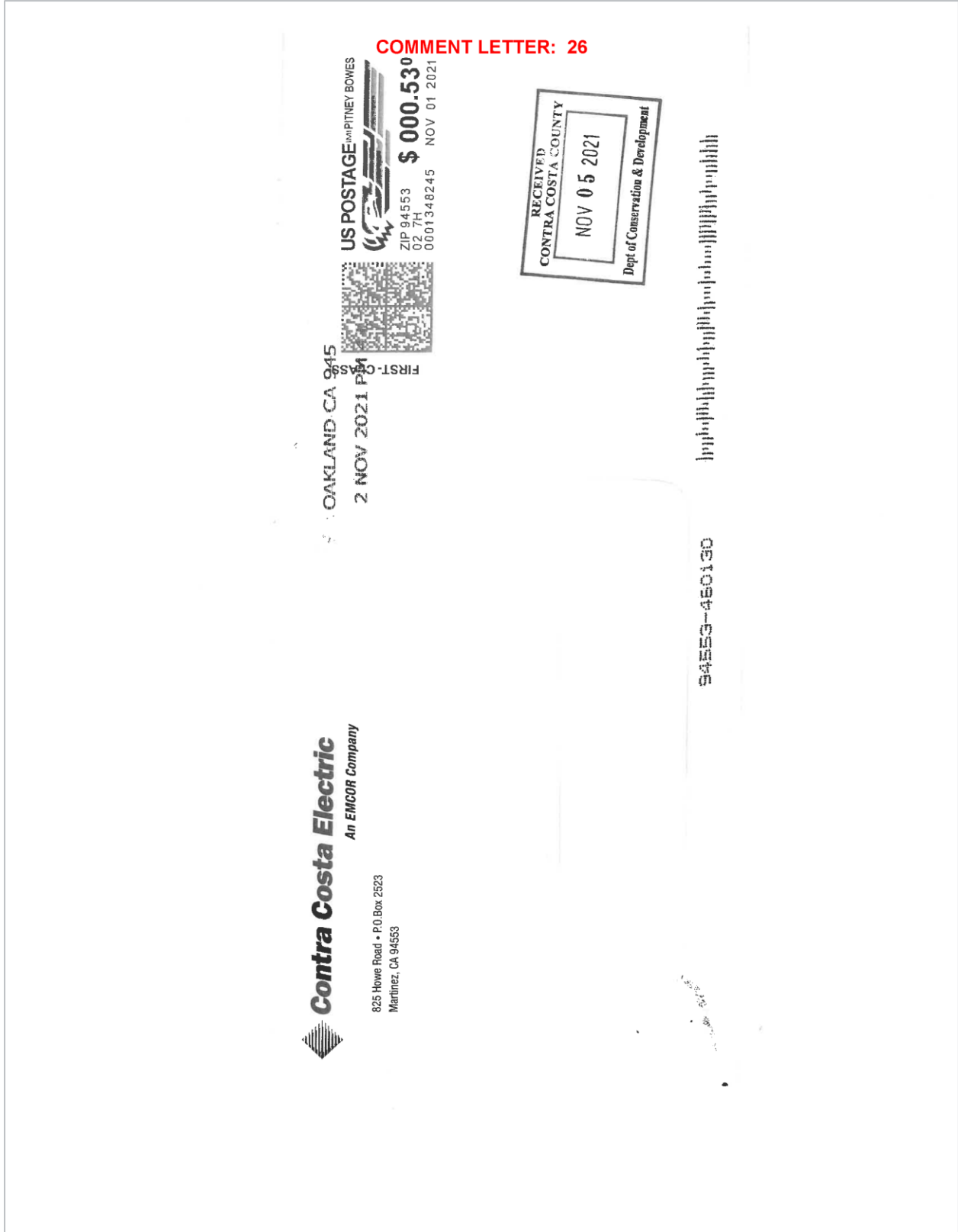
The "Rodeo Renewed" Project positions Phillips 66 and our community to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve, among other things, local air quality. This project provides a future for the families and employees at numerous local contractors and vendors and the surrounding community. Rodeo Renewed is our future, too.

Therefore, I strongly support Phillips 66 and the Draft EIR and ask that you approve the EIR and the 'Rodeo Renewed' project as soon as possible so we can all enjoy that future!

Thank you.

Bob Lilley
Business Development Director
Contra Costa Electric, Inc.
billey@emcor.net





Response to Comment 1

Comment noted.

Response to Comment 2

Comment noted.

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Comment Letter 27. Council of Industries

COMMENT LETTER: 27

Gary Kupp

From: Katrinka Ruk <kpruk@sbcglobal.net>
Sent: Monday, December 6, 2021 6:48 PM
To: Gary Kupp
Cc: SupervisorMitchoff; District5; Supervisor Candace Andersen; Supervisor_Burgis; John Gioia
Subject: Rodeo Renewed project at Phillips 66 Refinery
Attachments: 12.06.21 RodeoRenwedProj,P66 ltr support.pdf

COUNCIL OF INDUSTRIES
P.O. BOX 70088, PT. RICHMOND, CA 94807
(510)215-9325
501(C)(6) FED ID# 94-0672760

December 6, 2021

/Sent via email/

Contra Costa County Dept. of Conservation &
Development Community: Development Division
Attention Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553

COMMENT LETTER: 27

Dear Mr. Kupp:

On behalf of the Council of Business & Industries (COI) I write to offer our organization's strong support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo. This letter is being submitted to be entered into the administrative record in response to the Draft EIR.

I am the Executive Director of the COI- an organization that includes over 50 large, mid-size, and small companies throughout Contra Costa County and the surrounding region. We fully support Rodeo Renewed and believe the Draft EIR accurately represents this positive and responsible project.

Rodeo Renewed serves the best interests of our Association, and the working men and women of Contra Costa County. The refinery's direct and indirect employment have an economic multiplying effect that impacts the entire Bay Area and California as a whole.

Rodeo Renewed positions Phillips 66 to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve local air quality. This project not only preserves the livelihood of Phillips 66 employees, but it will also have a very positive impact on employees from other COI membership companies.

Therefore, the Council of Business & Industries of West Contra Costa County strongly supports Phillips 66 and the Draft EIR, and we ask that you approve the EIR and the Rodeo Renewed project as soon as possible.

Thank you.

Katrinka Ruk

Executive Director

Council of Business & Industries

Cc: COI Board

Honorable Contra Costa County Supervisor Diane Burgis, Chair

Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair

Honorable Contra Costa County Supervisor John M. Gioia

Honorable Contra Costa County Supervisor Candace Andersen

Honorable Contra Costa County Supervisor Karen Mitchoff

COMMENT LETTER: 27

Katrinka Ruk
Executive Director
Council of Business & Industries
510)260-4820 cell
<http://www.councilofindustries.com>

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COMMENT LETTER: 27



COUNCIL OF INDUSTRIES
P.O. BOX 70088, PT. RICHMOND, CA 94807
(510)215-9325
501(C)(6) FED ID# 94-0672760

December 6, 2021, 2021

/Sent via email/

Contra Costa County Dept. of Conservation &
Development Community: Development Division
Attention Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

On behalf of the Council of Business & Industries (COI) I write to offer our organization's strong support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo. This letter is being submitted to be entered into the administrative record in response to the Draft EIR.

I am the Executive Director of the COI- an organization that includes over 50 large, mid-size, and small companies throughout Contra Costa County and the surrounding region. We fully support Rodeo Renewed and believe the Draft EIR accurately represents this positive and responsible project.

Rodeo Renewed serves the best interests of our Association, and the working men and women of Contra Costa County. The refinery's direct and indirect employment have an economic multiplying effect that impacts the entire Bay Area and California as a whole.

Rodeo Renewed positions Phillips 66 to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve local air quality. This project not only preserves the livelihood of Phillips 66 employees, but it will also have a very positive impact on employees from other COI membership companies.

Therefore, the Council of Business & Industries of West Contra Costa County strongly supports Phillips 66 and the Draft EIR, and we ask that you approve the EIR and the Rodeo Renewed project as soon as possible.

Thank you.



Katrinka Ruk
Executive Director
Council of Business & Industries

COMMENT LETTER: 27

Cc: COI Board
Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

Response to Comment

Comment noted.

Comment Letter 28. East Bay Leadership Council

COMMENT LETTER: 28

Gary Kupp

From: Lindy Johnson <lindy@eblcmail.org>
Sent: Tuesday, December 14, 2021 3:56 PM
To: Gary Kupp
Cc: SupervisorMitchoff; John_Gioia; Supervisor Candace Andersen; Supervisor_Burgis; District5
Subject: Support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo
Attachments: P66 LOS EBLC.pdf

Good afternoon,

Attached please find a letter of support for the Rodeo Renewed project at Phillips 66 Refinery in Rodeo from the East Bay Leadership Council.

Thank you,

Lindy Johnson | Policy Director
o. 925.246.1880 | lindy@eblcmail.org
P.O. Box 4096, Walnut Creek, CA 94596
www.eastbayleadershipcouncil.com

COMMENT LETTER: 28



Chair of the Board

Bielle Moore
Republic Services

Chair-Elect

Leo Scott
Gray Bowen Scott

Vice President – Finance

Terri Montgomery
Eide Bailly

Vice President – Leadership Development

Danielle Cagan
CSAA

Vice President - Events

Peggy White
Diablo Regional Arts Association

Vice President – Talent & Workforce

Bob Linscheid
Walnut Creek Chamber of Commerce

Vice President – Economic Development & Jobs

Vic Baker
EquitiFy

Vice President – Communications

Wendy Gutshall
Safeway

Vice President – Membership

Brian Dean
Wells Fargo

Chief Legal Counsel

Horace Green
Brothers Smith, LLP

Vice President - Infrastructure

Chadi Chazbek
Kimley-Horn

Immediate Past Chair

Ken Mintz

President & CEO

Kristin B. Connelly

December 14, 2021

Contra Costa County Dept. of Conservation &
Development Community: Development Division
Attention Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553
(By email)

Dear Mr. Kupp:

On behalf of the East Bay Leadership Council, a regional public policy and advocacy organization representing hundreds of employers across Contra Costa and Alameda Counties, I write in support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo.

The East Bay Leadership Council fully supports Rodeo Renewed which, as the Draft EIR accurately conveys, is a project that will have myriad benefits to the region's local economy while reducing our region's greenhouse gas emissions and air pollution.

The Rodeo Renewed project benefits working people in Contra Costa by preserving the jobs of the refinery workers that will be retained, as well as through the construction work required for the project. The refinery's contribution to the gross regional product is significant which positively benefits both the Bay Area and the state of California as a whole.

Rodeo Renewed allows our region to remain a world class leader in energy innovation and production while preserving high-quality and high-wage jobs. Rodeo Renewed also will improve local air quality.

For these and many other reasons, the East Bay Leadership Council strongly supports Phillips 66 and the Draft EIR. Please approve the EIR and the Rodeo Renewed project as soon as possible.

Warmest regards,

A handwritten signature in blue ink that reads "Kristin Connelly".

Kristin Connelly
President & CEO

Cc: The Honorable Contra Costa County Supervisor Diane Burgis, Chair
The Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
The Honorable Contra Costa County Supervisor Karen Mitchoff
The Honorable Contra Costa County Supervisor John M. Gioia
The Honorable Contra Costa County Supervisor Candace Andersen

Response to Comment

Comment noted.

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Comment Letter 29. The Industrial Association of Contra Costa County

COMMENT LETTER: 29

Gary Kupp

From: Mark Hughes <markhughesiacc@gmail.com>
Sent: Wednesday, November 3, 2021 3:21 PM
To: Gary Kupp
Cc: Candace Andersen; Supervisor_Burgis; John Gioia; District5; SupervisorMitchoff
Subject: Rodeo Renewed Project and Draft EIR - Industrial Association's Letter of Support
Attachments: IACCC Letter of support for Rodeo Renewed.doc.docx

Dear Mr. Kupp,

Attached is a letter from the Industrial Association of Contra Costa County, expressing support for the Phillips 66 Rodeo Renewed project and the draft EIR.

Please let me know if you have any questions.

Thank you.

Mark Hughes
Executive Director
Industrial Association of Contra Costa County
(707) 656-1765

Sent from [Mail](#) for Windows 10

COMMENT LETTER: 29



November 3, 2021

Contra Costa County Dept. of Conservation &
Development Community: Development Division
Attention Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

On behalf of the Industrial Association of Contra Costa County (IACCC), I write to offer my strong support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo. In response to the Draft EIR, I am submitting this letter to be entered into the administrative record.

I am the Executive Director of the IACCC; an organization that includes over 50 large, mid-size, and small companies throughout Contra Costa County and the surrounding region. We fully support Rodeo Renewed and believe the Draft EIR accurately represents this positive and responsible project.

Rodeo Renewed serves the best interests of our Association, and the working men and women of Contra Costa County. The refinery's direct and indirect employment have an economic multiplying effect that impacts the entire Bay Area and California as a whole.

Rodeo Renewed positions Phillips 66 to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve local air quality. This project not only preserves the livelihood of Phillips 66 employees, but it will also have a very positive impact on employees from other IACCC membership companies.

Therefore, the Industrial Association of Contra Costa County strongly supports Phillips 66 and the Draft EIR, and we ask that you approve the EIR and the Rodeo Renewed project as soon as possible.

Thank you.

A handwritten signature in blue ink, appearing to read 'Mark Hughes', is written over a horizontal line.

Mark Hughes
Executive Director
Industrial Association of Contra Costa County
(707) 656-1765

COMMENT LETTER: 29

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

Response to Comment

Comment noted.

Comment Letter 30. International Association of Heat and Frost Insulators & Allied Workers

COMMENT LETTER: 30

Gary Kupp

From: Melvin Breshears <MBreshears@insulators.org>
Sent: Friday, December 17, 2021 10:35 AM
To: Gary Kupp
Cc: SupervisorMitchoff; District5; Supervisor Candace Andersen; Supervisor_Burgis; John Gioia; Ursino, Adrienne; Chris Greaney (Chris@local16.us)
Subject: Support Letter for P-66 renewal
Attachments: support letter for P-66.pdf

Please see attached support letter for Phillips 66's renewal project.

Should you have any questions, please let me know.

Happy Holidays.

Mel Breshears

WSC International Vice-President
International Association of Heat and Frost Insulators & Allied Workers
PO Box 614 Anderson, CA 96007
(530) 354-7519

COMMENT LETTER: 30

INTERNATIONAL ASSOCIATION OF

Heat & Frost Insulators & Allied Workers

International Headquarters

Gregory T. Revard, General President
Douglas N. Gamble, General Secretary-Treasurer

9602 M L King Jr. Hwy.
Lanham, MD 20706

Tel: 301-731-9101
Fax: 301-731-5058



MELVIN L. BRESHEARS
International Vice President
Western States Conference

PO Box 614
1590 School Street
Anderson, CA 96007-0614

Cell: 530-364-7519
mbreshears@insulators.org

12/17/21

Department of Conservation and Development &
Community Development Division

Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

On behalf of the members of the Western States Conference of the Heat and Frost Insulator's Union we offer our strong support of Phillips 66's Rodeo Renewed project at the San Francisco Refinery in Rodeo. In response to the Draft EIR, we officially submit these public comments to be entered into the record.

Rodeo Renewed is among the first renewable transportation fuels projects in Contra Costa County and positions Phillips 66 to be a world leader in renewable energy production while preserving, family-wage jobs and helping to improve local air quality. **We fully support Rodeo Renewed and believe the Draft EIR is an accurate representation of this positive and responsible plan.**

Approval of this project will not only serve the best interests of the working men and women of Western States Conference of the Heat and Frost Insulator's Union, but Contra Costa County, the Bay Area and California as a whole. Rodeo Renewed will help achieve California's low-carbon goals while also creating renewable energy jobs.

Phillips 66's Rodeo Refinery is celebrating their 125th Anniversary this year, and we want to ensure its ability to contribute to the Contra Costa County economy for many years to come is retained. This includes its long legacy of providing family-wage jobs, not only for the men and women within the refinery, but also for the members of Western States Conference of the Heat and Frost Insulator's Union, numerous contractors, vendors, and the surrounding community.

Rodeo Renewed, will help support our local economy by creating more than 500 construction jobs, during the conversion, and supporting ~650 renewable energy jobs upon completion. As essential workers, the refinery is vital to keeping California moving. Projects like this also have multiplier effects, meaning for each job the refinery provides, many additional jobs are supported. The benefits extend well beyond the immediate employment within the refinery. We appreciate the robust discussions surrounding the overall energy transition in California, and

Affiliated with
the AFL-CIO,
Building and
Construction
Trades
Department,
Metal Trades
Department
and Canadian
Labour Congress



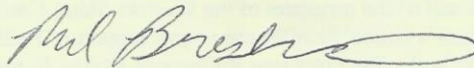
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IN
USA

COMMENT LETTER: 30

we want to be part of this great effort. But we must be thoughtful in our approach and utilize new technologies that support the transition while preserving local, family-wage jobs and supporting the local economy.

Therefore, the members of Western States Conference of the Heat and Frost Insulator's Union stand in solidarity with Phillips 66 as it ushers in the next generation of renewable fuel production in California. We ask that Contra Costa County approve the Rodeo Renewed project.

Thank you for your consideration,



Melvin L. Breshears
Western States Conference Intl. Vice-President

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

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Response to Comment

Comment noted.

**Comment Letter 31. International Brotherhood of Electrical Workers,
Local Union 302**

COMMENT LETTER: 31
Local Union No. 302

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

REGULAR MEETING 4TH WEDS. EACH MONTH



EXECUTIVE BOARD MEETS 3RD WEDS. EACH MONTH

1875 ARNOLD DRIVE • MARTINEZ, CALIFORNIA 94553-4239
TELEPHONE (925) 228-2302 • FAX (925) 228-0764

October 20, 2021

Department of Conservation and Development &
Community Development Division
Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553

2021 OCT 26 P 3:36
CONTRA COSTA COUNTY
DEPARTMENT OF CONSERVATION AND DEVELOPMENT

Dear Mr. Kupp:

On behalf of the 1,800 members of the IBEW Local Union 302 we offer our strong support of Phillips 66's Rodeo Renewed project at the San Francisco Refinery in Rodeo. In response to the Draft EIR, we officially submit these public comments to be entered into the record.

Rodeo Renewed is among the first renewable transportation fuels projects in Contra Costa County and positions Phillips 66 to be a world leader in renewable energy production while preserving, family-wage jobs and helping to improve local air quality. **We fully support Rodeo Renewed and believe the Draft EIR is an accurate representation of this positive and responsible plan.**

Approval of this project will not only serve the best interests of the working men and women of IBEW Local Union 302, but Contra Costa County, the Bay Area and California as a whole. Rodeo Renewed will help achieve California's low-carbon goals while also creating renewable energy jobs.

Phillips 66's Rodeo Refinery is celebrating their 125th Anniversary this year, and we want to ensure its ability to contribute to the Contra Costa County economy for many years to come is retained. This includes its long legacy of providing family-wage jobs, not only for the men and women within the refinery, but also for the members of IBEW Local Union 302, numerous contractors, vendors, and the surrounding community.

Rodeo Renewed, will help support our local economy by creating more than 500 construction jobs, during the conversion, and supporting ~650 renewable energy jobs upon completion. As essential workers, the refinery is vital to keeping California moving. Projects like this also have multiplier effects, meaning for each job the refinery provides, many additional jobs are supported. The benefits extend well beyond the immediate employment within the refinery.

1

COMMENT LETTER: 31

We appreciate the robust discussions surrounding the overall energy transition in California, and we want to be part of this great effort. But we must be thoughtful in our approach and utilize new technologies that support the transition while preserving local, family-wage jobs and supporting the local economy.

Therefore, the members of IBEW Local Union 302 stand in solidarity with Phillips 66 as it ushers in the next generation of renewable fuel production in California. We ask that Contra Costa County approve the Rodeo Renewed project.

Thank you for your consideration,



Tom Hansen
Business Manager
Financial Secretary

TH:nlp
Opelu#29:afl-cio

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

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Response to Comment

Comment noted.

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Comment Letter 32. Iron Workers Local 378

COMMENT LETTER: 32

IRON WORKERS LOCAL 378

UNION OFFICE OF BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING

3120 Bayshore Road, Benicia CA 94510 | www.ironworkers378.org

P. (707) 746-6100 | F. (707) 746-0979



10/22/2021

Department of Conservation and Development &
Community Development Division
Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

On behalf of the approximately 2,500 members of the Iron Workers Union Local 378, we offer our strong support of Phillips 66's Rodeo Renewed project at the San Francisco Refinery in Rodeo. In response to the Draft EIR, we officially submit these public comments to be entered into the record.

Rodeo Renewed is among the first renewable transportation fuels projects in Contra Costa County and positions this region to be a world leader in renewable energy production while preserving middle-class jobs and helping to improve local air quality. **We fully support Rodeo Renewed and believe the Draft EIR is an accurate representation of this positive and responsible plan.**

Approval of this project will not only serve the best interests of the working men and women of the Iron Workers Union Local 378, but of Contra Costa County, the Bay Area and California as a whole. Rodeo Renewed will help achieve California's low-carbon goals while also creating renewable energy jobs.

Phillips 66's Rodeo Refinery is celebrating their 125th Anniversary this year, and we want to ensure its ability to contribute to the Contra Costa County economy for many years to come is retained in this sustainable form. This includes its long legacy of providing family-wage jobs, not only for the men and women within the refinery, but also for local Iron Workers, other construction workers, numerous contractors, vendors, and the surrounding community.

Rodeo Renewed will help support our local economy by creating more than 500 construction jobs during the conversion and supporting ~650 renewable energy jobs upon completion. As essential workers, this project is vital to keeping California moving toward an equitable and sustainable economic recovery. Projects like this also have multiplier effects, meaning that for each job this project provides, many additional jobs are supported. The benefits extend well beyond the immediate employment within the converted refinery.

Jason Lindsey
*President/Business
Agent*

Jason Gallia
*Business Manager
Financial Secretary-
Treasurer*

Nicolas Rivera
Business Agent

Ken Miller
*Business Agent/
Organizer*



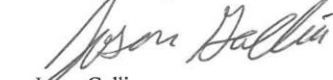
COMMENT LETTER: 32

Page 2
Phillips 66-Rodeo Renewed Project
October 22, 2021

We appreciate the robust discussions surrounding the overall energy transition in California, and we want to be part of this great effort. In doing so, we must be thoughtful and holistic in our approach by utilizing new technologies that support the transition across sectors while preserving local, family-wage jobs and supporting the local economy.

Therefore, the members of the Iron Workers Union Local 378 stand in solidarity with workers, communities, and employers engaged on this project as it ushers in the next generation of renewable fuel production in California. We ask that Contra Costa County approve the Rodeo Renewed project.

Thank you for your consideration.



Jason Gallia
Business Manager/Financial Secretary-Treasurer

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

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cont'd

Iron Workers Local 378, 3120 Bayshore Road, Benicia, CA 94510
707-746-6100 OFFICE/707-746-0979 FAX www.ironworkers378.org

COMMENT LETTER: 32



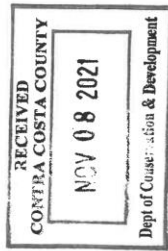
OAKLAND CA 945
4 NOV 2021 PM



**IRONWORKERS
LOCAL UNION No. 378**
3120 Bayshore Road
Benicia, CA 94510



Department of Conservation and Development &
Community Development Division
Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553



94553-460130

Response to Comment

Comment noted.

Comment Letter 33. Kiewit Energy Group

COMMENT LETTER: 33

Gary Kupp

From: Michael.Hollingshaus <Michael.Hollingshaus@kiewit.com>
Sent: Wednesday, December 15, 2021 1:50 PM
To: Gary Kupp; Gary Kupp
Cc: SupervisorMitchoff; District5; Supervisor Candace Andersen; Supervisor_Burgis; John Gioia
Subject: Mike Hollingshaus and Kiewit support of the Phillips 66 Rodeo renewed project
Attachments: Kiewit-P66 Rodeo Renewed-Support Ltr 12.15.21.pdf

Gary,

Please find my letter supporting the P66 Rodeo Renewed Project.

Mike Hollingshaus



Michael Hollingshaus
Vice President - Downstream

KIEWIT ENERGY GROUP INC.
4650 Business Center Drive, Fairfield, CA 94534
(925) 222-1428 cell
kiewit.com



COMMENT LETTER: 33

Contra Costa County Dept. of Conservation &
Development Community: Development Division
Attention Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553

Dec 15, 2021

Dear Mr. Kupp:

I write to offer my strong support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo. In response to the Draft EIR, I am submitting this letter to be entered into the administrative record.

I am Mike Hollingshaus, a contractor who has worked in Contra Costa County for over 100 years. Kiewit Energy Group Inc. is one of North America's largest and most respected engineering and construction organizations who employes over 1000 people in the state of California. Kiewit is proud to support Phillip 66 on their "World Class Rodeo Renewed Energy Transition Project" which will provide sustainable low carbon fuels for the West Coast. We congratulate the Phillips 66 organization for providing the energy sources of the future! I fully support Rodeo Renewed and believe the Draft EIR accurately represents this positive and responsible project.

Rodeo Renewed serves the best interests of our employees, and the working men and women of Contra Costa County. The refinery's direct and indirect employment have an economic multiplying effect that impacts the entire Bay Area and California as a whole.

Rodeo Renewed positions Phillips 66 to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve local air quality. This project preserves the livelihood of Phillips 66 employees as well as ours at Kiewit Energy Group Inc.

The future of Phillips 66's Rodeo Refinery directly links to the future of employees at companies like mine and numerous contractors, vendors and the surrounding community – Rodeo Renewed is our future, too.

Therefore, I strongly support Phillips 66 and the Draft EIR and ask that you approve the EIR and the Rodeo Renewed project as soon as possible.

Thank you,

Michael Hollingshaus
VP, Business Development

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

KIEWIT CORPORATION
KIEWIT PLAZA, OMAHA, NE 68131
(402) 342-2052

Response to Comment

Comment noted.

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Comment Letter 34. Laborers' Union Local 324

COMMENT LETTER: 34

Gary Kupp

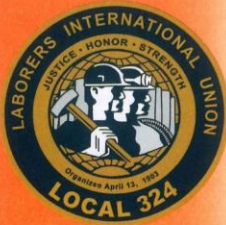
From: Fernando Campos <FCampos@local324.org>
Sent: Thursday, November 11, 2021 2:01 PM
To: Gary Kupp
Cc: SupervisorMitchoff; District5; Supervisor Candace Andersen; Supervisor_Burgis; John Gioia; Keith LeMoine
Subject: Laborers 324 Letter of Support - Phillips 66's Rodeo Renewed-San Francisco Refinery in Rodeo | Draft EIR
Attachments: Local 324 Letter to CCC Dept of Conservation Development.pdf

Mr. Kupp et al.

Please see the attached communication from LiUNA Laborers 324 Business Manager | Secretary Treasurer Keith Le Moine in support of the Phillips 66's Rodeo Renewed Project @ the San Francisco Refinery in Rodeo. If you have any questions, please feel free to contact me.

on Behalf of Keith Le Moine,
Cordially,

Fernando E. Campos
Business Representative | Political Captain
LiUNA! Laborers' Union Local 324
Contra Costa | Solano | Sonoma | Napa | Lake
Mendocino | Humboldt | Del Norte Counties
925.228.0930 | Office
916.705.0281 | Mobile
fcampos@local324.org
www.liunalocal324.org



KEITH LeMOINE
Business Manager
Secretary-Treasurer

LARRY PROCTOR
President

TRESTON SHULL
Vice-President

EDUARDO ESPINOZA
Recording Secretary

JOE CABADA
Executive Board

ERIC HOWARD
Executive Board

FERNANDO CAMPOS
Executive Board

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COMMENT LETTER: 34

LiUNA! LOCAL 324

Feel the Power

November 11, 2021

Department of Conservation and Development &
Community Development Division
Attn: Gary Kupp
30 Muir Road
Martinez, CA 94553

Dear Mr. Kupp:

On behalf of the 9000+ members of the Laborers' International Union of North America - LiUNA - who live in Contra Costa County, WE offer our strong support of Phillips 66's Rodeo Renewed project at the San Francisco Refinery in Rodeo. In response to the Draft EIR, we officially submit these public comments to be entered into the record.

Rodeo Renewed is among the first renewable transportation fuels projects in Contra Costa County and positions Phillips 66 to be a world leader in renewable energy production while preserving, family-wage jobs and helping to improve local air quality. **We fully support Rodeo Renewed and believe the Draft EIR is an accurate representation of this positive and responsible plan.**

Approval of this project will not only serve the best interests of the working men and women of the LABORERS, but Contra Costa County, the Bay Area and California as a whole. Rodeo Renewed will help achieve California's low-carbon goals while also creating renewable energy jobs.

Phillips 66's Rodeo Refinery is celebrating their 125th Anniversary this year. We want to ensure they continue to contribute to the Contra Costa County economy for many years to come as well as their continued legacy of providing family-wage jobs, not only for the men and women within the refinery, but also for the members of the Northern California Laborers, numerous contractors, vendors, and the surrounding community.

The Rodeo Renewed initiative will help support our local economy by creating more than 500 construction jobs, during the conversion, and additionally, ~650 renewable energy jobs upon completion. As essential workers, the refinery is vital to keeping California moving. Projects like this also have multiplier effects, meaning for each job the refinery provides, many additional jobs are supported, and the local economy positively and exponentially impacted. The benefits extend well beyond the immediate employment within the refinery.

Affiliated with the Laborers' International Union of North America serving
Contra Costa, Solano, Napa, Lake, Mendocino, Humboldt, and Del Norte Counties

COMMENT LETTER: 34

We appreciate the robust discussions surrounding the overall energy transition in California, and we want to be part of this great effort. But we must be thoughtful in our approach and utilize new technologies that support the transition while preserving local, family-wage jobs and supporting the local economy.

Therefore, the members of the Northern California Laborers stand in solidarity with Phillips 66 as it ushers in the next generation of renewable fuel production in California. We ask that Contra Costa County approve the Rodeo Renewed project.

Thank you for your consideration,



Keith Le Moine
Business Manager | Secretary Treasurer – LiUNA Laborers 324
Trustee – Northern California Laborers Training & Retraining Fund

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

↑
1
cont'd

Response to Comment

Comment noted.

Comment Letter 35. Mass. Electric Construction Co. (MEC)

COMMENT LETTER: 35

Gary Kupp

From: Joey.Ramirez <Joey.Ramirez@masselec.com >
Sent: Thursday, December 16, 2021 11:07 AM
To: Gary Kupp
Cc: SupervisorMitchoff; District5; Supervisor Candace Andersen; Supervisor_Burgis; John Gioia
Subject: P66 Rodeo Renewed Project Support
Attachments: MEC_ Electronic-P66 Rodeo Renewed-Support Ltr 12.15.21.pdf

Thank You



Joey Ramirez
Business Development

MASS. ELECTRIC CONSTRUCTION CO.
1925 Wright Ave. Suite C
La Verne, CA 91750
925-766-4898 cell
Joey.Ramirez@masselec.com

COMMENT LETTER: 35



Contra Costa County Dept. of Conservation &
Development Community: Development Division
Attention Gary Kupp, Senior Planner
30 Muir Road
Martinez, CA 94553

Dec 15, 2021

Dear Mr. Kupp:

I write to offer my strong support of the Rodeo Renewed project at Phillips 66 Refinery in Rodeo. In response to the Draft EIR, I am submitting this letter to be entered into the administrative record.

I am Joey Ramirez, a contractor who has worked in Contra Costa County for over 20 years. Mass Electric Construction Company (MEC), one of the nation's premier electrical contractors' who employees from 400 to 1000 people depending on the project. MEC is proud to support Phillip 66 on their "World Class Rodeo Renewed Energy Transition Project" which will provide sustainable low carbon fuels for the West Coast. We congratulate the Phillips 66 organization for providing the energy sources of the future! I fully support Rodeo Renewed and believe the Draft EIR accurately represents this positive and responsible project.

Rodeo Renewed serves the best interests of our employees, and the working men and women of Contra Costa County. The refinery's direct and indirect employment have an economic multiplying effect that impacts the entire Bay Area and California as a whole.

Rodeo Renewed positions Phillips 66 to be a world leader in renewable energy production while preserving family-wage jobs and helping to improve local air quality. This project preserves the livelihood of Phillips 66 employees as well as ours at MEC.

The future of Phillips 66's Rodeo Refinery directly links to the future of employees at companies like mine and numerous contractors, vendors and the surrounding community – Rodeo Renewed is our future, too.

Therefore, I strongly support Phillips 66 and the Draft EIR and ask that you approve the EIR and the Rodeo Renewed project as soon as possible.

Thank you,

Joey Ramirez
Sr. Manager, Business Development

Cc: Honorable Contra Costa County Supervisor Diane Burgis, Chair
Honorable Contra Costa County Supervisor Federal D. Glover, Vice Chair
Honorable Contra Costa County Supervisor John M. Gioia
Honorable Contra Costa County Supervisor Candace Andersen
Honorable Contra Costa County Supervisor Karen Mitchoff

MEC
400 Totten Pond Road, Suite 400
Waltham, MA 02451
(781) 781-290-1000

Response to Comment

Comment noted.

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Comment Letter 36. Natural Resources Defense Council (NRDC)

COMMENT LETTER: 36

Gary Kupp

From: Alexander, Ann <aalexander@nrdc.org>
Sent: Friday, December 17, 2021 11:51 AM
To: Gary Kupp
Cc: megan@apen4ej.org; Gary Hughes; Neena Mohan; hkretzmann@biologicaldiversity.org; Connie Cho; cbrown@econ.berkeley.edu; Keever, Marcie; eye4cee@gmail.com; Gemma Tillack; Charlie Davidson; Ben Eichenberg; Matt Krogh; Ellie Cohen; action@sunflower-alliance.org; jackie mann; Leah Redwood; Ken Szutu; Dan Sakaguchi; claudia jimenez; G Karras
Subject: Comments concerning DEIR for Rodeo Renewed project (File No. LP20-2040)
Attachments: RODEO RENEWED DEIR COMMENT.pdf; Gary Kupp transmitting documents 12.17.21.pdf

Mr. Kupp, attached please find comments on the draft Environmental Impact Report for the Rodeo Renewed project (File No. CDLP20-02046), submitted on behalf of Asian Pacific Environmental Network, Biofuelwatch, California Environmental Justice Alliance, Center for Biological Diversity, Communities for a Better Environment, Citizen Air Monitoring Network, Community Energy reSource, Extinction Rebellion San Francisco Bay Area, Fossil Free California, Friends of the Earth, Interfaith Climate Action Network of Contra Costa County, Natural Resources Defense Council, Rainforest Action Network, Richmond Progressive Alliance, Rodeo Citizens Association, San Francisco Baykeeper, Stand.Earth, Sunflower Alliance, The Climate Center, and 350 Contra Costa.

A thumb drive containing all sources cited is being sent via overnight mail, under cover of the attached letter.

Please confirm receipt.

ANN ALEXANDER

Senior Attorney, Nature Program

**NATURAL RESOURCES
DEFENSE COUNCIL**
111 SUTTER ST., 21ST FLOOR
SAN FRANCISCO, CA 94104
T 415.875.6190
AALEXANDER@NRDC.ORG
NRDC.ORG

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December 17, 2021

Via overnight mail

Gary Kupp
Senior Planner
Contra Costa County
Department of Conservation and Development
30 Muir Rd
Martinez, CA 94553

*Re: Phillips 66 Rodeo Renewed Project – sources referenced in comments concerning draft
EIR: File LP20–2040*

Dear Mr. Kupp:

Enclosed please find a thumb drive containing the sources referenced in the comments on the draft EIR for the above-referenced project that will be submitted December 17, 2021 via electronic mail, on behalf of the identified organizations. Please feel free to reach out to me if you have any questions or concerns.

Very truly yours,



Ann Alexander
Senior Attorney, Natural Resources Defense
Council
312-919-7285
aalexander@nrdc.org

NATURAL RESOURCES DEFENSE COUNCIL

111 SUTTER STREET | SAN FRANCISCO, CA | 94104 | T 415.875.6100 | F 415.875.6161 | NRDC.ORG

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ASIAN PACIFIC ENVIRONMENTAL NETWORK • BIOFUELWATCH • CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE • CENTER FOR BIOLOGICAL DIVERSITY • CITIZEN AIR MONITORING NETWORK • COMMUNITIES FOR A BETTER ENVIRONMENT • COMMUNITY ENERGY RESOURCE • EXTINCTION REBELLION SAN FRANCISCO BAY AREA • FOSSIL FREE CALIFORNIA • FRIENDS OF THE EARTH • INTERFAITH CLIMATE ACTION NETWORK OF CONTRA COSTA COUNTY • NATURAL RESOURCES DEFENSE COUNCIL • RAINFOREST ACTION NETWORK • RICHMOND PROGRESSIVE ALLIANCE • RODEO CITIZENS ASSOCIATION • SAN FRANCISCO BAYKEEPER • STAND.EARTH • SUNFLOWER ALLIANCE • THE CLIMATE CENTER • 350 CONTRA COSTA

December 17, 2021

Via electronic mail (gary.kupp@dcd.cccounty.us)¹

Gary Kupp
Senior Planner
Contra Costa County
Department of Conservation and Development
30 Muir Rd
Martinez, CA 94553

Re: Phillips 66 Rodeo Renewed Project (File No. LP20-2040) – comments concerning draft environmental impact report

Dear Mr. Kupp:

Asian Pacific Environmental Network, Biofuelwatch, California Environmental Justice Alliance, Center for Biological Diversity, Citizen Air Monitoring Network, Communities for a Better Environment, Community Energy reSource, Extinction Rebellion San Francisco Bay Area, Fossil Free California, Friends of the Earth, Interfaith Climate Action Network of Contra Costa County, Natural Resources Defense Council, Rainforest Action Network, Richmond Progressive Alliance, Rodeo Citizens Association, San Francisco Baykeeper, Stand.Earth, Sunflower Alliance, and The Climate Center, 350 Contra Costa (collectively, Commenters) appreciate this opportunity to submit comments concerning the Contra Costa County's Draft Environmental Impact Report (DEIR) for the proposed Phillips 66 refinery (Refinery) Rodeo Renewed project (Project).

For reasons explained in these comments, the DEIR falls far short of the basic requirements of the California Environmental Quality Act (CEQA), Pub. Resources Code §

¹ The sources cited in this Comment are being sent separately via overnight mail to the County on a thumb drive.

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21000 et seq. An EIR is “the heart of CEQA.”² “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.” Pub. Res. Code § 21061. 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.’ . . .” *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 392 (“Laurel Heights I”). A project’s effects include all indirect impacts that are “reasonably foreseeable.” CEQA Guidelines, § 15064, subd. (d). An indirect environmental impact is “reasonably foreseeable” when “the [proposed] activity is capable, at least in theory, of causing” a physical change in the environment. *Union of Medical Marijuana Patients, Inc. v. City of San Diego* (2019) 7 Cal.5th 1171, 1197. Courts have analyzed whether it is “reasonably foreseeable” that a project will cause indirect physical changes to the environment in a variety of factual contexts, including changes to off-site land use, lifecycle impacts, and displaced development impacts. *County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal.App.4th 1544. See *Save the Plastic Bag Coalition v. City of Manhattan Beach* (2011) 52 Cal.4th 155, 174; *Muzzy Ranch Co. v. Solano County Airport Land Use Com.* (2007) 41 Cal.4th 372, 382-383. As explained below, the DEIR fails adequately to describe the Project’s significant effects, let alone mitigate them.

1

The DEIR fails to meet these legal standards. The proposed Project would, if built, be the largest biofuel refinery in the world.³ A conversion of an existing refinery of this size is unprecedented and untested in California, implicating unknown impacts on operational safety, the agricultural land use systems supplying the feedstock, air emissions, and California’s climate goals in the transportation sector, among other things. The law requires more than the limited and uninformative document the County has produced. And the community in and around Rodeo who will have to live with the Project, and everyone else potentially affected by it, deserve better.

2

Its key deficiencies, described in the sections below, include the following:

- *Incorrect baseline.* The assessment of impacts in the DEIR, and its definition of the no project alternative is grounded in an assumption that in the absence of the proposed conversions, the Refinery would continue processing crude oil at historic levels. This assumption is unsupported and contrary to fact. Available information makes clear that closure of the Santa Maria refinery, the source of petroleum feedstock for the Rodeo refinery, is inevitable with or without the Project.
- *Faulty project description.* The DEIR fails to disclose essential information regarding the proposed biofuel processing operations. This includes key information about feedstocks, as well as about the proposed refining process – such as processing

3

4

² *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 392 (“*Laurel Heights I*”).

³ “Phillips 66 Plans World’s Largest Renewable Fuels Project,” Phillips 66 Corporate Website, available at <https://www.phillips66.com/newsroom/rodeo-renewed>.

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chemistry, hydrogen production and input requirements (a major emissions generator) and refining temperature and pressure (which implicates process upset risks), – that are essential to an assessment of the proposed new operations on the surrounding community. It also fails to disclose actions connected to the Project that should have been considered together with it.

- *Failure to consider safety impacts.* The County ignored available information indicating a possible heightened threat of process upsets associated with processing of biofuel feedstocks, creating greater risk for workers and the community.
- *Failure to fully evaluate air quality impacts.* The DEIR, having failed to describe the new proposed process chemistry, fails as well to describe the air emissions impact of that process chemistry on air quality. In particular, the County ignored available information that the new feedstocks risk an increase in flaring and accidental releases; and failed to evaluate the differing air emissions impacts of various proposed feedstocks and product slates. The County also failed to assess the acute short-term hazards from flaring, confining itself to addressing longer-term pollution.
- *Failure to fully evaluate marine impacts.* The DEIR fails to adequately address the contemplated drastic increase in the amount of feedstock crossing through the marine terminal, including the risk of spills involving Project feedstocks for which impact and cleanup methods are poorly understood; as well as the impact of that increase on air quality, recreation, aesthetics, wildlife, and other public resources.
- *Failure to consider the environmental impacts of land use changes.* The Project will require importation of an unprecedented volume of food crop feedstocks such as soy oil. Yet the DEIR entirely neglects to consider the environmental impact of this massive diversion of food crop oils on land use – including conversion of forest land to cropland, and incentivizing increases in palm oil production.
- *Inadequate analysis of climate impacts.* The DEIR failed to consider the indirect impacts of the proposed Project on California’s climate goals. Full analysis of climate impacts must consider not just emissions from Project operations, but also the impact of a large influx of combustion fuel on climate goals for the transportation sector.
- *Inadequate discussion of hazardous contamination.* The Project will have a limited lifetime given that California’s climate commitments lead away from combustion fuel. Accordingly, the DEIR should have considered the environmental impacts associated with decommissioning the Refinery site, which is almost certainly heavily contaminated with toxics. Additionally, the DEIR inadequately evaluated the impact of Project construction and operation on ongoing efforts to remediate and monitor hazardous waste contamination.
- *Deficient cumulative impacts analysis.* Remarkably, even though the DEIR was issued simultaneously with the DEIR for the very similar biofuel conversion project at the Marathon Martinez refinery, the DEIR makes no effort at all to evaluate the cumulative impact of those two projects together – not to mention other biofuel conversion projects – on key issues such as land use impact and regional air quality.
- *Deficient ‘no project’ alternative analysis.* Without the proposed Project, the Refinery would not continue processing crude at historic levels. Accordingly, the DEIR should have considered the environmental impacts associated with subsequent legal requirements for site decommissioning.



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- *Deficient project alternatives analysis.* The DEIR improperly fails to consider an electrolytic “green” hydrogen alternative, even though it considered such an alternative for the very similar Marathon Martinez conversion project. Additionally, it improperly considers the various alternatives for reducing the Project’s impact separately rather than together. The option of reducing the scope of the Project can and should have been considered together with the option of not expanding crude throughput over the wharf. The DEIR also defines the Project objectives so narrowly as to distort the consideration of alternatives.

15

The County had abundant information concerning all of these subjects at its fingertips that would have facilitated the type of robust analysis required for this Project, but chose to ignore it in the DEIRs. Commenters requested in their January 26, 2021 CEQA scoping comments on the Notice of Preparation (Scoping Comments) that these topics be considered, and provided voluminous documentation concerning each.⁴ The County chose to ignore it all in drafting the DEIR, resulting in a woefully deficient document.

16

The deficiencies we have identified are too pervasive and deep to be corrected merely by making changes in a final EIR. In order to ensure that the public has full information and opportunity to comment upon, the County must re-circulate a revised DEIR providing fully-documented analysis of all of the issues addressed in this comment (as well as the Scoping Comments). It is unavoidable that addressing the deficiencies identified in these comments in a manner that complies with CEQA will necessarily require addition of “significant new information.” CEQA Guidelines § 15088.5.⁵

17

This Comment document includes and incorporates the previously-submitted Scoping Comments as well as the expert report of Greg Karras accompanying this document as an appendix. All sources cited in this document have are being provided electronically to the County under separate cover.

18

⁴ Biofuelwatch, Community Energy reSource, Interfaith Climate Action Network of Contra Costa County, Natural Resources Defense Council, Rodeo Citizens Association, San Francisco Baykeeper, Sierra Club, Stand.Earth, Sunflower Alliance, and 350 Contra Costa, Phillips 66 Rodeo Renewed Project – comments concerning scoping: File LP20–2040 (Jan. 27, 2021), available at Contra Costa County Department of Conservation & Development Community Development Division. Appendix A: Notice of Preparation and Public Comments, <https://www.contracosta.ca.gov/DocumentCenter/View/72907/Appendix-A--NOP-and-Public-Comments-PDF> (accessed Dec. 10, 2021).

⁵ The regulations implementing CEQA, 14 CCR 15000 *et seq.*, are cited herein as the CEQA Guidelines.

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<p>APPENDIX B: Karras, G, <i>Unsustainable Aviation Fuel</i>; technical report for Natural Resources Defense Council, San Francisco, CA, August 2021 (Karras, 2021b).</p>		
<p>APPENDIX C: Karras, G, <i>Technical Report in Support of Comments Concerning Rodeo Renewed Project</i>; technical report prepared for Natural Resources Defense Council, San Francisco, CA, December 2021 (Karras, 2021c).</p>		

COMMENT LETTER: 36

I. STATEMENTS OF INTEREST

The interest of each of the Commenters in the DEIR and Project impacts is as follows:

Asian Pacific Environmental Network (APEN) is an environmental justice organization with deep roots in California's Asian immigrant and refugee communities. Since 1993, APEN has built a membership base of Laotian refugees in Richmond and throughout West Contra Costa County. We organize to stop big oil companies from poisoning our air so that our families can thrive.

Biofuelwatch provides information, advocacy and campaigning in relation to the climate, environmental, human rights and public health impacts of large-scale industrial bioenergy. Central to the Biofuelwatch mission is promoting citizen engagement in environmental decision making in relation to bioenergy and other bio-based products – including bioenergy-related decisions on land use and environmental permitting.

California Environmental Justice Alliance (CEJA) is a statewide, community-led alliance that works to achieve environmental justice by advancing policy solutions. We unite the powerful local organizing of our members across the state in the communities most impacted by environmental hazards – low-income and communities of color – to create comprehensive opportunities for change at a statewide level through building community power. We seek to address the climate crisis through holistic solutions that address poverty and pollution, starting in the most over-burdened communities.

Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.3 million members and online activists dedicated to the protection of endangered species and wild places, public health, and fighting climate change. The Center works to secure a sustainable and healthy future for people and for all species, great and small, hovering on the brink of extinction. It does so through science, law, and creative media, with a focus on protecting the lands, waters, and the climate.

Citizen Air Monitoring Network is a community group started in 2016 in Vallejo. Our mission is to make sure the air quality in our community is healthy for all. Vallejo is situated in the middle of five refineries, and we are deeply concerned about the impact of their operation.

Communities for a Better Environment is a California nonprofit environmental justice organization with offices in Northern and Southern California. For more than 40 years, CBE has been a membership organization fighting to protect and enhance the environment and public health by reducing air, water, and toxics pollution. Hundreds of CBE members live, work, and breathe in Contra Costa County and the area surrounding the Marathon Refinery. The Northern California office is located in Contra Costa County.

Community Energy reSource offers independent pollution prevention, environmental justice, and energy systems science for communities and workers on the frontlines of today's climate, health, and social justice crises. Its work focuses on assisting communities with a just transition from oil refining and fossil power to clean, safe jobs and better health.

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Extinction Rebellion San Francisco Bay Area (XRSFBay) is a local chapter of the global movement to compel business and government to address the climate and ecological crisis. We use nonviolent direct action, theater and art to bring the message that we are running out of time to prevent climate disaster and it is necessary to Tell the Truth, Act Now, Go Beyond Politics and Create a Just Transition for all beings in the Bay Area and beyond.

Fossil Free California is a nonprofit organization of climate justice volunteers. Many are members of the two largest public pension funds in the country, CalPERS and CalSTRS, which continue to invest in fossil fuel companies. Fossil Free California works to end financial support for climate-damaging fossil fuels and promotes the transition to a socially just and environmentally sustainable society. Together with allied environmental and climate justice organizations, we mobilize grassroots pressure on CalPERS and CalSTRS, as well as other public institutions, to divest their fossil fuel holdings.

Friends of the Earth is a national nonprofit environmental organization which strives for a more healthy and just world. Along with our 2 million members and activists we work at the nexus of environmental protection, economic justice and social justice to fundamentally transform the way our country and world value people and the environment. For more than 50 years, we have championed the causes of a clean and sustainable environment, protection of the nation's public lands and waterways, and the exposure of political malfeasance and corporate greed. Our current programs focus on promoting clean energy and solutions to climate change; ensuring a healthy, just and resilient food system where organic is for all; protecting marine ecosystems and the people who depend on them; and transforming our financial, economic and political systems.

Interfaith Climate Action Network of Contra Costa County (ICAN) is a non-profit environmental justice organization working group of California Interfaith Power and Light, whose offices are in Oakland, CA. The mission of ICAN is to inform and educate faith and non-faith communities and individuals about how to mitigate climate change, advocate with leaders of BILPOC communities before government agencies, industry and other organizations that need to hear our collective voices. They are committed to centering the voices of those most impacted by industry, particularly the communities close to the refineries in Contra Costa County.

Natural Resources Defense Council (NRDC) is a nonprofit environmental membership organization that uses law, science, and the support of more than 440,000 members throughout the United States to ensure a safe and healthy environment for all living things. Over 2,200 of NRDC's members reside in Contra Costa County, some of those in the City of Rodeo. NRDC has a long-established history of working to ensure proper oversight of refining activities and minimize their carbon footprint and other environmental impacts, and ensure that biofuels are produced in a sustainable manner.

Rainforest Action Network (RAN) preserves forests, protects the climate and upholds human rights by challenging corporate power and systemic injustice through frontline partnerships and strategic campaigns. RAN works toward a world where the rights and dignity of all communities are respected and where healthy forests, a stable climate and wild biodiversity are protected and celebrated. RAN is a collaborative organization that challenges corporate power and exposes institutional systems of injustice in order to drive positive systemic change.

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Richmond Progressive Alliance is an association of members in Richmond, California, with the explicit goal of taking political decision-making back from corporations and putting power in the hands of the people. The RPA mobilizes people in support of progressive policies and candidates, often in alliance with other local groups.

Rodeo Citizens Association is a non-profit environmental organization with the primary purpose of providing a means for the citizens of Rodeo to address issues of local concern with respect to health, safety, and the environment. Currently, RCA's primary activity is focused on promoting responsible use of land and natural resources around the community and to engage in community outreach activities involving education and awareness of environmental protection issues impacting the region.

San Francisco Baykeeper (Baykeeper) has worked for more than 25 years to stop pollution in San Francisco Bay and has more than five thousand members and supporters who use and enjoy the environmental, recreational, and aesthetic qualities of San Francisco Bay and its surrounding tributaries and ecosystems. San Francisco Bay is a treasure of the Bay Area, and the heart of our landscape, communities, and economy. Oil spills pose one of the primary threats to a healthy Bay, and environmental impacts from increased marine terminal activity directly threaten Baykeeper's core mission of a Bay that is free from pollution, safe for recreation, surrounded by healthy beaches, and ready for a future of sea level rise and scarce resources. San Francisco Baykeeper is one of 200 Waterkeeper organizations working for clean water around the world. Baykeeper is a founding member of the international Waterkeeper Alliance and was the first Waterkeeper on the West Coast. Baykeeper also works with 12 Waterkeepers across California and the California Coastkeeper Alliance.

Stand.earth is a San Francisco-based nonprofit that challenges corporations and governments to treat people and the environment with respect, because our lives depend on it. From biodiversity to air, to water quality and climate change, Stand.earth designs and implements strategies that make protecting our planet everyone's business. Its current campaigns focus on shifting corporate behavior, breaking the human addiction to fossil fuels, and developing the leadership required to catalyze long-term change.

Sunflower Alliance engages in advocacy, education, and organizing to promote the health and safety of San Francisco Bay Area communities threatened by the toxic pollution and climate-disruptive impacts of the fossil fuel industry. They are a grassroots group committed to activating broader public engagement in building an equitable, regenerative, and renewable energy-fueled economy.

The Climate Center works to rapidly reduce climate pollution at scale, starting in California. The Climate Center's strategic goal is that by 2025, California will enact policies to accelerate equitable climate action, achieving net-negative emissions and resilient communities for all by 2030, catalyzing other states, the nation and the world to take effective and equity-centered climate action.

350 Contra Costa is a home base and welcoming front door to mobilize environmental activism. It is comprised of concerned citizens taking action for a better community. They envision a world where all people equitably share clean air, water and soil in a healthy, sustainable, and post-carbon future. It is a local affiliate of 350 Bay Area.

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II. THE PROJECT DESCRIPTION IN THE DEIR IS LEGALLY INADEQUATE¹

An EIR must describe a proposed project with sufficient detail and accuracy to permit informed decision-making, as an inaccurate or incomplete project description renders the analysis of significant environmental impacts inherently unreliable. *See* CEQA Guidelines § 15124. “An 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). “An accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity.” *San Joaquin Raptor*, 27 Cal.App.4th at 730 (citation omitted).

Accordingly, 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. *Id.* When an EIR fails to disclose the “true scope” of a project because it “concealed, ignored, excluded, or simply failed to provide pertinent information” regarding the reasonably foreseeable consequences of the project, then the EIR is inadequate as a matter of law because it violated the information disclosure provisions of CEQA. *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 82-83 (“*City of Richmond*”).

The Project DEIR fails to meet basic CEQA requirements for complete and accurate project description. As described in more detail below, the DEIR’s cursory description failed entirely to address the actual processes and process chemistry associated with biofuel refining; and failed to address the operational duration of the Project, which is highly relevant to impacts expected to worsen over time.

A. The Project Description Failed to Disclose All Project Components

1. The DEIR Failed to Disclose Two Project Components Undertaken Separately From the Project Permitting Process

The Project as described in the DEIR fails to describe two actions already taken by Phillips 66 that are functionally part of the Project, and therefore needed to be disclosed as such. These actions both involved physical changes within the refinery, integrated with and functionally interdependent with the proposed Project operation. Both were implemented contemporaneously after the Project application (Application) was filed.

Each of these undisclosed actions expands the scope and severity of potential impacts resulting from the Project. One of these actions, the unpermitted conversion of Unit 250, is identified in the DEIR but expressly – and incorrectly – disclaimed as part of the Project. The other action, the Nustar Shore Terminals project, is not identified or evaluated in the DEIR at all. The subsections below address each of these actions.

¹ Supplemental information in support of this analysis is provided in Karras 2021c accompanying this comment, in the section entitled “Project Description and Scope.”

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a. The Unpermitted Conversion of Unit 250

During 2021, Phillips 66 implemented the conversion of diesel hydrotreater Unit 250 within the Rodeo Facility from petroleum distillate to soybean oil processing² without a Clean Air Act permit and without any public review. In the DEIR, the County disclaims any connection between Unit 250 and the Project on the dubious ground that no further changes are proposed to it:

As explained in the Project Description, Section 3.7, Project Operation, the facility currently has the capacity to produce approximately 12,000 bpd of renewable fuels from pretreated feedstocks using Unit 250, which was previously used to process petroleum-based feedstocks. Unit 250 is not included in the Project as the Project does not propose any changes for Unit 250 and it would continue to produce 12,000 bpd of renewable fuels. Given that Unit 250 is not part of the Project, Unit 250 feedstock and production numbers are not included in this chart under the No Project Alternative.

DEIR at 5-11. But the fact that no *further* changes are proposed to Unit 250 is irrelevant to the question of whether the *previous* changes to that unit, completed after the Project application was filed, should have been considered as part of the Project. The relevant question is whether the changes to Unit 250 are *functionally* part of the Project – and by all indications they are. The Project would depend on Unit 250 to maximize onsite refining of the pretreated feed output; and in turn, Unit 250 would be dependent on the Project for economical access to pretreated feed, feedstock acquisition, and Unit 250 product distribution.³ It thus appears, based on all available information, to be an interdependent component of the Project that is essential to achieve a project objective to maximize project-supplied California biofuels.

Even more problematically, the conversion of Unit 250 earlier this year is currently under investigation by the Bay Area Air Quality Management District (BAAQMD) for potentially illegal construction, operation, or both without required notice, review and / or permits.⁴ Phillips 66 converted the unit without seeking BAAQMD approval.⁵ That investigation, and the possible misfeasance by Phillips 66, underscores the need for the DEIR to determine whether Unit 250 is functionally part of the Project and if so – which appears to be the case – evaluate it as such. The changes to Unit 250, to the extent they are part of the Project, would exacerbate its impacts, including those associated with feed acquisition, processing, and product distribution-related impacts.

Furthermore, the failure to include and disclose the Unit 250 changes as part of the Project appears to be related to a County decision to permit the Nustar biofuel action separately from the subject Project before allowing public comment on either action, as discussed below.

² PSX Q1 2021 Earnings Call.

³ Karras, 2021c.

⁴ BAAQMD, 2021.

⁵ See letter to Jack Broadbent from Ann Alexander et al., July 30, 2021; Email from Damian Breen to Ann Alexander, Sept. 9, 2021.

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b. NUSTAR Shore Terminals

Nustar Shore Terminals—a liquid hydrocarbons transfer and storage facility contiguous with the Refinery—and Contra Costa County have taken actions to advance the “Nustar Soybean Oil Project” contemporaneously with the Project. According to a December 2, 2020 email from the County, this Nustar action would:

[I]nstall an approximately 2300-foot pipeline from Nustar to Phillips 66 to carry pretreated soybean oil feedstock to existing tankage and the Unit 250 hydrotreater at the Phillips 66 refinery, which can already produce diesel from both renewable and crude feedstocks (see attached site plan). The soybean feedstock will be unloaded at existing Nustar rail facilities which will be modified with 33 offload headers to accommodate the soybean oil. ... it was determined that the modifications proposed by Nustar would not require a land use permit. The appropriate building permits have been issued.⁶

Color-coding of these pipeline sections shown on the site plan referenced by the County indicates that the new feedstock pipeline sections reach far into the Refinery; and that the vast majority of new pipeline segments by length is “Phillips 66” rather than “Nustar” pipe.⁷

There is basis to conclude, in light of these facts, that the Nustar project is an undisclosed component of the Project. The new pipelines will be supplying soybean feedstock to the Refinery, and soybean feedstock will almost certainly be used in connection with the Project (see Section IV). It therefore should have been evaluated in the DEIR as part of the Project; or, at the very least, the DEIR should have explicitly described why the Nustar project was not included in the impacts analysis. Instead, the DEIR neglects entirely to even mention the Nustar project.

The County, which permitted the Nustar project separately, has taken the position that it is neither a project component nor a related project: “The [Nustar Soybean Oil Project] ... is not associated with the proposed Phillips 66 Rodeo Renewed refinery conversion ... [and] is a stand-alone project not related to the Rodeo Renewed refinery conversion”⁸ Yet this response offers no support for that conclusion. The County was obligated to either present and factually support that conclusion in the DEIR – *i.e.*, with facts demonstrating that the Nustar project will not, in fact, supply feedstock to the Project – or else evaluate the Nustar project as part of the Project DEIR analysis.

c. Terminal and Wharf Improvement Project at the Port of Los Angeles

Phillips 66 is also taking contemporaneous action to advance the Marine Oil Terminal (MOT) and Wharf Improvement Project (MOT Project) at the Port of Los Angeles (Port of LA) Berths 148-151 in Southern California.⁹ This proposed Port of LA project includes a request for

⁶ Email from Gary Kupp to Charles Davidson dated Dec. 2, 2020 and attached site map (Kupp, 2020a).

⁷ Kupp, 2020a.

⁸ Kupp, 2020a.

⁹ City of Los Angeles Harbor Department (LAHD), Draft Initial Study/ Mitigated Negative Declaration for Berths 148-151 (Phillips 66) Marine Oil Terminal (MOT) and Wharf Improvement Project (proposed Project) at the Port of Los Angeles (Port), Nov. 2021. <https://kenticoportoflosangeles.org/getmedia/d9b76ad6-9242-46e2-91b5-a7def9ac4e1f/Berths-148-151-P66-MOTEMS-Draft-IS-MND> (accessed Dec 14, 2021) [hereinafter LAHD P66 IS/Neg Dec 2019]

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consideration of a new 20-year entitlement (with two potential 10-year additional options) in Wilmington, an environmental justice community. Other than the Rodeo and Santa Maria refineries, Phillips 66 has only one other refinery in California—its Los Angeles refinery in Carson and Wilmington, CA. Although that refinery is never mentioned by name, the Los Angeles Refinery Emergency Response Plan is cited in the issued Draft Initial Study and Negative Declaration.¹⁰

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In the MOT Project, Phillips 66 proposes to demolish the timber wharf at Berths 150-151, replacing it with a new concrete wharf and associated equipment, for the stated purpose of compliance with safety standards. Yet it is clear from the MOT Project documents and larger circumstances that the MOT project may have a purpose, in part, of advancing the Rodeo Renewed Project. Most notably, the draft Initial Study and Negative Declaration describes its operations at the marine terminal as “load[ing] and unload[ing] oil commodities products such... naphthas, gasoline/gasoline blend stocks, diesel and jet fuels, and distillate blend stocks, *as well as renewables and renewable feedstocks...*” (emphasis added). Furthermore, Phillips 66 is requesting up to 40 years for continued operations at Berths 148-151 despite proposing to demolish the Santa Maria site.

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There is no mention of these Port of LA activities in the Project DEIR. The only mention of Los Angeles, Los Angeles County, or Southern California generally in the DEIR is with reference to the geographic location of the Santa Maria Refinery or the geographic location of potentially affected cultural resources. DEIR at 4.5-182, 4.14-422. There is one implicit reference to the Los Angeles Refinery as the “the only other Phillips 66 refinery in California besides the Santa Maria Refinery is located in the Wilmington/Carson area in Los Angeles County” as evidence to show that Phillips 66 has no other Northern California refineries. DEIR at 5-5.

However, on December 9, 2021, CARB published Phillips 66’s application for a Low-Carbon Fuel Standard (LCFS) Tier 2 Pathway,¹¹ which highlighted a transportation link between “Southern California” and the Rodeo project being reviewed in this DEIR. The consultant report compiled for the California Air Resources Board (CARB), with reference to its third application for canola oil, traces one feedstock route that is undisclosed in the DEIR. The report describes that “The [canola oil] shipment that was received was *first sent to Southern California* for some of the oil to be off loaded and then moved north to Rodeo for unloading the remainder of the cargo. This accounts for the long transportation distance”¹² (emphasis added).

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Given that the Rodeo Renewed project is Phillips 66’s only biofuel conversion project proposed in California and that the DEIR details the decommissioning of the Santa Maria refinery, DEIR at 3-31, it is likely that the biofuel feedstock coming into “Southern California” are through the Port of Los Angeles. This glimpse of a potential connection between the two

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¹⁰ LAHD P66 IS/Neg Dec 2019, pp. 107.

¹¹ Phillips 66 submitted a Tier 2 Pathway application for the same biofuels produced by the unpermitted and undisclosed Unit 250, described in a previous subsection. See (S&T)2 Consultants Inc., CARB LCFS Fuel Pathway Report Renewable Diesel Prepared for Phillips 66 Company, pp. 1-4, 7-9, Dec. 6, 2021, https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0241_report.pdf (accessed Dec 14, 2021) [hereinafter CARB LCFS P66 Pathway Report 2021]

¹² CARB LCFS P66 Pathway Report 2021, pp. 5.

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CEQA applications merits discussion in the DEIR and further investigation by the County. The City of Los Angeles Harbor Department (LAHD) has only granted a 30-day comment period for this Draft Initial Study and Negative Declaration. The public review period for this Phillips 66 marine terminal expansion began running on November 18, 2021 and will close on December 20, 2021. The County should immediately contact the City of Los Angeles to evaluate the relationship between the two proposed projects and CEQA reviews, and request a comment period extension for the County and the public fully evaluate the matter.

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B. The Project Description Failed to Describe Aspects of the Proposed Refining Process Essential to Analyzing Project Impacts

As discussed in the sections below, the Project aspects that the DEIR fails to describe, and that are critical to understanding its impacts, are manifold. They include the following:

- Process chemistry for Hydrotreating Esters and Fatty Acids (HEFA), the biofuel refining technology proposed for the Project.
- The class, types, and differing chemistries and processing characteristics of HEFA feedstocks which can have varying upstream environmental impacts of land use changes, air quality, and safety impacts.
- The geographic sources and existing volumetric supplies of each potential feedstock, necessary to fully disclose upstream environmental impacts of land use changes.
- Hydrogen demand associated with HEFA technology, including differential hydrogen demands for production targeting HEFA diesel versus jet fuel, which affect air emission levels.
- The process chemistry of proposed hydrogen production, which could coproduce carbon dioxide, to enable processing of HEFA feedstocks
- Known differences in hydro-conversion processing between petroleum and HEFA refining, which have potential to lead to increased risk associated with HEFA refining of process upset, process safety hazard, and flaring incidents
- A Project component designed to maximize jet fuel production, which has impacts that differ from diesel production, through onsite processing of petroleum.

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The DEIR also fails to disclose the anticipated and technically achievable operating duration of the Project, information that is essential to evaluate potential Project impacts which can worsen over time.

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1. The DEIR Fails to Disclose Information Regarding the HEFA Biofuel Refining Process Essential to Evaluating its Impacts

The HEFA biofuel refining technology proposed to be used for the Project has important capabilities, limitations, and risks that distinguish it from other biofuel technologies. These differences result in environmental impacts associated with HEFA technology that are unique or uniquely severe as compared with other biofuel technologies.

The DEIR, however, describes none of this. In its entire 400-plus pages, it does not once even mention or reference HEFA, or in any way describe what it is and how it works. This is a major deficiency, and inadequate disclosure that undercuts the integrity of the entire DEIR analysis, for reasons described throughout this Comment with respect to the risks and impacts that attend HEFA production.

The following subsections describe the aspects of the HEFA process that needed to be included in a description of the Project but were not.

a. HEFA as the Proposed Type of Processing

As noted above, the DEIR never once mentions that HEFA is the technology the Project would employ. It can be discerned nonetheless that HEFA is, in fact, the proposed technology, based on the Project's sole reliance upon repurposed refinery hydrotreaters and hydrocrackers for feed conversion to fuels, and upon repurposed refinery hydrogen plants to produce and supply hydrogen for that hydro-conversion processing. This is confirmed by independent expert review of the Project.^{13 14 15}

But the fact that technical experts (such as Commenters') can read between the lines and discern that HEFA is the proposed technology does not satisfy CEQA's requirement that the County directly disclose this information to the public. Such disclosure was particularly important here given the wide range of existing biofuel technologies and environmentally significant differences between them, and the significant environmental impacts that attend HEFA production. In a revised DEIR, the County should disclose, explain, and evaluate the specific impacts of HEFA production.

b. Capabilities and Limitations of HEFA

HEFA processing technology differs from most or all other commercially available biofuel technologies in many ways linked to environmental impacts, in ways that must be known in order to evaluate Project impacts.^{16 17 18} First, HEFA biofuels can be produced by repurposing

¹³ Karras, G, *Changing Hydrocarbons Midstream*; technical report and accompanying supporting material appendix for Natural Resources Defense Council, San Francisco, CA, June 2021 (Karras, 2021a).

¹⁴ Karras, G, *Unsustainable Aviation Fuel*; technical report for Natural Resources Defense Council, San Francisco, CA, August 2021 (Karras, 2021b).

¹⁵ Karras, G, *Technical Report in Support of Comments Concerning Rodeo Renewed Project*; technical report prepared for Natural Resources Defense Council, San Francisco, CA, December 2021 (Karras, 2021c).

¹⁶ Karras, 2021a and 2021b.

¹⁷ Karras, 2021a.

¹⁸ Karras, 2021b.

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otherwise stranded petroleum refining assets, thereby potentially extending the operable duration and resultant local impacts of large combustion fuel refineries concentrated in disparately toxic low income Black and Brown communities. Second, HEFA diesel can be blended with petroleum diesel in pipelines, petroleum storage tanks, and internal combustion vehicles in any amount, thereby raising the potential for competition with or interference with California climate goals for the development of zero-emission vehicles infrastructure for climate stabilization. Third, HEFA technology has inherent limitations that affect its potential as a sustainable substitute for petroleum diesel, jet fuel, or both - including its low yield on feedstock, high hydrogen demand, and limited feedstock supply. The DEIR fails to disclose or describe any these basic differences between HEFA and other biofuels (having failed to even mention HEFA at all), thereby obscuring unique or uniquely pronounced environmental consequences of the type of biofuel project proposed.

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c. HEFA process chemistry

HEFA process chemistry reacts lipidic (oily) vegetable oils and animal fats with hydrogen over a catalyst at high temperature and very high pressure to produce and alter the chemical structure of deoxygenated hydrocarbons. Although this is done in repurposed refinery equipment, this process chemistry is radically different from petroleum processing in respects that lead directly to potential environmental impacts of the Project.¹⁹ Moreover, site-specific differences in process design conditions²⁰—which have been reported in other CEQA reviews for oil refining projects²¹—can affect the severity of impacts significantly. The DEIR fails to disclose or describe this basic information.

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d. Differing hydrogen demand associated with different feedstocks and product slates

Known environmental emissions and hazards of HEFA processing are related in part to the amount of hydrogen demand per barrel of feed converted to biofuel, which varies significantly among HEFA feedstocks and product production targets.²² The DEIR does not disclose this data. Moreover, to a significant degree, process hydrogen demand and thus resultant impacts may vary depending on plant and Project-specific design specifications, data the DEIR likewise fails to disclose or describe.

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e. Process chemistry of proposed hydrogen production

This deficiency in the DEIR project description fails to inform the public of known climate impacts the proposed Project would cause and fails to disclose data necessary to adequate review of Project impacts. First, the DEIR fails to specifically disclose that the type of hydrogen production proposed for this “renewable” fuels Project would use fossil gas hydrogen

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¹⁹ *Id.*

²⁰ In addition to process-specific operating temperatures, pressures, and engineered process controls such as quench and depressurization systems, examples include process unit-specific input, internal recycle rates, hydrogen consumption rates, and even how those operating conditions interact across refining processes to affect overall hydrogen demand when processing feedstocks of various qualities.

²¹ See Chevron Refinery Modernization Project, SCH# 2011062042, DEIR Appendix 4.3–URM: Unit Rate Model.

²² *Id.*

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production, which, because of its production chemistry, can emit roughly ten tons of carbon dioxide per ton of hydrogen produced.²³ The DEIR further fails to describe the high *and* variable carbon intensity of fossil gas hydrogen technology among specific plants and refineries,²⁴ and the Project-specific hydrogen production design data necessary for impact estimation.

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f. Differences between HEFA and petroleum refining that increase risk of process upset, process safety hazard, and flaring incidents

There is a risk of upsets, fires, explosions, and flaring (Section V) linked to specific process hazards that switching from petroleum to HEFA processing has known potential intensify.²⁵ The DEIR fails to disclose the aspects of the HEFA process creating these hazards, and fails to describe the known differences between HEFA and crude refining that could worsen these impacts.

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g. Process upset, process safety hazard, and flaring incident records at the Refinery

The risk of explosion, fire, and flaring impact of the proposed HEFA refining is associated with specific design and operating specifications of the Refinery units proposed for conversion. These specifications, and the attendant risk, can be estimated using available data concerning past incidents involving the same units.^{26 27} The DEIR fails to disclose or address this incident data.

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The failure to describe anything at all about the proposed new technology makes a meaningful evaluation of its impacts impossible. Moreover, failing to name and describe HEFA technology eliminated the opportunity for the County to assess whether an alternative biofuel production technology (e.g., Fischer-Tropsch synthesis) might result in different impacts. This analytical limitation was compounded by the DEIR's overly narrow description of the Project's purpose described in Section VIII, which accepted at face value Marathon's commercial desire to repurpose its stranded asset to the greatest extent possible, an assumption that biased the DEIR against consideration of alternative technologies.

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2. The DEIR Fails to Disclose Adequate Information Concerning HEFA Feedstocks

HEFA feedstock is limited to lipids (triacylglycerols and fatty acids freed from them) produced as primary or secondary agricultural products, but there are many different oils and fat in this class of feedstocks, and many environmentally significant differences between them in terms of chemistry and process characteristics.²⁸ As discussed in Sections IV, VI, and VII, choice of feedstock has a major effect on the magnitude and potential significance of multiple impacts, from upstream land use impacts to process safety to air emissions.

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²³ Karras, 2021a.

²⁴ Sun et al. 2019. Criteria Air Pollutants and Greenhouse Gas Emissions from Hydrogen Production in U.S. Steam Reforming Facilities. *Environ. Sci. Technol.* 53: 71.3–71.13. DOI: 10.1021/acs.est.8b06197

²⁵ Karras, 2021a,

²⁶ *Id.*

²⁷ BAAQMD Causal Reports for Significant Flaring. BAAQMD Regulations, §12-12-406 of Regulation 12, Rule 12; Bay Area Air Quality Management District: San Francisco, CA. <https://www.baaqmd.gov/rules-and-compliance/current-rules>

²⁸ *Id.*

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The DEIR, however, declines to identify proposed Project feedstocks with any specificity, stating only that anticipated feedstocks include, without limitation, used cooking oil (UCO), fats, oils, and grease (FOG), tallow, “inedible” corn oil (presumably meaning distillers corn oil, or DCO), canola oil, soybean oil (SBO), “other vegetable-based oils,” and/or “emerging and other next-generation feedstocks.” DEIR at 3-25-27. The document does not disclose or analyze the percentage of each feedstock anticipated to be used, stating that it is not feasible to predict source and types of feedstocks because feedstock choice will be “influenced by business considerations and market conditions - described to include commodity prices and fungibility. *Id.* at 3-27.

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This description is entirely inadequate to inform the public regarding the nature and impacts of the Project – regardless of whether or not it is possible to specify an exact quantity of each feedstock that will be used into the future. Even the absence of such precise information, the County was obligated to use available information to estimate the likelihood of any given feedstock or combination of feedstocks will be used. Section IV details some of that information on upstream environmental impacts of land use changes, presenting multiple sources of data concerning availability and current use patterns of known feedstocks. That information is sufficient to develop at least a reasonable prediction of the likely mix, or range of potential mixes.

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The DEIR should have developed scenarios (including a reasonable worst case scenario – see Section IV) for likely feedstock mixes. It should also have specified likely sources for anticipated feedstocks, necessary to facilitate analysis of the upstream environmental impacts of land use changes described in Section IV. Then, as described in that section, the DEIR should have evaluated capping the use of particular feedstocks as a mitigation measure.

3. The DEIR Fails to Disclose a Project Component Designed to Debottleneck Hydrogen-limited Onsite Refining Capacity

Phillips 66 added a Project component after the public scoping process that is not disclosed in the DEIR, but may result in significant impacts. This component would relieve a bottleneck in hydrogen-limited biofuel processing at the Refinery by repurposing additional existing refinery equipment to co-produce hydrogen as a byproduct of processing gasoline feedstocks derived from semi-refined petroleum imported to Rodeo. Although the DEIR identifies the physical changes integrated into the Project post-scoping, it does not identify the purpose of these changes as de-bottlenecking, and hence fails to disclose and evaluate the environmental impacts of such debottlenecking, which will result in additional onsite processing of petroleum and biomass.

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As discussed in the previous subsection, the DEIR does not address the process role of hydrogen in the HEFA process at all; and hence does not evaluate HEFA process demand. As such, it fails to identify an existing hydrogen bottleneck at the Refinery which, if removed, would enable processing the additional pretreated feedstock the revised Project would produce. The County could (if it had focused on the HEFA process at all) have readily identified this bottleneck by comparing hydrogen production capacity and process hydrogen demand data for

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the disclosed Project components.²⁹ Had it done so it would have found that the repurposed hydrogen plants cannot actually supply enough hydrogen to refine 80,000 b/d of pretreated vegetable oils; and that this hydrogen bottleneck is particularly severe for jet biofuel production. Targeting HEFA jet fuel, a more hydrogen-intensive refining mode,³⁰ the hydrogen bottleneck could limit onsite biofuel refining capacity to only about 60% to 70% of pretreated feed capacity.³¹

The debottlenecking can be discerned to changes Phillips 66 made with respect to permit retention. The company changed its original Project description so as to retain permits for existing refinery coking and naphtha reforming units, so that those units could continue or resume operation as part of the Project.³² Refinery crude distillation units would be shuttered upon full Project implementation,³³ and the coking and reforming units would not process HEFA feedstock or whole crude. Instead, repurposing the coking and reforming units would involve processing semi-refined petroleum acquired from other refineries. Phillips 66 recently stated in other contexts that it is shifting the specialty coke production from its petroleum refining to produce graphite for batteries³⁴ and planning to use the Rodeo coking unit for that purpose.³⁵ The coking would co-produce light oils its reformers would then convert to gasoline blend stocks.

The debottlenecking element is that the light oil reforming would in turn co-produce hydrogen, thereby alleviating the jet biofuel production bottleneck described above. The DEIR nowhere identifies this important impact of the retained permits.

This undisclosed hydrogen debottlenecking action and the disclosed Project components would be interdependent components of the Project. The hydrogen debottleneck component depends on repurposing coking and reforming units that the Project would free from crude refining support service. The disclosed Project components, in turn, depend on the undisclosed hydrogen debottleneck for the ability to use their full capacity to produce biofuels, and especially HEFA jet fuel. Indeed, without relieving the hydrogen bottleneck the Project might not long be viable. The hydrogen debottleneck component would afford the ability to engage in more hydrogen-intensive jet fuel processing, which could boost jet biofuel yield on biomass feedstock from as little as 13% to as much as 49%.³⁶ That could allow shifting to jet biofuel production without more drastic cuts in total Project biofuel production as State zero-emission vehicle policies phase out diesel biofuels along with petroleum diesel demand.

Thus, Phillips 66 is highly incentivized to debottleneck its biorefinery; has asserted informal plans *and* formal Project objectives³⁷ consistent with that result; and crucially, has changed its Project to include the specific equipment which would be used to debottleneck the

²⁹ Karras, 2021b.

³⁰ *Id.*

³¹ Karras, 2021c.

³² BAAQMD Application, 2021. *Compare* also Phillips 66 initial Project Description; DEIR pp. 3-28, 3-29.

³³ DEIR pp. 3-28, 3-29.

³⁴ Phillips 66 3Q 2021 Earnings Conference Call; 29 Oct 2021, 12 p.m. ET.

³⁵ Personal communication between Charles Davidson, Rodeo Citizens Association, and Greg Karras, Community Energy reSource. 28 October 2021.

³⁶ Pearlson et al., 2013.

³⁷ DEIR p. 3-22 (objectives to maximize production of renewable fuels and reuse existing equipment to do so).

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Project's capacity. In the absence of a binding assurance that petroleum products processing will cease, the DEIR should have identified this hydrogen debottleneck as a component of the Project, and its potentially significant environmental impacts evaluated and mitigated to the extent possible.

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C. The Project Description Failed to Disclose the Operational Duration of the Project, Essential to Describing Impacts that Worsen Over Time

Essential to evaluating environmental impacts of the Project is knowing the period over which the impacts could occur, and could worsen. Thus, the operational duration of the Project is highly relevant to evaluating impacts that may accumulate or otherwise worsen over time.

However, the DEIR fails to disclose the anticipated and technically achievable operational duration of the Project. The necessary data and information could have been obtained from various sources. First, the County should have taken into consideration the declining place of combustion fuel as California moves toward its climate goals, and the County fulfils its own "Diesel Free in '33" pledge (Section VI). Additionally, the County could have requested operational duration data from Phillips 66 as necessary supporting data for its permit application. Such data could also have been accessed from publicly reported sources. For example, process unit-specific operational duration data from Bay Area refineries, including data for some of the same types of process units to be repurposed by the Project, have been compiled, analyzed and reported publicly by Communities for a Better Environment.³⁸

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III. THE DEIR IDENTIFIES AN IMPROPER BASELINE FOR THE PROJECT³⁹

The DEIR commits a major error in using an operating crude oil refinery as a baseline for determining impact significance. All available information indicates that Phillips 66 is in the process of phasing out its Santa Maria refinery, the only available source of petroleum feedstock for the Refinery, regardless of whether the County grants a permit for the Project. The end of petroleum refining at the Refinery is thus inevitable in the near term, with or without the Project. It is hence deeply misleading that the DEIR identifies previous years in which the Refinery was fully operational as a Project baseline. Failure to inform the public of the Refinery's existing trajectory toward ending petroleum processing creates the incorrect impression that the Project reflects a reduction in impacts from an artificially inflated baseline.

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A. CEQA Requires Use of an Accurate Baseline

The purpose of a description of baseline conditions is "to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts." CEQA Guidelines at 15125(a). The baseline should generally "describe physical environmental conditions as they exist at the time the notice of preparation is published." CEQA Guidelines § 15125. But where "use of existing conditions

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³⁸ Karras, 2020. Decommissioning California Refineries

³⁹ Supplemental information in support of this analysis is provided in Karras 2021c accompanying this comment, in the section entitled "The DEIR Obscures the Significance of Project Impacts by Asserting an Inflated Alternative Baseline Without Factual Support."

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would be either misleading or without informative value to decision makers and the public.” use of a baseline reflecting projected future conditions is appropriate. *Id.* § 15125(a)(1) and (2).

“An approach using hypothetical allowable conditions as the baseline results in ‘illusory’ comparisons that ‘can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts,’ a result at direct odds with CEQA’s intent.” *Communities for a Better Environment v. South Coast Air Quality Management District*, (2010), 48 Cal4th 310, 322. Accordingly, the existence of permits allowing a certain level of operation is not appropriately determinative of baseline “physical environmental conditions.” *Id.* at 320-21 (“A long line of Court of Appeal decisions holds, in similar terms, that the impacts of a proposed project are ordinarily to be compared to the actual environmental conditions existing at the time of CEQA analysis, rather than to allowable conditions defined by a plan or regulatory framework.”).

Thus, the DEIR analysis concerning baseline identification is legally deficient. The issue is not whether the Refinery’s emissions fluctuated over time during past years. DEIR at 3-36, citing CEQA Guidelines § 15125(a)(1). It is that the Refinery’s current existing conditions reflect a winding down of its crude oil processing operations; such that its inevitable near-term future conditions involve not processing crude oil at all.

B. Available Evidence Makes Clear that Phillips 66 is Winding Down Operations at the Refinery Regardless of Whether the Project Moves Forward

The DEIR selects 2019 as the baseline year for evaluating Project impacts. DEIR at 3-37 – 38. However, this choice of baseline reflects neither current nor near-term future reality. In fact, the steadily declining availability of crude feedstock supply to the Refinery makes clear that it is simply not possible that 2019 production levels will continue indefinitely.

As discussed in detail in the sections below, available evidence leads to the conclusion that the Phillips 66 Santa Maria refinery (Santa Maria facility) and Refinery which functionally depends on it are on a trajectory to reduce or cease their crude processing operations in the relatively near term even if the County does not approve the Project, due to supply limitations and the increasingly poor economics of crude oil refining. Thus, the appropriate baseline for assessing Project impacts is not indefinitely continued crude oil refining, but rather a slowdown or shutdown of one or both facilities. This would mean that the Project would not achieve all - or possibly any - of the claimed emissions reductions set forth in the Project application; and might, in fact, increase emissions significantly over the baseline.

The near-term inevitability of the Refinery’s curtailment or closure is evident in the history of the Refinery’s operations, and available public data, as discussed in the sections below. Indeed, it is evident even in the Project application (Application), which assumes closure of the Phillips 66 Santa Maria facility – a current source of Rodeo feedstock via pipeline. It asserts that Phillips 66 needs authorization to increase crude and gas oil imports over its Rodeo marine terminal by up to 73,818 barrels per day⁴⁰ (b/d) until its biofuel conversion is built and

⁴⁰ The current marine terminal input limit is 51,182 b/d, and Phillips 66 proposes to increase that limit up to 125,000 b/d. Notice of Preparation at 3.

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fully online,⁴¹ "to accommodate the idling and decommissioning of the Santa Maria facility in San Luis Obispo County."⁴² Yet the Application does not specifically identify closure of the Santa Maria refinery as a component of the Project – it simply assumes it as a background fact.⁴³

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The following sections address in detail why the DEIR conclusions re an appropriate baseline are based in inadequate informational disclosure, and unsupported by substantial evidence.

1. Inherent Infrastructure Constraints Limit Crude Feedstock Availability to the SF Complex

The DEIR expressly acknowledges that continued crude refining would be infeasible at the Refinery if and when the Refinery loses access to crude and semi-refined crude from the Santa Maria facility and pipeline system. DEIR at 5-3. As discussed below, the Santa Maria facility is essential to the Refinery's ability to obtain refining feedstock other than crude brought in over the wharf.

It is thus fatal to the DEIR's baseline analysis that the DEIR fails to disclose factors that are already leading to the inevitable near-term closure of the Santa Maria facility, regardless of the Project. Specifically, the DEIR fails to disclose or evaluate (and also erroneously describes) the functional interdependence of the Refinery, Santa Maria facility, and pipeline system as essential components of the San Francisco Refining Complex (SF Complex); the unique geography of these SF Complex components; and the resultant unique limitations in currently accessible crude feedstock for the Santa Maria facility and hence for the Refinery. These unacknowledged limitations on the Refinery's ability to operate exist independently of Project-related decisionmaking. And as discussed below, they will make continued crude processing at the Refinery at historic levels impossible – belying the baseline identified in the DEIR.

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Map 1 illustrates the unique geographic distribution of SF Complex refining and pipeline components, in relation to the landlocked crude resources the SF Complex was uniquely designed to access for feedstock - including pipeline-linked Outer Continental Shelf (OCS), Central Coast onshore, and San Joaquin Valley crude resources.⁴⁴ Crucially, the Santa Maria facility, marked "B" in Map 1, has no seaport access to import foreign and Alaskan crude via marine vessels,⁴⁵ which refiners statewide have come to rely upon for the majority of statewide refinery feedstock.⁴⁶

⁴¹ The increase would be from the current marine terminal input limit of 51,182 barrels per day (b/d) limit now to 125,000 b/d.

⁴² Application at 12.

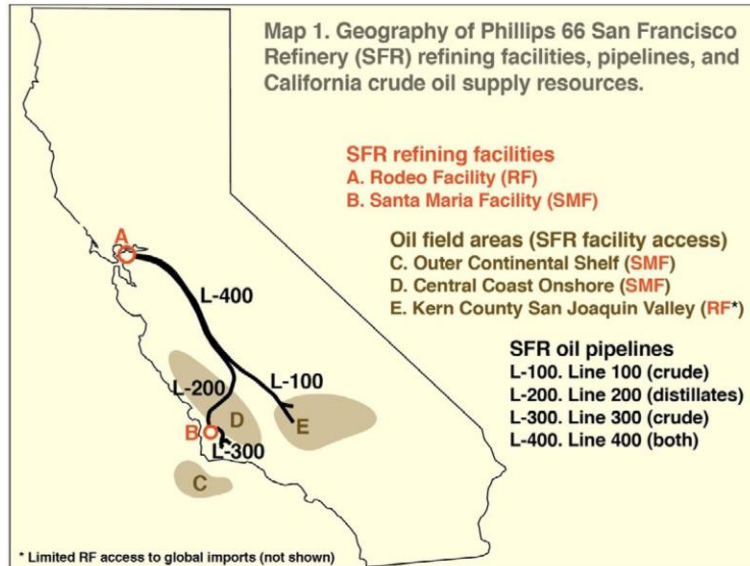
⁴³ *Id.* at 11-12 (listing Project components).

⁴⁴ Map 1 is only approximately to scale, consistent with facility and pipeline maps in the DEIR, and based also upon state and federal oilfield location and accessibility data, as documented in Karras, 2021c.

⁴⁵ SLOC, 2014. *Phillips 66 Company Rail Spur Extension and Crude Unloading Project Revised Public Draft Environmental Impact Report*; prepared for San Luis Obispo County (SLOC) by Marine Research Specialists (MRS). October 2014. SCH# 2013071028. Excerpt including title page and project description.

⁴⁶ *Crude Oil Sources for California Refineries*; California Energy Commission: Sacramento, CA. (CEC, 2021a).

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As illustrated, the sources of crude for the Santa Maria facility are very limited. There is only one local pipeline supplying crude to the Santa Maria facility, limiting its ability to access crude from outside the local area.⁴⁷ The Santa Maria facility has access to several local onshore oilfields via truck transport to a local pipeline pump station, but such transport is sufficient to supply only about half of the facility’s capacity.⁴⁸ As of 2014, OCS oilfields connected to the Santa Maria facility’s single crude input pipeline via pipelines from Santa Barbara County (“C” in Map 1) supplied up to 85% of the Santa Maria facility crude input.⁴⁹ By contrast, the largest still-producing onshore oilfield that historically supplied the Santa Maria facility, the San Ardo oilfield in Monterey County (part of “D” in Map 1) supplied only 5–10% of its crude as of 2014.⁵⁰ The DEIR does not disclose this crude supply limitation of the Santa Maria facility – and hence the Refinery – or evaluate the Refinery’s resultant reliance on the portion of OCS crude which the Santa Maria facility can access via pipelines and historically smaller onshore crude resources in San Luis Obispo County and parts of Santa Barbara and Monterey counties (“D” in Map 1).⁵¹

The DEIR commits a clear error in its setting description that further obscures the Santa Maria facility’s very limited access to crude oil supply – indicating access to resources that that facility does not, in fact, have. Pipeline system Line 100 (“L-100” in Map 1), which runs from Kern County oilfields in the San Joaquin Valley (“E” in Map 1), does not connect at all to the Santa Maria facility. It runs north to the junction with Line 200 from the Santa Maria facility

⁴⁷ SLOC, 2014.
⁴⁸ SLOC, 2014.
⁴⁹ SLOC, 2014.
⁵⁰ SLOC, 2014.
⁵¹ Karras, 2021c.

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and Line 400 to the Refinery, where the Kern crude and partially refined oil output from the Santa Maria refinery both flow north through Line 400 to the Refinery.⁵² The DEIR, however, erroneously describes Line 100 as directly supplying the Santa Maria refinery: “Two other pipelines—Line 100 and Line 300—*connect the Santa Maria Site* to crude oil collection facilities elsewhere in California ... [including] Kern County ...” DEIR at 3-21 (emphasis added). This clear error in the DEIR obscures the fact that the Santa Maria refinery lacks access to San Joaquin oilfields—the largest remaining regional crude resource in California.^{53 54}

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The Refinery likewise lacks access to the Kern County oil fields if the Santa Maria facility closes, despite the fact that Line 400 (connected to the Kern County fields via Line 100) runs directly to it. The DEIR correctly states that the entire pipeline system would shutter in place when the Santa Maria facility closes, providing that conclusion as a reason for a “transitional” increase in permitted crude inputs to the Refinery through its marine terminal. DEIR at 3-32; *see Id.* at 5-3.⁵⁵ Although the DEIR does not explain this, the reason the pipeline system would not continue to function after the closure of the Santa Maria facility is that lines 100 and 400 cannot physically function effectively without input from the Santa Maria facility. This is because the naphtha and pressure distillate from the Santa Maria facility thins the viscous (thick like molasses) Kern County San Joaquin Valley Heavy crude (“E” in Map 1), thus enabling it to move through Line 400 to the RF.⁵⁶

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Thus, in baseline conditions – without the “transitional” marine terminal throughput increase – the Refinery’s only potential source of crude is the limited volume of crude it can bring in over the wharf at currently permitted volumes. Those permitted volumes are enough to supply only 47 percent of the Refinery’s throughput capacity, as explained in the DEIR analysis of the alternative of shutting down the Santa Maria facility but keeping the Refinery open. DEIR at 5-3. Processing only these limited volumes brought in over the wharf over current limits would result in the refinery operating at a far lower throughput rate than described in the DEIR’s baseline scenario. . The DEIR functionally already recognizes that this scenario is not realistic, having acknowledged that continued crude refining would be infeasible at the Refinery if and when the Refinery loses access to crude and semi-refined crude from the Santa Maria facility and pipeline system. DEIR at 5-3.

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⁵² Karras, 2021c. Careful review of DEIR Figure 3-5 confirms this accurate description of pipeline flows, once the reader knows that crude does not flow to the SMF through Line 200. However, the erroneous assertion in the text on page 3-21 of the DEIR is misleading on that point because it could only make sense by assuming the opposite.

⁵³ Karras, 2021c.

⁵⁴ This error in the DEIR further compounds its failure to disclose the Santa Maria facility’s – and hence the Refinery’s – very limited access to crude, in the absence of seaport access. Gasoline, diesel and jet fuel production from the crude accessed and partially refined into naphtha and gas oil (“pressure distillate”) at the Santa Maria facility, then sent through lines 200 and 400, relies entirely on further processing at the Refinery (“A” in Map 1). This too, is not described in the DEIR.

⁵⁵ Karras, 2021c.

⁵⁶ Karras, 2021c.

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2. The Permitting History of the Refinery Evidences Declining Crude Feedstock Availability

Having failed to accurately describe the infrastructure constraints limiting the Refinery’s access to crude oil, the DEIR further fails to disclose information indicating that even this limited supply is diminishing – hence, by the company’s own admission, foreclosing the Refinery’s ability to continue processing crude at historic levels in the absence of the Project. Had they been included in the DEIR, would have contravened the County’s conclusion that these historic levels represent an appropriate baseline (and no project alternative, as discussed in Section VIII).

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Specifically, the DEIR fails to disclose that prior to proposing this Project, Phillips 66 warned that lack of access to crude oil, with such access being circumscribed as described in the subsection above, could lead to processing rate curtailments at the Refinery. On September 6, 2019 Carl Perkins, then the Phillips 66 Rodeo refinery manager, wrote Jack Broadbent, the Executive Director of the Bay Area Air Quality Management District, offering “concessions” in return for advancing a project proposed by the refiner to increase crude and gas oil imports to the Refinery via marine vessels.⁵⁷ Perkins stated that proposal—which was never approved or implemented—would “greatly enhance the continued viability of the Rodeo Refinery if and when California-produced crude oil becomes restricted in quantity or generally unavailable as a refinery process input.”⁵⁸ Perkins further stated that the refiner “seeks to ensure a reliable crude oil supply for the future. If this potential process input problem is not resolved, it could lead to processing rate curtailments at the [Rodeo] refinery”⁵⁹

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Underpinning these concerns with continued crude oil availability at the Refinery is the fact that the economics of obtaining feedstock from the Santa Maria facility are becoming less optimal; that production at the Santa Maria facility has been sharply declining.; and that these factors led to a decision to close the Santa Maria facility independent of the Project. Before its warning to the Bay Area Air Quality Management District described above, and before applying to that air district for expanded crude imports through the Refinery’s marine terminal, Phillips 66 sought access to new sources of crude via oil trains which would unload crude imported from other U.S. states and Canada at a proposed new Santa Maria facility rail spur extension.⁶⁰ In its review of that proposed rail spur, San Luis Obispo County described the limited Santa Maria facility access to crude and how that limited its access to competitively priced crude, then previewed, during 2014, the 2019 warning by Phillips described herein above: “Phillips 66 would like to benefit from these competitively priced crudes. In the short-term (three to five years), the availability of these competitively priced crudes would be the main driver ... In the long-term, the ... remaining life of the refinery is dependent on crude oil supplies, prices and overall economics.”⁶¹ The DEIR does not disclose those findings. And in fact, permits for that rail spur extension were denied and it was never built. The DEIR fails to evaluate whether the “long-term” need to replace declining sources of crude for the Refinery identified in 2014 is now an acute short-term need.

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⁵⁷ Perkins, 2019.

⁵⁸ Perkins, 2019.

⁵⁹ Perkins, 2019.

⁶⁰ SLOC, 2014.

⁶¹ SLOC, 2014.

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Recent events, undisclosed in the DEIR, indicate the need is, indeed, acute at the Santa Maria facility on which the Refinery depends. By 2017, ExxonMobil proposed to temporarily truck crude to the Santa Maria facility, a proposal the Santa County Planning Commission later voted to deny.⁶² Phillips 66 abandoned its proposed Santa Maria facility pipeline replacement project in August 2020.⁶³ This fact strongly indicates that the company's plan to decommission the Santa Maria facility was developed independently from the Project, and was already underway before Phillips 66 filed its Application with the County.

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Overall, it is important to recognize that no other California refinery is built to access isolated crude resources with landlocked front-end refining hundreds of pipeline miles from its back-end refining. And no other faces the crisis this built-in reliance on geographically limited and finite resources has wrought. The DEIR's failure to recognize and address these unique circumstances faced by the Refinery is a fatal flaw.

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3. Available Crude Supply Data Demonstrate Declining Feedstock Availability at the Santa Maria Facility

The County could and should have disclosed and considered, in setting the baseline, abundant crude oil production data indicating that available supply to the Santa Maria facility – and hence to the Refinery – is being steadily choked off as the California production on which it is dependent declines. Failure to do so undercuts the validity of the baseline determination, and renders it unsupported by substantial evidence. Given the decline trajectory, there is no sound basis to assume that future production levels at the Santa Maria facility and the Refinery will continue to match 2019 levels. Indeed, the decline points to and supports an inference that the Santa Maria facility is already headed for closure.

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In 2014 San Luis Obispo County conducted the type of crude access limitation review for the Santa Maria facility that found steeply declining crude feedstock availability. This review was referenced in the Scoping Comments but ignored by the County. It should not have been, because it is pertinent to the question of baseline and clearly undercuts the DEIR's conclusion regarding it. It should hence have been disclosed and addressed in the DEIR – especially given that (as discussed below and above), constraints have only gotten more severe in the intervening years. San Luis Obispo County found that as of 2014, the facility's continuing crude supply was already in doubt:

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Having only one pipeline system available for delivering crude oil to the refinery limits the [Santa Maria facility] refinery's ability to obtain crude oil from sources outside the local area. ... In the long-term, the need [for the Santa Maria facility to access new sources of crude] could be driven by declines in local production of crude oil that can be delivered by pipeline. Production from offshore ... (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 ...

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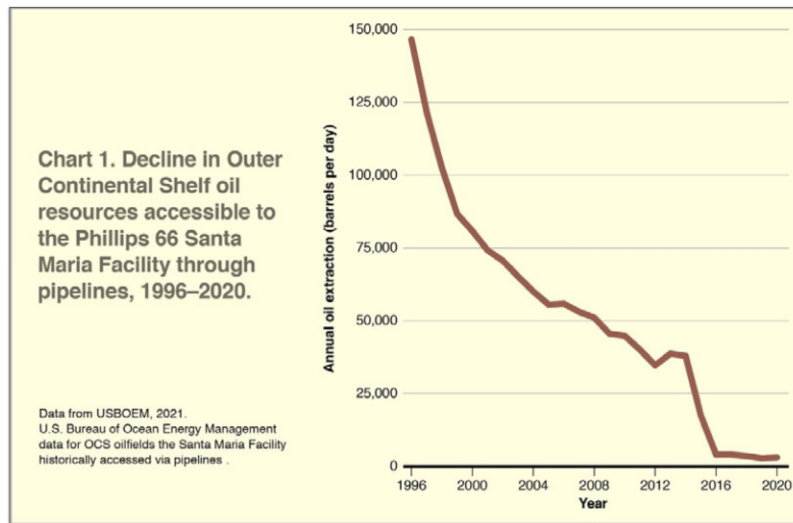
⁶² SBC, 2021. *ExxonMobil Interim Trucking for SYU Phased Restart Project Status, Description, Timeline*; Santa Barbara County Department of Planning & Development. Website page accessed 18 November 2021.

⁶³ Scully, J., 2020. Phillips 66 Plans 2023 Closure of Santa Maria Refinery, Pulls Application for Pipeline Project. <https://www.noozhawk.com/article/phillips-66-closure-of-santa-maria-refinery-planned-for-2023-20200813>

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and currently production is around 61,000 barrels per day for both onshore and offshore oil fields ... [T]he success and amount of additional production from [new] projects is currently speculative.⁶⁴

Currently available data confirm that feedstock availability at the Santa Maria facility has continued to deteriorate through the present time. The U.S. Bureau of Ocean Energy Management (BOEM) reports production data for OCS oilfields that the Santa Maria facility historically and currently can access via pipelines.^{65 66} These data, which the DEIR does not disclose or discuss, are summarized in Chart 1.



The BOEM data illustrated in Chart 1 indicate that crude production from OCS oilfields that the Santa Maria facility has historically been able to access continued in steep long-term decline after the 2014 San Luis Obispo analysis. From an annual average of approximately 146,000 barrels per day (b/d) in 1996, OCS oil production from these fields,⁶⁷ collectively, fell by 98% to approximately 3,000 b/d in 2020.⁶⁸ Had the DEIR disclosed these data, the County could and should have found that the historically dominant OCS source of crude refined by the Santa Maria facility is in steep terminal decline; and hence that a baseline grounded in assumptions of historic production levels is unsupported.

⁶⁴ SLOC, 2014.

⁶⁵ USBOEM, 2021a. U.S. Bureau of Ocean Energy Management. *Pacific Production*; data tables for the Pacific OCS Region, 1996–2021. <https://www.data.boem.gov/Main/PacificProduction.aspx#ascii>

⁶⁶ USBOEM, 2021b. U.S. Department of the Interior, Bureau of Safety and Environmental Enforcement/Bureau of Ocean Energy Management, Pacific OCS Region. Map updated May 2021.

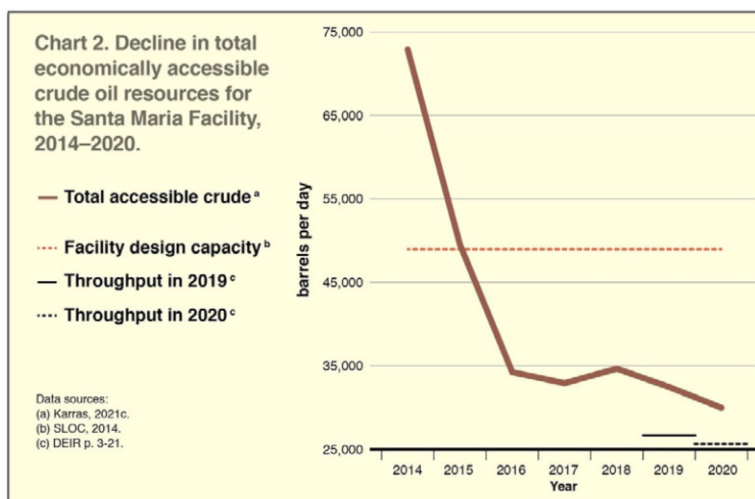
⁶⁷ These OCS oilfields that the SMF could historically or currently access via pipelines are the Point Pedernales, Point Arguello, Hondo, Pescado, and Sacate fields. *See* USBOEM, 2021b.

⁶⁸ USBOEM, 2021a.

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State data, also not disclosed or addressed in the DEIR, further support a conclusion that available feedstock for the Santa Maria facility (and hence the Refinery) is steadily and precipitously declining. The California Air Resources Board (CARB) and the Geologic Energy Management Division (CalGEM, formerly DOGGR) both have collected data concerning the total annual amounts of crude actually refined from each OCS and State offshore and onshore oilfield.⁶⁹ The County could have, but did not, report and evaluate changes in the annual volumes of crude actually refined in California which were derived from OCS and onshore oilfields that the SMF can access.⁷⁰ Chart 2, based on the CalGEM/DOGGR data, confirms the declining availability of crude feedstock supply to the Santa Maria facility.⁷¹



The falling brown curve illustrates the rapid decline in total crude accessible to the Santa Maria facility that was refined statewide since 2014. Most importantly, its fall below the dashed red line indicates this dwindling crude supply could no longer support Santa Maria facility operation at or even near capacity. From approximately 73,000 b/d in 2014, total refining of Central Coast onshore, offshore, and OCS crude accessible to the Santa Maria facility via truck and pipeline fell by 59%, to approximately 30,000 b/d in 2020.⁷² In 2019, before COVID-19, the Santa Maria

⁶⁹ CARB, various years. *Calculation of Crude Average Carbon Intensity Values*; California Air Resources Board: Sacramento, CA. In LCFS Crude Oil Life Cycle Assessment, Final California Crude Average Carbon Intensity Values. Accessed October 2021. <https://ww2.arb.ca.gov/resources/documents/lcfs-crude-oil-life-cycle-assessment>

⁷⁰ DOGGR, 2017. *2017 Report of California Oil and Gas Production Statistics*; California Department of Conservation, Division of Oil, Gas, & Geothermal Resources: Sacramento, CA.

⁷¹ For example, based on evidence described in sections B.1.1 and B.1.2 herein, Chart 2 includes all onshore and State offshore fields identified by DOGGR (2017) in District 3, and OCS oilfields included in Chart 1 as noted above, and optimistically assumes that no other California refiner competes for access to their production.

⁷² Karras, 2021c.



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facility was operating at only 26,700 b/d,⁷³ 45% below its 48,950 b/d capacity.⁷⁴ In 2020, as accessible crude fell by roughly another 2,000 b/d,⁷⁵ the SMF cut rate by another 1,000 b/d to 25,700 b/d,⁷⁶ fully 47% below its design capacity.⁷⁷

These data demonstrate that the *currently* accessible crude supply does not allow operation at historic rates—the baseline condition conclusion in the DEIR—and strongly suggest that further dwindling access to crude would further curtail, then shutter, the crude refinery.

The County should have disclosed and evaluated all of this data, but it did not. It should additionally have required Phillips 66 to disclose relevant correlative data – *i.e.*, to provide volumes of each crude refined at each facility. The County’s failure to do any of that obscures the plain falsity of its conclusion that a refinery with steadily less access to crude will continue to refine at current levels indefinitely (DEIR at 3-37). The County has thus failed to inform the public that a set of conditions that the DEIR plainly states would end crude refining at the Refinery (DEIR at 5-3) are imminently about to materialize.

4. Production Declines in the SF Complex Reflect Larger National Trends

The likelihood that production levels will continue to decline in the SF Complex is underscored by current national trends in refinery economics. Both the Santa Mara facility and the Refinery are impacted by the overall increasingly poor profit margins of crude oil refining, which has led to the closure, or conversion to biofuels production, of numerous refineries in California and throughout the world. The COVID pandemic caused short-term volatility; but refinery profits across the nation have been declining since before the pandemic. Refineries are closing or converting to biofuel production in the United States and throughout the world, and there is significant doubt whether the economics of refining will improve post-pandemic. The International Energy Agency (IEA) reported in November 2020 that roughly a dozen refinery closures had been announced in the previous few months, with the bulk of the capacity closures – over 1 million b/d – happening in the United States. IEA stated in its monthly report, “There were capacity shutdowns planned for 2020-2021 prior to COVID-19, but the bulk of the new announcements reflect pessimism about refining economics in a world suffering from temporary demand collapse and structural refining overcapacity.”

Structural factors that underly this trend, predating but accelerated by COVID-19, are especially pronounced in the U.S. at West Coast refineries. Growth reversed years ago in both the crude supply and the market demand that California refineries were first built to tap. Refiners statewide reacted by increasing production through increasing reliance on oil imports and export fuels markets. The sustainability problem with that path-dependent reaction was

⁷³ DEIR p. 3-21.

⁷⁴ SLOC, 2014.

⁷⁵ Karras, 2021c.

⁷⁶ DEIR p. 3-21.

⁷⁷ This very low SMF production rate in 2019 would have reduced SMF output to the RF and thus capacity to thin and enable the movement of viscous San Joaquin Valley crude through Line 400 to the RF. Among other things, that reduction in RF pipeline receipts during 2019 might help to explain the anomalously high RF marine vessel traffic in 2019 reported by the DEIR.



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further revealed by COVID-19. From March 20, 2020, through January 15, 2021, fully one-fourth of statewide refining production became unproductive assets as a side effect of the pandemic, which paused personal travel. Perhaps most dispositively, even during the recent temporary surge in statewide and West Coast demand for petroleum fuels, up to 305,000 barrels per calendar day of statewide refining capacity—far more than the total capacity of this Phillips refinery—remained idle.⁷⁸ Phillips 66 faces this statewide overcapacity problem, along with the rapid terminal decline of site-specific crude resources that its refining facilities were built for and remain uniquely dependent upon.

5. Conclusion Regarding the DEIR Baseline Analysis.

The DEIR acknowledges both that crude refining at Rodeo would be infeasible without the Santa Maria facility and pipeline connecting it to the Refinery (DEIR at 5-3), and that “throughput at the Santa Maria Site has declined over time ..” (p. 5-12). However, it fails to disclose the key facts driving the future of the Santa Maria facility and the Refinery described above. It then fails to draw the necessary conclusion from those facts, which is that Refinery production will be increasingly curtailed under status quo conditions; and to apply that conclusion to its selection of a baseline. The DEIR’s passing statement that “declining production is not equivalent to closure” (DEIR 5-12) is meaningless and uninformative. The question is not whether those two things are “equivalent”; it is whether declining production undercuts the DEIR’s assumption that production will continue at historic levels; and whether the decline signifies a likelihood of near-term closure that should have been disclosed and evaluated as part of determining an accurate baseline (as well as no project alternative).

An accurate baseline would be based on the reality that refining will not and cannot continue at 2019 levels, or anything close to them. The DEIR must be revised and recirculated with full information addressing this reality.

IV. THE DEIR FAILED TO CONSIDER THE UPSTREAM ENVIRONMENTAL IMPACTS OF FEEDSTOCKS

As the largest biofuel refinery in the world, the Project would by definition consume unprecedented volumes of feedstock – inevitably much of it consisting of agricultural food products such as soybean oil. Both the environmental analysis for the California 2017 Scoping Plan and the Low-Carbon Fuel Standard (LCFS) expected localities to analyze and mitigate the potentially destructive consequences of such food crop and food system-related biofuels. Yet remarkably, the DEIR is virtually devoid of any discussion of the environmental impact of this unavoidably massive upheaval in the nation’s agricultural systems, with global implications.

Commenters’ Scoping Comments provided the County with abundant information concerning the potential upstream environmental impact of the Project’s proposed feedstocks, including through indirect land use changes.⁷⁹ The Scoping Comments offered reliable data that

⁷⁸ Karras, 2021c.

⁷⁹Scoping Comments, pp. 10.



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indicates severe shortages in non-food crop sources such as waste oil and animal fats will necessarily require the Project to make use of large amounts of food crop oils, most notably soybean oil.⁸⁰ Commenters pointed to studies that have documented the unintended economic, environmental, and climate consequences of using fungible feedstock to produce biofuels. Although the environmental and climate impacts of each may vary in biofuel production, food crop oils share a basic chemical structure that allows them to be used interchangeably or substituted for each other in the market—a characteristic called fungibility. Most notably, Commenters documented the massive spike in demand for biofuel feedstocks that will be induced by the Project.⁸¹

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The DEIR effectively disregards all this information. None of the extensive scientific research and data provided by Commenters concerning the potential upstream impact of food crop feedstocks is even referenced, much less considered.

Ultimately, the DEIR concludes, without any analysis resembling an evaluation of either displacement or induced land use changes, that the Project will have no impact on agricultural or forestry resources. DEIR at 4-1. It improperly narrows the geographic scope to “entirely within the developed areas of the Rodeo Site, Carbon Plant, and the Santa Maria Site.” *Id.* As a result, the DEIR’s very limited discussion and conclusions concerning upstream environmental impacts suffers from the following deficiencies, addressed at greater length in the sections below:

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- *Misplaced reliance on the LCFS.* Implicitly, the DEIR appears to justify rejecting the Scoping Comments’ concerns about the inducement land use changes based on the existence of the State’s Low Carbon Fuel Standard (LCFS), which draws on an analysis of upstream impacts. DEIR at 4.6-212, 4.8-266, 4.8-284. That reliance is entirely misplaced.
- *Failure to fully describe feedstocks and their limited availability.* The DEIR fails to fully identify and analyze all potential feedstock the Project will be capable of processing. It merely states what feedstocks the Project’s slate is “anticipated”, DEIR at 3-25-27; see Section II), without describing the factors that will determine the feedstock slate. The DEIR makes a sweeping comment that feedstock combinations cannot be predicted with “any degree of certainty,” but data collected for over a decade indicates otherwise. The analysis makes no reference to this exemplary data presented in the Scoping Comments concerning the limited availability of biofuel feedstocks, particularly for waste oils and animal fats, and the impact of that limited availability on the likely feedstock mix for the Project.⁸²
- *Failure to address impact of feedstock fungibility with an indirect land use change (ILUC) and displacement analysis.* The DEIR does include a discussion of the fungibility of feedstock commodities, DEIR 3-27, but fails to follow through with the corresponding ILUC and displacement analyses that would allow the County to assess the environmental and climate impacts of ILUC and displacement changes.
- *Failure to address the magnitude of feedstock demand increase.* The Scoping Comments set forth the large percentage increase in demand for food system-related feedstocks of

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⁸⁰ Scoping Comments, pp. 12-14.

⁸¹ Scoping Comments, pp. 13.

⁸² *Id.*

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the type proposed to be used for the Project. These enormous spikes receive no mention in the DEIR.

- *Failure to address environmental impacts from land use changes caused by feedstock demand increases.* There is now broad consensus that increased demand for food crop oil biofuel feedstock has induced land use changes with significant negative environmental and climate consequences. Of particularly great concern are the studies that document a link between increased demand for SBO to a dangerous increase in palm oil production.
- *Failure to meaningfully address mitigation of upstream environmental impacts.* Meaningful mitigation measures, not addressed in the DEIR, would include limiting use of the most harmful types of feedstocks and those likely to induce increased production of such feedstocks. It is likely that the County would need to limit at least two of the feedstock identified in the DEIR—SBO and DCO—as a mitigation measure.

A. Previous LCFS Program-Level CEQA Analysis Does Not Exempt the County from Analyzing Impacts Analysis of Project-Induced Land Use Changes and Mitigating Them

The DEIR includes numerous references to the California Low Carbon Fuel Standard (LCFS) crediting system. To the extent the County may take the position that any land use impacts have already been addressed in the environmental analyses to adopt and amend the LCFS, that position is unsupported.⁸³ While CARB may have evaluated, considered, and hoped to mitigate greenhouse gas emissions from the transportation sector in the design of the LCFS, its land use change modeling was one factor in the quantification of carbon intensity (CI) and associated credits generated for an incremental unit of fuel. It does not purport to assess the impact of an *individual project*, which produces a specific volume of such fuel using a knowable array of feedstocks. That is the County’s job in this CEQA review.

The LCFS analysis is not a substitute for CEQA because it does not establish or otherwise imply a significance threshold under CEQA Guidelines § 15064.7. The LCFS is a “scoring system” in that the quantity of LCFS credits available for each barrel of fuel produced is based on the fuel’s “score”—its carbon intensity (CI). The DEIR uses broad language to describe how the LCFS considers the “complete life cycle” of a fuel. DEIR at 4.8-251. But the details matter. The LCFS calculates the *incremental* CI per barrel of production of covered fuels by incorporating multiple sources of associated carbon emissions, including those associated with feedstock-based land use changes. The LCFS uses the Global Trade Analysis Project (GTAP), which is mentioned in the DEIR, to incorporate the incremental carbon impact of feedstock-induced indirect land use changes (ILUC) in its incremental CI scoring system. CARB uses GTAP to estimate the amounts and types of land worldwide that are converted to agricultural production to meet fuel demand.⁸⁴ DEIR 3.8-13. A closer reading of a key CARB

⁸³ DEIR 4.8-251, 4.8-3.

⁸⁴ In 2010, the LCFS ILUC analysis updated to using GTAP-BIO, which was designed to project the specific effects of one carefully defined policy change—namely the increased production of a biofuel. The methodology behind the change is detailed in Prabhu, A. Staff Report: Calculating Carbon Intensity Values from Indirect Land Use Change of Crop-Based Biofuels, California Environmental Protection Agency & Air Resources Board, 2015; Appendix I-6, I-7, I-19. https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/peerreview/050515staffreport_iluc.pdf (accessed Dec 8, 2021)[hereinafter CARB 2015 LCFS Staff Report ILUC]; see also Appendix I: Detailed Analysis

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staff report on the LCFS ILUC analysis makes clear, “The GTAP-BIO analysis was designed to isolate the *incremental* contribution... GTAP-BIO projections are *incremental* and *relative*” (emphasis added).⁸⁵ The ILUC emission factors in the LCFS are calculated by averaging 30 GTAP scenarios with different input parameters per incremental unit increase in fuel demand,⁸⁶ disaggregating the land use change estimates by world region and agro^{87 88} This incremental adjustment of CI values is useful for augmenting incremental units of biofuel production based on carbon emissions from associated land use changes, but no more.

As a marginal tool, the LCFS ILUC modeling does not set or have a threshold that could distinguish between significant and insignificant impacts under CEQA. The LCFS can determine the incremental CI of one barrel per day of biofuel production, but it says nothing about what happens when an individual project produces a finite amount of fuel. As a result, the LCFS cannot tell you if 80,000 b/d of additional biofuel feedstock consumption—and its associated environmental and climate impacts—is a little or a lot, insignificant or significant.

Indeed, the 2018 LCFS Final EA indicates that state regulators did not intend for the LCFS to be a replacement for CEQA review of individual projects. The 2018 LCFS Final EA explicitly explains that the environmental review conducted was only for the LCFS program—not for individual projects. It repeatedly states, “the programmatic level of analysis associated with this EA does not attempt to address project-specific details of mitigation...”⁸⁹ and defers to local agencies like the County who have the “authority to determine project-level impacts and require project-level mitigation...for individual projects.”⁹⁰ The County not only has the authority, but also the duty to determine project-level land use impacts and require project-level mitigation.

Finally, the LCFS only addresses carbon emissions, as it is designed to assign a CI score to fuels. It thus does *not* address non-carbon impacts associated with land use change. These impacts, as discussed further below, can be ecologically devastating. LCFS CI calculations are not designed to capture the full range of impacts associated with deforestation and other land use changes that may be wrought by increased production of biofuel feedstock crops.⁹¹ Following the guidance of the 2018 LCFS Final EA, it is up to a project-specific DEIR to analyze the

for Indirect Land Use Change in Low Carbon Fuel Standard Regulation Staff Report: Initial Statement of Reasons for Proposed Rulemaking, California Air Resources Board, Jan 2015, I-1, <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2015/lcfs2015/lcfs15appi.pdf> (accessed Dec 8, 2021) [hereinafter CARB 2015 LCFS Staff Report ILUC Appendix].

⁸⁵ CARB 2015 LCFS Staff Report ILUC Appendix I-20.

⁸⁶ CARB 2015 LCFS Staff Report ILUC Appendix I-8, I-16.

⁸⁷ CARB 2015 LCFS Staff Report ILUC Appendix I-13.

⁸⁸ CARB 2015 LCFS Staff Report ILUC Appendix Attachment 3-1.

⁸⁹ CARB analyzed the Conversion of Agricultural and Forest Resources Related to New Facilities, Agricultural and Forest Resource Impacts Related to Feedstock Cultivation and Long-Term Operational Impacts Related to Feedstock Production. See Final Environmental Analysis Prepared For The Proposed Amendments To The Low Carbon Fuel Standard And The Alternative Diesel Fuels Regulation. California Air Resources Board: Sacramento, CA, 2018; <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2018/lcfs18/finalea.pdf> (accessed Dec 8, 2021) (hereinafter CARB 2018 LCFS Final EA).

⁹⁰ *Id.*

⁹¹ *Id.*



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agricultural, forest, soil and water impacts related to land use changes because this analysis is specific to the geographic source of the feedstock crops.

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In sum, the County cannot rely on the LCFS as a basis to abdicate its duty to disclose, analyze, and mitigate Project-induced land use changes in the DEIR. That the LCFS passed through program-level environmental review does not exempt any and all individual fuel production projects from CEQA review simply because they might qualify for LCFS subsidies. It is imperative that the DEIR evaluate all effects of use of potential food-grade feedstocks on upstream land use and agricultural systems, and the environmental impacts associated with those effects.

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B. The DEIR Should Have Specified That the Project Will Rely Largely on Non-Waste Food System Oils, Primarily Soybean Oil⁹²

The Project would convert existing crude oil refining equipment for use in HEFA refining. DEIR at 3.9 *et seq.*⁹³ The only HEFA feedstocks available in commercially relevant amounts for biofuel refining are from land-based food systems.⁹⁴ These include the ones listed in the DEIR: “used cooking oil (UCO); fat, oil and grease (FOG); tallow (animal fat); inedible corn oil (also known as distillers corn oil or DCO); soybean oil (SBO); canola oil; other vegetable-based oils and/or emerging and other next-generation feedstock.” DEIR at 3.82. However, as noted above in the previous subsection, the DEIR reflects no commitment to use these in any particular proportion.

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The law requires more. Even to the extent Phillips 66 is unable to specify the exact amount of each feedstock that will be used in the Project year to year, the County should have evaluated a “reasonable worst case scenario” for feedstock consumption and its impacts. See *Planning and Conservation League v. Castaic Lake Water Agency* (2009), 180 Cal.App.4th 210, 252; *Sierra Club v. Tahoe Regional Planning Agency*, 916 F.Supp.2d 1098, 1151-52 (E.D.Cal. 2013). While the County was not required to address entirely speculative worst case scenarios, neither may it use the mere existence of uncertainty as justification to avoid addressing any feedstock-varying scenarios at all. *Id.* Neither is analysis *only* of the reasonable worst case scenario necessarily sufficient – the County was required to evaluate a reasonable array of scenarios, including but not necessarily limited to the worst case scenario, in order to provide full disclosure. *City of Long Beach v. City of Los Angeles* (2018), 19 Cal.App.5th 465, 487-88.

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⁹² Portner, H.O. et al., Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, IPBES Secretariat, June 2021, 18-19, 28-29, 53-58. <https://www.ipbes.net/events/launch-ipbes-ipcc-co-sponsored-workshop-report-biodiversity-and-climate-change> (accessed Dec 8, 2021).

⁹³ Although as discussed in Section II, the DEIR never specifically mentions HEFA, the description generally references that technology, *i.e.*, briefly noting that the process feeds lipids, and more specifically, lipids from triacylglycerols (TAGs), and fatty acids cleaved from those TAGs, from biomass into the refinery.

⁹⁴ While fish oils are commercially available, they are extremely limited in availability. Food and Agriculture Organization of the United Nations (FAO), *The State of World Fisheries and Aquaculture: Sustainability in action*, 2020. <http://www.fao.org/documents/card/en/c/ca9229en> (accessed Dec 12, 2021); see also Yusuff, A., Adeniyi, O., Olutoye M., and Akpan, U. *Waste Frying Oil as a Feedstock for Biodiesel Production*, IntechOpen, 2018. <http://dx.doi.org/10.5772/intechopen.79433> (accessed Dec 8, 2021).

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Whether the list is exclusive or not, appropriate DEIR impact analysis should reflect historic, current, and projected feedstock availability that will influence the proportional selection of feedstocks as demand for feedstock increases. While the DEIR acknowledges that market forces will also influence the selection of feedstocks, DEIR at 3-27, the County cannot ignore this readily available information about feedstock availability. Under CEQA, the County must still identify analyze the significance of the foreseeable feedstock mix scenarios—including a reasonable worst case scenario—accordingly.

Had it done so, the County would have determined that the very large majority of the feedstock the Project will use will almost certainly come from food crop and food system oils—predominantly SBO but also potentially others like DCO—with very little coming from waste oils such as tallow. One indicator for the likely predominant role of SBO and other food crop oils for the Project is the current breakdown of feedstock *demand* for biodiesel (another lipid-based biofuel) production.⁹⁵ From 2018 to 2020, 59% of biodiesel in the United States was produced from SBO as feedstock, compared to 11% from yellow grease, 14% from DCO, and only 3% from tallow, or rendered beef fat.⁹⁶ Another indicator is the limited domestic *supply* of alternative feedstock sources. Tallow and other waste oil volumes have come nowhere near meeting current biodiesel feedstock demand, with little prospect of expanding soon.⁹⁷ The future possible supply for these wastes is substantially constrained by the industries that produce them, and as such are generally nonresponsive to increased levels of demand. As a result, supplies will likely only increase at the natural pace of the industries that produce them.⁹⁸ Thus, a large fraction of feedstock likely to be used for the Project will be food crop oils – both purpose-grown food crop oils, such as SBO, canola, rapeseed, and cottonseed oils; and oils currently used in the food system, such as DCO.

C. The Project’s Use of Feedstocks From Purpose-Grown Crops For Biofuel Production Is Linked to Upstream Land Use Conversion

There is now broad consensus in the scientific literature that increased demand for food crop oil biofuel feedstock has induced or indirect land use changes (ILUC) with significant negative environmental and climate consequences.⁹⁹ ILUC is already widely considered in

⁹⁵ See Zhou, Y; Baldino, C; Searle, S. *Potential biomass-based diesel production in the United States by 2032*. Working Paper 2020-04. International Council on Clean Transportation, Feb. 2020, https://theicct.org/sites/default/files/publications/Potential_Biomass-Based_Diesel_US_02282020.pdf (accessed Dec 8, 2021).

⁹⁶ Uses data from EIA Biodiesel Production Report, Table 3. Feedstock breakdown by fat and oil source based on all data from Jan. 2018–Dec. 2020 from this table. U.S. Energy Information Administration (EIA), Monthly Biodiesel Production Report Table 3, Feb. 26, 2021, <https://www.eia.gov/biofuels/biodiesel/production/table3.pdf> (accessed Dec. 14, 2021). Data were converted from mass to volume based on a specific gravity relative to water of 0.914 (canola oil), 0.916 (soybean oil), 0.916 (corn oil), 0.90 (tallow), 0.96 (white grease), 0.84 (poultry fat), and 0.91 (used cooking oil). See also Zhou, Baldino, and Searle, 2020-04.

⁹⁷ See Baldino, C; Searle, S; Zhou, Y, *Alternative uses and substitutes for wastes, residues, and byproducts used in fuel production in the United States*, Working Paper 2020-25, International Council on Clean Transportation, Oct. 2020, <https://theicct.org/sites/default/files/publications/Alternative-wastes-biofuels-oct2020.pdf> (accessed Dec 8, 2021).

⁹⁸ See Zhou, Baldino, and Searle, 2020-04.

⁹⁹ See Portner et al., 2021.; see also Searchinger, T. et al., *Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land Use Change*. Science, 2008, 319, 1238,



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policies to evaluate the environmental benefits of biofuels relative to fossil fuel counterparts, including the California Low-Carbon Fuel Standard, Renewable Fuel Standard (RFS),¹⁰⁰ EU Renewable Energy Directive (RED) and RED II,¹⁰¹ and ICAO CORSIA¹⁰². After a decade of studies, soybean oil will likely be designated a high-ILUC risk biofuel that will be phased out of European Union renewable energy targets by 2030.¹⁰³ Belgium has already banned soybean oil-based biofuels as of 2022.¹⁰⁴

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HEFA biofuels can result in ILUC in several ways. One way is through the additional lands converted for crop production as feedstock demand for that crop increases. In simple economic terms, increased HEFA biofuel production requires increased feedstock crops, resulting in increased prices for that feedstock crop. The price increases then cause farmers of existing cultivated agricultural land to devote more of such land to that crop as it becomes more lucrative,¹⁰⁵ and are incentivized to clear new land to meet increased demand.¹⁰⁶¹⁰⁷

A second way that HEFA biofuels can cause ILUC, most relevant for the feedstocks proposed for the Project, is through displacement and substitution of commodities, leading to the conversion of land use for crops other than that of the feedstock demanded. As mentioned above, oil crops are to a great degree fungible—they are, essentially, interchangeable lipid, triacylglycerol (TAG) or fatty acid inputs to products. Due to their fungibility, their prices are

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<https://science.sciencemag.org/content/319/5867/1238> (accessed Dec 8, 2021) (This landmark article notes one of the earliest indications that certain biofuel feedstock are counterproductive as climate measures.)

¹⁰⁰ O'Malley, J. *U.S. biofuels policy: Let's not be fit for failure*, International Council on Clean Transportation, Oct. 2021, <https://theicct.org/blog/staff/us-biofuels-policy-RFS-oct21> (accessed Dec 11, 2021).

¹⁰¹ Currently, the European Union is phasing out high ILUC fuels to course correct their biofuel policies based on nearly a decade of data. Adopted in 2019, Regulation (EU) 2019/807 phases out high ILUC-risk biofuels from towards their renewable energy source targets by 2030. ILUC – High and low ILUC-risk fuels, Technical Assistance to the European Commission. <https://iluc.guidehouse.com/> (accessed Dec 8, 2021).

¹⁰² International Civil Aviation Organization (ICAO), "CORSIA Supporting Documents: CORSIA Eligible Fuels – Life Cycle Assessment Methodology," 2019. https://www.icao.int/environmental-protection/CORSIA/Documents/CORSIA%20Supporting%20Document_CORSA%20Eligible%20Fuels_LCA%20Methodology.pdf (accessed Dec 11, 2021).

¹⁰³ Malins, C. *Risk Management: Identifying high and low ILUC-risk biofuels under the recast Renewable Energy Directive*; Cerulogy, 2019; 4, 14. http://www.cerulogy.com/wp-content/uploads/2019/01/Cerulogy_Risk-Management_Jan2019.pdf (accessed Dec 8, 2021).

¹⁰⁴ Belgium to ban palm- and soy-based biofuels from 2022. Argus Media, Apr. 14, 2021.

<https://www.argusmedia.com/en/news/2205046-belgium-to-ban-palm-and-soybased-biofuels-from-2022> (accessed Dec 8, 2021).

¹⁰⁵ See Appendix I: Detailed Analysis for Indirect Land Use Change in Low Carbon Fuel Standard Regulation Staff Report: Initial Statement of Reasons for Proposed Rulemaking, California Air Resources Board, Jan 2015, I-1, <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2015/lcfs2015/lcfs15appi.pdf> (accessed Dec 8, 2021) (hereinafter CARB 2015 LCFS Staff Report ILUC Appendix).

¹⁰⁶ *Id.*

¹⁰⁷ Lenfert et al., *ZEF Policy Brief No. 28*; Center for Development Research, University of Bonn, 2017.

www.zef.de/fileadmin/user_upload/Policy_brief_28_en.pdf; Gatti, L.V., Basso, L.S., Miller, J.B. et al. Amazonia as a carbon source linked to deforestation and climate change. *Nature* 595, 388–393 (2021).

<https://doi.org/10.1038/s41586-021-03629-6> (accessed Dec 8, 2021); Nepstad, D., and Shimada, J., *Soybeans in the Brazilian Amazon and the Case Study of the Brazilian Soy Moratorium*, International Bank for Reconstruction and Development / The World Bank, Washington, D.C., 2018 (accessed Dec 8, 2021); Rangaraju, S, 10 years of EU fuels policy increased EU's reliance on unsustainable biofuels, Transport & Environment, Jul 2021.

https://www.transportenvironment.org/wp-content/uploads/2021/08/Biofuels-briefing_072021.pdf (accessed Dec 8, 2021).

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significantly if not wholly linked: when the price of one crop increases, another cheaper crop will be produced in greater volumes to fill the gap as consumers substitute their use of the more expensive crop. This substitution effect is known as displacement.¹⁰⁸ Studies have extensively documented the linkage between rising prices for one biofuel feedstock oil crop and the expanding production of another substitute oil crop.¹⁰⁹ These effects have been demonstrated for at least three of feedstocks identified in the DEIR—SBO, DCO, and tallow – that are significantly likely to be used in the Project.

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Soybean Oil (SBO): SBO accounts for only about a third of the total market value of whole soybeans, with the majority of the value in the soybean meal. As a result, SBO supply is only weakly responsive to its own price—meaning that as demand for soybean oil increases, domestic SBO supply is unlikely to increase substantially.¹¹⁰ However, the supply of *palm oil* does respond to SBO prices. Historical data show that SBO price increases lead to increased imports of palm oil, as domestic consumers substitute SBO with palm oil.^{111 112} The price of SBO, which would be the predominant source of feedstock in this Project, is already skyrocketing, in part in connection with increased biofuel production.¹¹³ By proposing a Project that will heavily rely on SBO, the Project will exacerbate the trends of increasing palm oil production and use because of rising SBO prices because of feedstock fungibility.

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DCO: Distiller’s corn oil (DCO) is a co-product produced during ethanol production, alongside another co-product, distiller’s grains with solubles (DGS).¹¹⁴ DCO can be extracted

¹⁰⁸ See generally Pavlenko, N. and Searle, S. *Assessing the sustainability implications of alternative aviation fuels*. Working Paper 2021-11. International Council on Clean Transportation, Mar 2021. <https://theicct.org/sites/default/files/publications/Alt-aviation-fuel-sustainability-mar2021.pdf> (accessed Dec 8, 2021).

¹⁰⁹ See Malins, C. *Thought for food: A review of the interaction between biofuel consumption and food markets*, Transport & Environment, Sept 2017. <https://www.transportenvironment.org/wp-content/uploads/2021/07/Cerulogy-Thought-for-food-September2017.pdf> (accessed Dec 8, 2021).

¹¹⁰ See Martin, J. ‘Soybean freakonomics’ in *Everything You Ever Wanted to Know About Biodiesel (Charts and Graphs Included!)* Union of Concerned Scientists, The Equation, Jun 22, 2016. <https://blog.ucsusa.org/jeremy-martin/all-about-biodiesel/> (accessed Dec 8, 2021).

¹¹¹ See Santeramo, F. and Searle, S. *Linking soy oil demand from the US Renewable Fuel Standard to palm oil expansion through an analysis on vegetable oil price elasticities*. Energy Policy 2018, 127, 19 <https://www.sciencedirect.com/science/article/abs/pii/S0301421518307924> (accessed Dec 8, 2021).

¹¹² Searle, S. *How rapeseed and soy biodiesel drive oil palm expansion*, The International Council on Clean Transportation, Jul 2017. <https://theicct.org/publications/how-rapeseed-and-soy-biodiesel-drive-oil-palm-expansion> (accessed Dec 8, 2021).

¹¹³ See Walljasper, C. GRAINS–Soybeans extend gains for fourth session on veg oil rally; corn mixed. *Reuters*, Mar 24 2021. <https://www.reuters.com/article/global-grains-idUSL1N2LM2O8> (accessed Dec 8, 2021).

¹¹⁴ Malins, C., Searle, S., and Baral, A., *A Guide for the Perplexed to the Indirect Effects of Biofuels Production*, International Council on Clean Transportation 2014, 80 (“Co-products can be broadly placed into two categories: those that directly displace land-based products and have land use implications, such as distillers grains with solubles (DGS) displacing soybean meal, and those that displace non-land-based products such as urea, glycerol, and electricity. Co-products in the second category do not have land use implications but have greenhouse gas (GHG) reduction implications.”). https://theicct.org/sites/default/files/publications/ICCT_A-Guide-for-the-Perplexed_Sept2014.pdf (accessed Dec 8, 2021).

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from distiller's grains with solubles (DGS), leading to substitution effects between the two commodities.¹¹⁵ DGS is a valuable agricultural residue commonly used in animal feed. In response to recently increasing biofuel feedstock demand, ethanol producers have been increasingly extracting DCO from DGS.¹¹⁶ Yet extracting DCO from DGS feed also removes valuable nutrients, requiring farmers to add even more vegetable oils or grains to replace the lost calories in their livestock feed.¹¹⁷ In practice, the most economical, and common source for these replacement nutrients has been more DCO, or DGS containing DCO, both of which then require additional corn crops.¹¹⁸ Thus, while DCO is not an oil from purpose-grown crops, any increase in DCO demand for Project biofuel production will ultimately increase food corn crop demand.¹¹⁹

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Tallow: Tallow represents a small portion of the total value of cattle, less than 3%, and as a result, increased demand for tallow will only result in marginal increases in tallow supply, even with substantial price increases.¹²⁰ Like several other animal fats and DCO, tallow is not truly a waste fat, because it has existing uses. Tallow is currently used for livestock feed; pet food, for which it has no substitute; and predominantly, the production of oleochemicals like wax candles, soaps, and cosmetics.¹²¹ As a result, the dominant impact of increased tallow demand is through diversion of existing uses. Therefore, increased tallow production will likely yield increased palm oil and corn oil production.¹²²

D. The Scale of This Project Would Lead to Significant Domestic and Global Land Use Conversions

As shown above, all of the feedstocks demanded by the Project would lead to either direct or indirect increases in crops, such as soy, oil palm, and corn, which will require land use conversion. These potential land use impacts are of particular concern with respect to a project of the magnitude proposed by Phillips 66, given its potential to significantly disrupt food crop agricultural patterns.

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¹¹⁵ *Id.* at 79.

¹¹⁶ Searle, S. *If we use livestock feed for biofuels, what will the cows eat?* The International Council on Clean Transportation, Jan. 2019. <https://theicct.org/blog/staff/if-we-use-livestock-feed-biofuels-what-will-cows-eat> (accessed Dec 8, 2021).

¹¹⁷ See Final Rulemaking for Grain Sorghum Oil Pathways. 81 Fed. Reg. 37740-37742 (August 2, 2018), <https://www.govinfo.gov/content/pkg/FR-2018-08-02/pdf/2018-16246.pdf> (accessed Dec 8, 2021); see also EPA sets a first in accurately accounting for GHG emissions from waste biofuel feedstocks, International Council on Clean Transportation Blog (Sept. 2018), <https://theicct.org/blog/staff/epa-account-ghg-emissions-from-waste> (accessed Dec 8, 2021).

¹¹⁸ Searle 2019.

¹¹⁹ Gerber, P.J. et al., *Tackling climate change through livestock—A global assessment of emissions and mitigation opportunities*, Food and Agriculture Organization of the United Nations 2013, 8. <https://www.fao.org/3/i3437e/i3437e.pdf> (accessed Dec 8, 2021).

¹²⁰ Pavlenko, N. and Searle, S. *A comparison of methodologies for estimating displacement emissions from waste, residue, and by-product biofuel feedstocks*, Working Paper 2020-22, International Council on Clean Transportation, Oct 2020, 6. <https://theicct.org/sites/default/files/publications/Biofuels-displacement-emissions-oct2020.pdf> (accessed Dec 8, 2021).

¹²¹ Baldino, Searle, and Zhou, 2020-25, pp. 6.

¹²² Pavlenko and Searle 2020-22, pp. 26.

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The DEIR failed to address the significant impact of the Project's demand for food crop feedstocks on agricultural markets, and hence on land use. The volume of food crop oil feedstock, namely SBO, likely to be required for the Project represents a disproportionately large share of current markets for such feedstock.¹²³ The anticipated heavy spike in demand for food crop oils associated with the Project (not to mention the cumulative spike when considered together with other HEFA projects such as the Marathon Martinez Refinery, *see* Section IX) will have significant environmental impacts, as discussed in the next subsection.

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To assess the significance the Project's anticipated feedstock use, the County could and should have analyzed the Project's proposal to consume up to 80,000 b/d of lipid feedstocks¹²⁴ in the context of both total biofuel demand and total agricultural production data. With respect to biofuel demand, data from the U.S. Energy Information Administration on total biodiesel production in the United States indicates that oil crop and animal fat demand associated with U.S. biodiesel production on average totaled approximately 113,000 barrels per day (b/d) for the time period 2018-2020.¹²⁵ The Project would increase this nationwide total by a full 71 percent.¹²⁶

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With respect to total production, US agricultural yield of the types of oil crops and animal fats that are potentially usable as Project feedstocks was roughly 372,000 b/d on average.¹²⁷ Thus, the Project alone would consume approximately a 22 percent share¹²⁸ of current total US production of lipid feedstocks. With that increase from the Project in place, U.S. biofuel feedstock demand could claim as much as 52 percent of total U.S. farm yield for *all* uses of these

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¹²³ See Karras, G. Biofuels: Burning Food?, Community Energy resource, 2021. https://f61992b4-44f8-48d5-9b9d-aed50019f19b.filesusr.com/ugd/bd8505_a077b74c902c4c4888c81dbd9e8fa933.pdf (accessed Dec 8, 2021).

¹²⁴ DEIR xxii.

¹²⁵ Uses EIA data from the Monthly Biodiesel Production Report, Table 3. This 113,000 b/d estimate is based on all data from Jan. 2018–Dec. 2020 from this table. U.S. Energy Information Administration (EIA), Monthly Biodiesel Production Report Table 3, Feb. 26, 2021, <https://www.eia.gov/biofuels/biodiesel/production/table3.pdf> (accessed Dec. 14, 2021). Data were converted from mass to volume based on a specific gravity relative to water of 0.914 (canola oil), 0.916 (soybean oil), 0.916 (corn oil), 0.90 (tallow), 0.96 (white grease), 0.84 (poultry fat), and 0.91 (used cooking oil).

¹²⁶ DEIR xxii. The Project percentage boost over existing biofuel feedstock consumption is from 80,000 b/d, divided by that 113,000 b/d from existing biodiesel production.

¹²⁷ This 372,000 b/d estimate is from two sources. First, data were taken from the U.S. Department of Agriculture (USDA) "Oil Crops Data: Yearbook Tables" data. U.S. Department of Agriculture (USDA), Oil Crops Yearbook Tables 5, 26, and 33, Mar. 26, 2021, <https://www.ers.usda.gov/data-products/oil-crops-yearbook/> (accessed Dec. 14, 2021). Specifically, from Oct. 2016 through Sep. 2020 average total U.S. yields were: 65.1 million pounds per day (MM lb/d), or 202,672 b/d at a specific gravity (SG) of 0.916 for soybean oil (*see i* below), 4.62 MM lb/d or 14,425 b/d at 0.915 SG for canola oil (*ii*), and 15.8 MM lb/d or 49,201 b/d at 0.923 SG for corn oil (*iii*). *See* USDA Oil Crops Yearbook (OCY) data tables (i) OCY Table 5, (ii) OCY Table 26, (iii) OCY Table 33, (iv) OCY Table 20), (v) OCY Table 32. Second, we estimated total U.S. production of other animal fats and waste oils from the U.S. Department of Agriculture (USDA) "Fats and Oils: Oilseed Crushings, Production, Consumption and Stocks" Annual Summaries. National Agricultural Statistics Service, "Fats and Oils: Oilseed Crushings, Production, Consumption and Stocks Annual Summary", 2017 through 2020, <https://usda.library.cornell.edu/concern/publications/mp48sc77c>. (accessed Dec. 14, 2021). Specifically, from 2017 to 2020, average total U.S. yields were: 16.2 MM lb/d or 51,386 b/d for edible, inedible, and technical tallow production, 6.65 MM lb/d or 22,573 b/d for poultry fat production, 4.52 MM lb/d or 13,420 b/d for lard and choice white grease production, and 5.83 MM lb/d or 18,272 b/d for yellow grease production.

¹²⁸ This figure represents Project feedstock demand of 80,000 b/d over the estimated 372,000 b/d total lipid production in the U.S. calculated in the previous footnote.

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oils and fats. The Project alone would thus commit a disproportionate share of US food crop oils to California, with attendant potential climate consequences.¹²⁹

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The projected impact of the Project on the SBO markets is particularly notable. Existing biodiesel production uses approximately 66,000 b/d of SBO out of the total 203,000 b/d of SBO produced domestically for all uses.¹³⁰ As a result, the Project alone could use up to 39 percent of total domestic SBO production. This would constitute a rapid increase in domestic SBO consumption, which would dramatically outpace the recent year-on-year increases in domestic SBO production, ranging from 1-7%. This in turn would lead to rapid price spikes and substitution across the oil markets.

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In order to assess the impacts of a “reasonable worst case” scenario, the County could, and should, have calculated the magnitude of the land use changes attributable to the anticipated feedstock mix. Had the County taken a closer look at the environmental assessment of the LCFS itself, it could have readily used the same analysis conducted by CARB for the LCFS, as previously discussed in subsection A in order to quantify the upstream land use impacts of the Project’s use of SBO feedstock. For example, under a hypothetical “shock” increase of 0.812 billion gallons per year of soy biodiesel, the GTAP-BIO model identified an average of over 2 million acres of forest, pasture, and cropland-pasture land would be converted to cropland. The majority of this land use change would be overseas, with 1.2 million acres of the converted land use outside of the U.S.¹³¹ While land use impacts will not necessarily be linear with the feedstock demand increases, this finding can be extrapolated to estimate the land use converted as a result of the Project. This finding, if scaled to the 1.23 billion gallons of feedstock consumed by the Project and if 100% of that feedstock was SBO, would mean 3.0 million acres of land would need to be converted for this Project.

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¹²⁹ Importing biofuel feedstock from another state or nation which is needed there to help decarbonize its economy could make overreliance on biofuels to help decarbonize California’s economy counterproductive as a climate protection measure. Accordingly, expert advice commissioned by state agencies suggests limiting the role of biofuels within the state’s decarbonization mix to the state’s per capita share of low-carbon biofuel feedstocks. See Mahone et al. 2020 and 2018. On this basis, given California and U.S. populations of 39.5 and 330 million, respectively, California’s total share of U.S. farm production (for all uses) of plant oils and animal fats which also are used for biofuels would be approximately 12%. As described in the note above, however, the Project could commit 22% of that total U.S. yield (for all uses) to biofuels produced at the Refinery alone.

¹³⁰ U.S. Department of Agriculture (USDA) “Oil Crops Data: Yearbook Tables.” Table 5 <https://www.ers.usda.gov/data-products/oil-crops-yearbook/oil-crops-yearbook/#All%20Tables.xlsx?v=7477.4> (accessed Dec 12, 2021); U.S. Energy Information Administration (EIA). Monthly Biodiesel Production Report, Table 3. Inputs to biodiesel production; www.eia.gov/biofuels/biodiesel/production/table3.xls (accessed Dec 12, 2021). Soybean oil consumed for biodiesel production is an average of 2018 through 2020 data, while total U.S. production is an average from Oct. 2016 through Sept. 2020.

¹³¹ 2018 CARB LCFS Staff Report Appendix I-8, I-29, I-30.

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E. Land Use Conversions Caused by the Project Will Have Significant Non-Climate Environmental Impacts

The land use changes incurred by increased use of feedstock supplies risk an array of environmental impacts related to habitats, human health, and indigenous populations.¹³² Conversion of more natural habitat to cropland is often accompanied by efforts to boost short-term yields by applying more fertilizers and pesticides, thereby destroying habitat needed to reverse biodiversity loss. Indeed, authoritative international bodies have warned explicitly about the potential future severity of these impacts.¹³³ One path for creating additional crop lands is by burning non-agricultural forests and grasslands. This destructive process not only releases sequestered carbon, but also causes non-carbon related environmental impacts due to use of nitrogen-based fertilizers and petroleum-derived pesticides on the newly cleared lands; and use petroleum-fueled machinery to cultivate and harvest feedstock crops from newly converted land to meet crop-based biofuel demand.¹³⁴

These non-climate environmental impacts were even identified by the 2018 LCFS Final EA as significant negative environmental impacts. CARB concluded that the agricultural, forest, and water resources related to land use changes related to feedstock cultivated would likely have significant negative effects, which are extraneous to the LCFS CI calculation. Adverse effects associated with the conversion or modification of natural land or existing agriculture include impacts on sensitive species populations; soil carbon content; annual carbon sequestration losses, depending on the land use; long-term erosion effects; adverse effects on local or regional water resources; and long-term water quality deterioration associated with intensified fertilizer use, pesticide or herbicide run-off; energy crops and short rotation forestry on marginal land, and intensive forest harvest could both have long-term effects on hydrology; agricultural activities may cause pollution from poorly located or managed animal feeding operations; pollutants that result from farming and ranching may include sediment, nutrients, pathogens, pesticides, metals, and salts; increased use of pesticides could increase greenhouse gas emissions.¹³⁵

The expansion of palm oil production, due to SBO consumption as described above, will also have a particularly severe environmental impact.¹³⁶ The palm oil industry is a source of pollutants and greenhouse gas emissions in two ways: deforestation and the processing of palm

¹³² Malins, C., *Soy, land use change, and ILUC-risk: a review*, Cerology, 2020a, https://www.transportenvironment.org/wp-content/uploads/2021/07/2020_11_Study_Cerology_soy_and_deforestation.pdf; Malins, C. *Biofuel to the fire – The impact of continued expansion of palm and soy oil demand through biofuel policy*. Report commissioned by Rainforest Foundation Norway, 2020b.

https://d5f6is0eze552.cloudfront.net/documents/RF_report_biofuel_0320_eng_SP.pdf (accessed Dec 8, 2021); Garr, R. and Karpf, S., BURNED: Deception, Deforestation and America's Biodiesel Policy, Action Aid USA, 2018. <https://www.actionaidusa.org/publications/americas-biodiesel-policy/> (accessed Dec 8, 2021).

¹³³ IPBES Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES: Bonn, DE, 2019, pp. 12, 18, 28. <https://ipbes.net/global-assessment> (accessed Dec 8, 2021).

¹³⁴ CARB 2018 LCFS Final EA, pp. 120, 172-173.

¹³⁵ CARB 2018 LCFS Final EA, pp. 110 – 120.

¹³⁶ See Petrenko, C., Paltseva, J., and Searle, S. *Ecological Impacts of Palm Oil Expansion in Indonesia*, International Council on Clean Transportation, Jul 2016. https://theicct.org/sites/default/files/publications/Indonesia-palm-oil-expansion_ICCT_july2016.pdf (accessed Dec 8, 2021).

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oil. Fires clearing the way for a palm oil plantation are a major source of air pollution that adversely affect human health; agrochemicals associated with palm oil plantations are dangerous for terrestrial and aquatic ecosystems.¹³⁷ Palm oil production also proliferates in highly productive biodiversity hotspots like Indonesia and the Brazilian Amazon, where massive deforestation and attendant species loss can dramatically affect both global biodiversity and the climate.¹³⁸

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F. Land Use Conversions Caused by the Project Will Have Significant Climate Impacts

The County failed to address evidence that increased use of food crop or food system feedstocks like palm and soybean oil have resulted in net increases in greenhouse gas emissions. As noted above, while the LCFS takes into account climate impacts resulting from land use change in its CI calculations, those calculations are expressly not intended to substitute for project-level analysis of impacts.

As described in the previous subsection, when the increased consumption of palm and soybean oil results in the clearing of more land or deforestation to grow more of those crops, it leads to the counterproductive destruction of natural carbon sinks. This expansion of soy production not only results in carbon loss from the destruction of vegetation and upheaval of high carbon stock soil, but also the loss of future sequestration capabilities. Available analysis suggests that a significant fraction of cropland expansion in general, and soy expansion in particular, continues to occur at the expense of carbon-sequestering forests, especially in South America.¹³⁹ Greenhouse gas emissions induced by land use changes from increased demand for food crop or food system-based feedstock also occur in the United States. One recent study concluded “perhaps surprisingly—that despite the dominance of grassland conversion in the US, emissions from domestic [land use change] are greater than previously thought.”¹⁴⁰ More than 90% of emissions from grassland conversions came from soil organic carbon stocks (SOC).¹⁴¹ Due to the longtime accumulation time of the SOCs, those emissions may be impossible to mitigate on a time scale relevant to humans.¹⁴²

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Domestic and global climate impacts from land use changes are interconnected because the feedstock are tied to a global food system. For example, even if the feedstock source is domestic, the increase in soybean oil demand will result in increases in palm oil production expansion as described above—ultimately resulting in substantial increases in GHG emissions.¹⁴³ As a result, modeled soy-based biofuel net carbon emissions are, at best, virtually the same as fossil diesel, with even worse climate impacts for greater quantities of soy-based

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¹³⁷ *Id.*, pp. 7-11.

¹³⁸ *Id.*

¹³⁹ Malins 2019, pp. 5.

¹⁴⁰ Spawn, S. et al. *Carbon emissions from cropland expansion in the United States* Environ. Res. Lett. 14 045009, 2019. <https://iopscience.iop.org/article/10.1088/1748-9326/ab0399> (accessed Dec 11, 2021).

¹⁴¹ Spawn 2019, pp. 5.

¹⁴² Spawn 2019, pp. 7, 9.

¹⁴³ Malins, C. Driving deforestation: The impact of expanding palm oil demand through biofuel policy, 2018. http://www.cerulogy.com/wp-content/uploads/2018/02/Cerulogy_Driving_deforestation_Jan2018.pdf (accessed Dec 12, 2021); see also Malins 2020, pp. 57; see generally Searle 2018.

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biofuel produced.¹⁴⁴ These estimates suggest the DEIR has dramatically overstated the potential GHG benefits of the Project.

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G. The County Should Have Taken Steps to Mitigate ILUC Associated with the Project by Capping Feedstock Use

The County should have considered a feedstock cap as a mitigation measure for land use impacts, but did not.¹⁴⁵ The one mitigating measure it did mention, best management practices (BMPs), has no meaningful application here.

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Best Management Practices: BMPs for feedstock crops should have been considered and included as a mitigation measure. The 2018 LCFS EA indicates that CARB anticipated local governments like the County to use their land use authority to mitigate projects by requiring feedstock sources to be developed under Best Management Practices specific to the ecological needs of feedstock origins. In particular, CARB left localities with land use authority to consider BMPs to mitigate long-term effects on hydrology and water quality related to changes in land use and long-term operational impacts to geology and soil associated with land use changes.¹⁴⁶

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Feedstock Cap: To guard against the severe environmental impacts associated with the inevitably induced land use changes, the County should set capped feedstock volume, at a level that would prevent significant ILUC impacts. The DEIR should have considered both caps on individual feedstocks, and an overall cap on feedstock volume. Such limits would be based on an ILUC assessment of each potential feedstock and total combinations of feedstock. In particular, the County should take steps to ensure that California does not consume a disproportionate share of available feedstock, in exceedance of its per capita share, in accordance with the prudent assumptions in CARB's climate modeling.¹⁴⁷

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V. THE DEIR FAILS TO ASSESS AND MITIGATE PROCESS SAFETY RISKS ASSOCIATED WITH RUNNING BIOFUEL FEEDSTOCKS¹⁴⁸

The Scoping Comments described how processing vegetable or animal-derived biofuel feedstocks in a hydrotreater or hydrocracker creates significant refinery-wide process hazards beyond those that attend crude oil refining. That information was disregarded and not addressed in the DEIR. It is essential that the DEIR address the process safety risks described in the subsections below, and evaluate their potential impact on human health.

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¹⁴⁴ Malins 2020a, pp. 57.

¹⁴⁵ See e.g., Mitigation B.2.b: Agricultural and Forest Resource Impacts Related to Feedstock Cultivation; Mitigation Measure B.7.b Long-Term Operational Impacts to Geology and Soil Associated with Land Use Changes; Mitigation B.10.b: Long-Term Effects on Hydrology and Water Quality Related to Changes in Land Use, Mitigation B.11.b: Long-Term Operational Impacts on Land Use Related to Feedstock Production.

¹⁴⁶ See Mitigation Measure B.7.b Long-Term Operational Impacts to Geology and Soil Associated with Land Use Changes; Mitigation B.10.b: Long-Term Effects on Hydrology and Water Quality Related to Changes in Land Use.

¹⁴⁷ California Air Resources Board, PATHWAYS Biofuel Supply Module, Technical Documentation for Version 0.91 Beta, Jan 2017, pp. 9 https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/bfsm_tech_doc.pdf.

¹⁴⁸ Supplemental information in support of this analysis is provided in Karras 2021c accompanying this comment, in the section entitled "The Deir Does Not Provide A Complete or Accurate Analysis of Process Hazards and Does Not Identify, Evaluate, or Mitigate Significant Potential Project Hazard Impacts."

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A. The Project Could Worsen Process Hazards Related to Exothermic Hydrogen Reactions

Running biofuel feedstocks risks additional process safety hazards even beyond those associated with processing crude oil. This is because the extra hydrogen that must be added to convert the new biofuel feedstock to hydrocarbon fuels generates more heat in process reactions that occur under high pressure and are prone to runaway reactions. The reaction is exothermic: it generates heat. When it creates more heat, the reaction can feed on itself, creating more heat even faster.¹⁴⁹

The reason for the increased heat, and hence risk, is that the removal of oxygen from triacylglycerols of fatty acids in the biofuel feed, and saturating the carbon atoms in that feed to remove that oxygen without creating unwanted carbon byproducts that cannot be made into biodiesel and foul the process catalyst, require bonding that oxygen and carbon with a lot more hydrogen. The Project would use roughly nine times more hydrogen per barrel biorefinery feed than the average petroleum refinery needs from hydrogen plants per barrel crude.¹⁵⁰ Reacting more hydrogen over the catalyst in the hydrotreating or hydrocracking reactor generates more heat faster.¹⁵¹ This is a well-known hazard in petroleum processing, that manifests frequently in flaring hazards¹⁵² when the contents of high-pressure reactor vessels must be depressurized¹⁵³ to flares in order to avoid worse consequences that can and sometimes have included destruction of process catalyst or equipment, dumping gases to the air from pressure relief valves, fires and explosions. The extra hydrogen reactants in processing the new feedstocks increase these risks.¹⁵⁴

B. The Project could Worsen Process Hazards Related to Damage Mechanisms Such as Corrosion, Gumming, and Fouling

The severe processing environment created by the processing of new feedstocks for the Project also can be highly corrosive and prone to side reactions that gum or plug process flows, leading to frequent or even catastrophic equipment failures. Furthermore, depending on the

¹⁴⁹ Robinson and Dolbear, "Commercial Hydrotreating and Hydrocracking. *In* Hydroprocessing of heavy oils and residua," 2007. Ancheyta and Speight, eds. CRC Press, Taylor and Francis Group: Boca Raton, FL, pp. 308, 309.

¹⁵⁰ The Project could consume 2,220–3,020 standard cubic feet of H₂ per barrel of drop-in biodiesel feed processed. Karras, 2021a. *Changing Hydrocarbons Midstream* (Attached hereto). Operating data from U.S. petroleum refineries during 1999–2008 show that nationwide petroleum refinery usage of hydrogen production plant capacity averaged 272 cubic feet of H₂ per barrel crude processed. Karras, 2010. *Environ. Sci. Technol.* 44(24): 9584 and Supporting Information. (*See* data in Supporting Information Table S-1.) <https://pubs.acs.org/doi/10.1021/es1019965>.

¹⁵¹ van Dyk et al., 2019. *Biofuels Bioproducts & Biorefining* 13: 760–775. *See* p. 765 ("exothermic reaction, with heat release proportional to the consumption of hydrogen"). <https://onlinelibrary.wiley.com/doi/10.1002/bbb.1974>.

¹⁵² Flaring causal analyses, various dates. Reports required by Bay Area Air Quality Management District Regulation 12, Rule 12, including reports posted at <https://www.baaqmd.gov/about-air-quality/research-and-data/flare-data/flare-causal-reports> and reports for incidents predating those posted at that link.

¹⁵³ Chan, 2020. www.burnsmcd.com/insightsnews/tech/converting-petroleum-refinery-for-renewable-diesel. *See* p. 2 ("emergency depressurization" capacity required).

¹⁵⁴ van Dyk et al., 2019 as cited above at 765 ("heat release proportional to the consumption of hydrogen"); and Chan, 2020 as cited above at 2 ("significantly more exothermic than petroleum diesel desulfurization reactions").

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contaminants and processing byproducts of the particular Project feedstock chosen, it could create new damage mechanism hazards or exacerbate existing hazards to a greater degree. As Chan notes:

Feedstock that is high in free fatty acids, for example, has the potential to create a corrosive environment. Another special consideration for renewable feedstocks is the potential for polymerization ... which causes gumming and fouling in the equipment ... hydrogen could make the equipment susceptible to high temperature hydrogen attack ... [and drop-in biodiesel process] reactions produce water and carbon dioxide in much larger quantities than petroleum hydrotreaters, creating potential carbonic acid corrosion concerns downstream of the reactor.¹⁵⁵

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C. Significant Hazard Impacts Appear Likely Based on Both Site-Specific and Global Evidence

Site-specific evidence shows that despite current safeguards, hydrogen-related hazards frequently contributed to significant flaring incidents, even before the worsening of hydro-conversion intensity and hydrogen-related process safety hazards which could result from the Project. Causal analysis reports for significant flaring from unplanned incidents indicate that at least 52 hydrogen-related process safety hazard incidents occurred at the Refinery from January 2010 until it closed on 28 April 2020.¹⁵⁶ This is a conservative estimate, since incidents can cause significant impacts without environmentally significant flaring, but still represents, on average, another hydrogen-related hazard incident at the Refinery every 70 days. Moreover, considering the Refinery and Marathon Martinez refinery flare data together, sudden unplanned or emergency shutdowns of major hydro-conversion or hydrogen production plants occurred in 84 of these reported incidents.¹⁵⁷ Such sudden forced shutdowns of *both* hydro-conversion and hydrogen production plants occurred in 22 of these incidents.¹⁵⁸ In other words, incidents escalated to refinery-level systems involving multiple plants frequently—a foreseeable consequence since both hydro-conversion and hydrogen production plants are susceptible to upset when the critical balance of hydrogen production supply and hydrogen demand between them is disrupted suddenly. In four of these incidents, consequences of underlying hazards included fires at the Refinery.¹⁵⁹

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Catastrophic consequences of hydrogen-related hazards are foreseeable based on industry-wide reports as well as site-specific evidence. For example:

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¹⁵⁵ Chan, 2020 as cited above at 3.

¹⁵⁶ Flaring causal analyses, various dates. Reports required by Bay Area Air Quality Management District Regulation 12, Rule 12, including reports posted at <https://www.baaqmd.gov/about-air-quality/research-and-data/flare-data/flare-causal-reports> and reports for incidents predating those posted at that link.

¹⁵⁷ Flaring causal analyses as cited above. Hydro-conversion includes hydrotreating and hydrocracking.

¹⁵⁸ *Id.*

¹⁵⁹ Flaring causal analyses as cited above. *See* reports for incidents starting 13 May 2010, 17 February 2011 and 17 April 2015.

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- Eight workers are injured and a nearby town is evacuated in a 2018 hydrotreater reactor rupture, explosion and fire;¹⁶⁰
- A worker is seriously injured in a 2017 hydrotreater fire that burns for two days and causes an estimated \$220 million in property damage;¹⁶¹
- A reactor hydrogen leak ignites in a 2017 hydrocracker fire that causes extensive damage to the main reactor;¹⁶²
- A 2015 hydrogen conduit explosion throws workers against a refinery structure;¹⁶³
- Fifteen workers die, and 180 others are injured, in a series of 2005 explosions when hydrocarbons flood a distillation tower during an isomerization unit restart;¹⁶⁴
- A vapor release from a valve bonnet failure in a high-pressure hydrocracker section ignites in a major 1999 explosion and fire at the Chevron Richmond refinery;¹⁶⁵
- A worker dies, 46 others are injured, and the surrounding community is forced to shelter in place when a release of hydrogen and hydrocarbons under high temperature and pressure ignites in a 1997 hydrocracker explosion and fire at the Tosco (now Marathon) Martinez refinery;¹⁶⁶
- A Los Angeles refinery hydrogen processing unit pipe rupture releases hydrogen and hydrocarbons that ignite in a 1992 explosion and fires that burn for three days;¹⁶⁷
- A high-pressure hydrogen line fails in a 1989 fire which buckles the seven-inch-thick steel of a hydrocracker reactor that falls on nearby Richmond refinery equipment;¹⁶⁸
- An undetected vessel overpressure causes a 1987 hydrocracker explosion and fire.¹⁶⁹

Since the Project's new feedstock and process system are thus known to worsen the underlying conditions that can become (and have become) root causes of hazardous incidents, the DEIR should have disclosed, thoroughly evaluated, and mitigated these risks. The DEIR should have analyzed, *inter alia*, the impact of the proposed new feedstock and production process on worker safety, community safety, and upset frequency and impacts (including increased flaring).

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¹⁶⁰ Process Safety Integrity, *Refining incidents*; <https://processsafetyintegrity.com/incidents/industry/refining>; see Bayernoil Refinery Explosion, January 2018.

¹⁶¹ Process Safety Integrity as cited above; see Syncrude Fort McMurray Refinery Fire, March 2017.

¹⁶² Process Safety Integrity as cited above; see Sir Refinery Fire, January 2017.

¹⁶³ Process Safety Integrity as cited above; see Petrobras (RLAM) Explosion, January 2015.

¹⁶⁴ Process Safety Integrity as cited above; see BP Texas City Refinery Explosion, March 2005.

¹⁶⁵ Process Safety Integrity as cited above; see Chevron (Richmond) Refinery Explosion, March 1999.

¹⁶⁶ Process Safety Integrity as cited above; see Tosco Avon (Hydrocracker) Explosion, January 1997.

¹⁶⁷ Process Safety Integrity as cited above; see Carson Refinery Explosion, October 1992.

¹⁶⁸ Process Safety Integrity as cited above; see Chevron (Richmond) Refinery Fire, April 1989.

¹⁶⁹ Process Safety Integrity as cited above; see BP (Grangemouth) Hydrocracker Explosion, March 1987.

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D. Process Operation Mitigation Measures Can Reduce but Not Eliminate Process Safety Hazard Impacts

There are procedures to control the reaction heat, pressure – including through process operation measures such as quenching between catalyst beds in the reactor and careful control of how hot the reactor components get, how much hydrogen is added, how much feed is added, and how long the materials remain in the reactor, preventing hot spots from forming inside of it, and intensive monitoring for equipment damage and catalyst fouling. These measures should have been considered in the DEIR as mitigation for process safety impacts, but were not.

However, such analysis would also need to account for the fact that these measures are imperfect at best, and rely on both detailed understanding of complex process chemistry and monitoring of conditions in multiple parts of the process environment. Both those conditions are difficult to attain in current petroleum processing, and even more difficult with new feedstocks with which there is less current knowledge about the complex reactions and how to monitor them when the operator cannot “see” into the reactor very well during actual operation; and cannot meet production objectives if production is repeatedly shut down in order to do so.

In fact, the measures described above are “procedural safeguards,”¹⁷⁰ the least effective type of safety measure in the “Hierarchy of Hazard Control”¹⁷¹ set forth in California process safety management policy for petroleum refineries.¹⁷² It would also in principle be possible to add automated shutdown control logic systems to these procedural safeguards before it closed the refinery, as Marathon proposes to do in its similar biofuel conversion, but these are “active safeguards,”¹⁷³ the next least effect type of safety measure in the Hierarchy of Hazard Control. Similarly, it would be possible to replace some of the vessel and piping linings of its old Refinery equipment, which would be repurposed for the Project, with more corrosion-resistant metallurgy—an added layer of protection in those parts of the biorefinery where this proposal might be implemented, and a tacit admission that potential hazards of processing its proposed feedstock are a real concern. This type of measure is a “passive safeguard,”¹⁷⁴ the next least effective type of measure in the Hierarchy of Hazard Control, after procedural and active safeguards. Both of these measures, and others like them, should have been considered; but their effectiveness is limited.

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¹⁷⁰ Procedural safeguards are policies, operating procedures, training, administrative checks, emergency response and other management approaches used to prevent incidents or to minimize the effects of an incident. Examples include hot work procedures and emergency response procedures. California Code of Regulations (CCR) § 5189.1 (c).

¹⁷¹ This Hierarchy of Hazard Control ranks hazard prevention and control measures “from most effective to least effective [as:] First Order Inherent Safety, Second Order Inherent Safety, and passive, active and procedural protection layers.” CCR § 5189.1 (c).

¹⁷² We note that to the extent this state policy, the County Industrial Safety Ordinance, or both may be deemed unenforceable with respect to biorefineries which do not process petroleum, that only further emphasizes the need for full analysis of Project hazard impacts and measures to lessen or avoid them in the DEIR.

¹⁷³ Active safeguards are controls, alarms, safety instrumented systems and mitigation systems that are used to detect and respond to deviations from normal process operations; for example, a pump that is shut off by a high-level switch. CCR § 5189.1 (c).

¹⁷⁴ See CCR § 5189.1 (c).

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Importantly, and perhaps most telling, Phillips 66 proposes to repurpose and continue to use the flare system of its closed refinery for this Project. DEIR at 3-29. Rather than eliminating underlying causes of safety hazard incidents or otherwise preventing them, refinery flare systems are designed to be used in procedures that minimize the effects of such incidents.¹⁷⁵ This is a procedural safeguard, again the least effective type of safety measure.¹⁷⁶ The flares would partially mitigate incidents that, in fact, are expected to occur if the Project is implemented, but flaring itself causes acute exposure hazards. And as incidents caused by underlying hazards that have not been eliminated continue to recur, they can eventually escalate to result in catastrophic consequences. In essence, the Project description itself demonstrates the need to address process hazards that site-specific data show to be potentially significant and the DEIR fails to address.

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E. The DEIR Should Have Evaluated the Potential for Deferred Mitigation of Process Hazards

The DEIR should have considered available means to address the Project design, and impose appropriate conditions and limitations, to mitigate process safety hazards. Examples of potential mitigation measures that should have been considered (in addition to the process measures referenced above of limited effectiveness) include the following:

- *Feedstock processing hazard condition.* The County could adopt a Project condition to forgo or minimize the use of particularly high process hydrogen demand feedstocks. Since increased process hydrogen demand would be a causal factor for the significant process hazard impacts and some HEFA feedstocks increase process hydrogen demand significantly more than other others, avoiding feedstocks with that more hazardous processing characteristic would lessen or avoid the hazard impact.
- *Product slate processing hazard condition.* The County could adopt a Project condition to forgo or minimize particularly high-process hydrogen demand product slates. Minimizing or avoiding HEFA refining to boost jet fuel yield, which significantly increases hydrogen demand, would thereby lessen or avoid further intensified hydrogen reaction hazard impacts.
- *Hydrogen input processing hazard condition.* The County could adopt a Project condition to limit hydrogen input per barrel, which could lessen or avoid the process hazard impacts from particularly high-process hydrogen demand feedstocks, product slates, or both.
- *Hydrogen backup storage processing hazard condition.* The County could adopt a Project condition to store hydrogen onsite for emergency backup use. This would lessen or avoid hydro-conversion plant incident impacts caused by the sudden loss of hydrogen inputs when hydrogen plants malfunction, a significant factor in escalating incidents.

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Commenters are not necessarily recommending these particular measures. However, these and any other options for mitigating process hazards through design or other conditions should have been considered, and were not.

¹⁷⁵ See BAAQMD regulations, § 12-12-301. Bay Area Air Quality Management District: San Francisco, CA.

¹⁷⁶ See Procedural Measure and Hierarchy of Hazard Control definitions under CCR § 5189.1 (c) in the notes above.

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VI. THE DEIR INADEQUATELY DISCLOSES AND ADDRESSES PROJECT GREENHOUSE GAS AND CLIMATE IMPACTS

The DEIR analysis of greenhouse gas (GHG) emissions and climate impacts suffers from the same baseline-related flaw as numerous other subjects in the document, *i.e.*, it determines emission impacts from a baseline of continuing crude oil production as opposed to actual current shutdown conditions. Based on the flaw alone, the DEIR analysis of GHG emissions impacts must be revised to incorporate the correct baseline.

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However, even aside from this major flaw, the DEIR's analysis of GHG and climate impacts is deficient. The document identifies as significance criteria both (1) whether the Project would generate significant GHG emissions, and (2) whether it would "conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG." DEIR at 3.8-19. The DEIR fails to adequately evaluate the first significance criterion because it fails to account for potentially increased GHG emissions associated with the processing of varying biofuel feedstocks. It also fails to adequately evaluate the second significance criterion, because it ignores the potential downstream impact of a significant increase in biofuel production on state and local climate goals. As noted in the Scoping Comments but not addressed in the DEIR at all, those goals include an increase in use of battery electric vehicles to electrify the state's transportation sector and decrease use of combustion fuels¹⁷⁷; as well as a "Diesel Free by '33" pledge promoted by BAAQMD and entered into by Contra Costa County, which commits the County to, *inter alia*, "[u]se policies and incentives that assist the private sector as it moves to diesel-free fleets and buildings."¹⁷⁸ The DEIR further fails to identify the significant shifting of GHG emissions from California to other jurisdictions that would likely occur as a consequence of the Project.

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The following sections address the various potential conflicts between the Project and state and local plans, policies, and regulations adopted for the purpose of reducing GHG emissions that render the Project's impacts potentially significant, but which the DEIR nonetheless failed to consider.

A. The DEIR Air Impacts Analysis Fails to Take Into Account Varying GHG Emissions from Different Feedstocks and Crude Slates

The following subsections discuss ways in which Project GHG emissions vary widely with feedstock choice, as well as reasons why those emissions may increase rather than decrease over the comparable crude oil refining emissions.

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¹⁷⁷ Executive Order N-79-20 dated September 23, 2020, available at <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf>.

¹⁷⁸ See <https://dieselfree33.baaqmd.gov/> (landing page), <https://dieselfree33.baaqmd.gov/statement-of-purpose> (text of the pledge), <https://dieselfree33.baaqmd.gov/signatories> (signatories).

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1. Processing Biofuel Feedstock Instead of Crude Oil Can Increase Carbon Emission Intensity of the Refining Process

The DEIR did not address the fact that the process of refining biofuel feedstocks is significantly more carbon intense than crude oil refining. This increased carbon intensity has primarily to do with the fact that HEFA feedstocks have vastly more oxygen in them than crude oil – and hence require more hydrogen production to remove that oxygen. The oxygen content of the various proposed Project feedstocks is approximately 11 wt. % (Table 1), compared with refining petroleum crude, which has virtually no oxygen. Oxygen would be forced out of the HEFA feedstock molecules by bonding them with hydrogen to make water (H₂O), which then leaves the hydrocarbon stream. This process consumes vast amounts of hydrogen, which must be manufactured in amounts that processing requires. The deoxygenation process chemistry further boosts HEFA process hydrogen demand by requiring saturation of carbon double bonds.

These “hydrodeoxygenation” (HDO) reactions are a fundamental change from petroleum refining chemistry. This new chemistry is the main reason why—despite the “renewable” label Phillips 66 has chosen—its biorefinery could emit more carbon per barrel processed than petroleum refining. That increase in the carbon intensity of fuels processing would be directly connected to the proposed change in feedstock.

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Table 1. Impact of Project Feedstock Choice on CO₂ Emissions from Hydrogen Production for Phillips 66 Project Targeting Diesel: Estimates based on readily available data.

t/y: metric tons/year kg: kilogram b: barrel, 42 U.S. gallons

	Feedstock			Difference	
	Tallow	Soy oil	Fish oil	Soy oil–tallow	Fish oil–tallow
Processing characteristics^a					
Oxygen content (wt. %)	11.8	11.5	11.5	– 0.3	– 0.3
H ₂ for saturation (kg H ₂ /b)	0.60	1.58	2.08	+ 0.98	+ 1.48
H ₂ for deoxygenation (kg H ₂ /b)	4.11	4.11	4.13	0.00	+ 0.02
Other H ₂ consumption (kg H ₂ /b)	0.26	0.26	0.26	0.00	0.00
Process H₂ demand (kg H₂/b)	4.97	5.95	6.47	0.98	1.50
Hydrogen plant emission factor					
HEFA mixed feed (g CO ₂ /g H ₂) ^a	9.82	9.82	9.82		
Methane feed (g CO ₂ /g H ₂) ^b	9.15	9.15	9.15		
Hydrogen plant CO₂ emitted					
HEFA mixed feed (t/y) ^a	1,420,000	1,710,000	1,850,000	290,000	430,000
Methane feed (t/y) ^b	1,330,000	1,590,000	1,730,000	260,000	400,000

a. Data from HEFA feedstock-specific composition analysis based on multiple feed measurements, process analysis for HEFA hydro-conversion process hydrogen demand, and emission factor based on median SF Bay Area hydrogen plant verified design performance and typical expected HEFA process hydrogen plant feed mix. From Karras, 2021b. *See* also Karras, 2021a.
b. Data from Sun et al. for median California merchant steam methane reforming hydrogen plant performance. Sun et al., 2019. Criteria Air Pollutants and Greenhouse Gas Emissions from Hydrogen Production in U.S. Steam Methane Reforming Facilities. Environ. Sci. Technol. 53: 7103–7113. <https://pubs.acs.org/doi/10.1021/acs.est.8b06197> Note that these steam methane reforming plant data are shown for context. Steam reforming of HEFA byproduct propane can be expected to increase direct emissions from the steam reforming and shift reactions. Karras, 2021a. Mass emissions based on 80,000 b/d project capacity. Fish oil values shown are based on Menhaden.

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Hydrogen must be added to bond with oxygen in HEFA feeds and thereby remove the oxygen in them, and to bond with carbon atoms in fatty acids in order to facilitate this deoxygenation of the feed carbon chains converted to hydrocarbons. This increases the hydrogen needed for the proposed HEFA¹⁷⁹ processing over and above the hydrogen that was needed for the crude refining that formerly took place at the Refinery. Deoxygenation is the major driver of this high process hydrogen demand, but HEFA feeds are consistently high in hydrogen, while some have more carbon double bonds that must be “saturated” first, and thus higher saturation hydrogen demand, than other feeds. Table 1 shows both of these things.

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The DEIR – to the extent it considers past petroleum refining emissions in its analysis – must consider the air emissions impact of increased hydrogen use. Oxygen-rich HEFA feedstocks force increased hydrogen production – and attendant hydrogen production emissions – by a proportional amount. These emissions are significant, because Phillips 66 proposes to make that hydrogen in existing fossil fuel hydrogen plants. This hydrogen steam reforming technology is extremely carbon intensive. It burns a lot of fuel to make superheated high-pressure steam mixed with hydrocarbons at temperatures up to 1,400–1,900 °F. And on top of those combustion emissions, its “reforming” and “shift” reactions produce hydrogen by taking it from the carbon in its hydrocarbon feed. That carbon then bonds with oxygen to form carbon dioxide (CO₂) that emits as well. Making the vast amounts of hydrogen needed for Project processing could cause CO₂ emissions from Project hydrogen plants alone to exceed a million tons each year.

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The resulting carbon intensity difference between crude oil refining and biofuel refining is striking. CO₂ emissions from U.S. petroleum refineries averaged 41.8 kg per barrel crude feed from 2015-2017 (the most recent data available).¹ By contrast, HEFA production emits 55-80 kg per barrel biomass feed associated with increased hydrogen production *alone* – such exceeding petroleum refining carbon intensity by 32-91 percent. Beyond the hydrogen-production driver of increased carbon intensity, additional CO₂ would emit from fuel combustion for energy to heat and pressure up HEFA hydro-conversion reactors, precondition and pump their feeds, and distill, then blend their hydrocarbon products.¹⁸⁰

2. GHG Emissions Impacts Vary With Different Potential Feedstocks

Crucially, feeds that the Project targets, such as tallow and SBO - and some that it does not but may nonetheless potentially use such as fish oil - require hydrogen for processing to significantly different degrees. Table 1 shows this difference in weight percent, a common measure of oil feed composition. The 0.98 kilograms per barrel feed difference in hydrogen saturation between soy oil and tallow is why processing soy oil requires that much more hydrogen per barrel of Project feed (0.98 kg/b). Table 1. Similarly, the 1.48 kg/b difference

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¹⁷⁹ As noted in previous sections, the type of drop-in biofuel technology proposed is called “Hydrotreating Esters and Fatty Acids” (HEFA).

¹⁸⁰ Karras, 2021. Unverified potential to emit calculations provided by one refiner¹ suggest that these factors could add ~21 kg/b to the 55-80 kg/b from HEFA steam reforming. This ~76-101 kg/b HEFA processing total would exceed the 41.8 kg/b carbon intensity of the average U.S. petroleum refinery by ~82-142 percent. Repurposing refineries for HEFA biofuels production using steam reforming would thus increase the carbon intensity of hydrocarbon fuels processing. See supporting material for Karras, 2021a

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between fish oil and tallow requires 1.48 more kilograms of hydrogen per barrel to make so-called “renewable” diesel from fish oil than to make it from tallow. *Id.*

Thus, feedstock choice would drive the magnitude of carbon emissions to a significant degree. *Id.* For instance, to the extent Phillips 66 runs SBO, Project hydrogen plants could emit approximately 290,000 metric tons more CO₂ each year than if it runs tallow. *Id.* This 290,000 t/y excess would exceed the emissions significance threshold for greenhouse gases in the DEIR, 10,000 metric tons/year CO₂e,¹⁸¹ by 28 times. And if Phillips 66 were to run fish oil, another potential feedstock not specifically targeted but also not excluded, the estimates in Table 1 suggest that Project hydrogen plants could emit 430,000 tons/year more CO₂ than if it runs tallow, or 42 times that significance threshold. Thus, available evidence indicates that the choice among Project feedstocks itself could result in significant emission impacts. Therefore, emissions from each potential feedstock should be estimated in the EIR.

The CO₂ emissions estimates in Table 1 are relatively robust and conservative, though the lack of project-specific details disclosed in the DEIR described in Section II still raises questions a revised County analysis should answer. The carbon intensity estimate for HEFA hydrogen production is remarkably close that for steam methane reforming, as expected since hydrocarbon byproducts of HEFA refining, when mixed with methane in project hydrogen plants, would form more CO₂ per pound of hydrogen produced than making that hydrogen from methane alone. The estimate may indeed turn out to be too low, given the variability in hydrogen plant emissions generally,¹⁸² and the tendency of older plant designs to be less efficient and higher emitting. The DEIR should have evaluated this part of Project processing emissions using data for the Refinery’s hydrogen plants that would be used by the Project; and Phillips 66 should have been required to provide detailed data on those plants to support this estimate.

Feedstock choices can impact other greenhouse gases as well through varying hydrogen demand. In addition to the potential for feedstock-driven increases in emissions of CO₂, the proposed hydrogen production would emit methane, a potent greenhouse gas that also contributes to ozone formation, via “fugitive” leaks or vents. Aerial measurements and investigations triggered by those recent measurements suggest, further, that methane emissions from hydrogen production have been underestimated dramatically.¹⁸³

Crucially as well, making a different product slate can increase GHG emissions from the same feedstock. This is why, for example, the California Air Resources Board estimates a different carbon intensity for refining gasoline, diesel, or jet fuel from the same crude feed. Targeting jet fuel instead of drop-in diesel production from the same vegetable oil or animal fat

¹⁸¹ See Chevron Refinery Modernization Project EIR. SCH # 2001062042. 2014. City of Richmond, CA. See esp. pp. 4.8-11, 4.8-12, 4.8-18, 4.8-19, 4.8-24, 4.8-27, 4.8-28, 4.8-38, 4.8-70 (10,000 metric tons/yr significance threshold).

¹⁸² Sun et al., 2019. Criteria Air Pollutants and Greenhouse Gas Emissions from Hydrogen Production in U.S. Steam Methane Reforming Facilities. *Environ. Sci. Technol.* 53: 7103–7113. <https://pubs.acs.org/doi/10.1021/acs.est.8b06197>.

¹⁸³ Guha et al., 2020. *Environ. Sci. Technol.* 54: 9254–9264 and Supporting Information. <https://dx.doi.org/10.1021/acs.est.0c01212>

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feed could increase processing emissions significantly.¹⁸⁴ Thus, since differences between potential Project feedstocks and Project products could each increase emissions independently or in combination, the DEIR should have estimated emissions for each potential Project feedstock for product slates targeting both diesel and jet fuel.

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Thus, processing emissions of GHGs should have been estimated in the DEIR for each potential Project feedstock and product slate, or range of product slates, proposed to be manufactured from it, including a reasonable worst case scenario.

B. The DEIR Failed to Consider the Impact of Biofuel Oversupply on Climate Goals

California has implemented a series of legislative and executive actions to reduce greenhouse gas emissions (GHGs) and address climate change. Two flagship bills were aimed at directly reducing GHG emissions economy wide: AB32, which called for reductions in GHG emissions to 1990 levels by 2020;¹⁸⁵ and SB32, which calls for reductions in GHG emissions to 40% below 1990 levels by 2030.¹⁸⁶ Following this, California Executive Order S-3-05 calls for a reduction in GHG emissions to 80% below 1990 levels by 2050.¹⁸⁷ Finally, Executive Order B-55-18 calls for the state “to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter.”¹⁸⁸

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In order to meet these legislative and executive imperatives, numerous goals have been set to directly target the state’s GHG emissions just in the last two years: for 100% of light-duty vehicle (LDV) sales to be zero-emission vehicles (ZEVs) by 2035; for 100% of medium- and heavy-duty vehicle (MDV and HDV) sales to be ZEVs by 2045;¹⁸⁹ for a ban on hydraulic fracturing by 2024; and for an end to all state oil drilling by 2045.

Such goals, both the ZEV sales mandates that target liquid combustion fuel demand and the proposed bans on petroleum extraction that target supply, point to the need to transition from petroleum-based transportation fuels to sustainable alternatives. The DEIR frames biofuels as a means to reduce reliance on “traditional” transportation fuels, the original purpose of the LCFS. DEIR at 3.8-13. It insists that this Project is a necessary fulfillment of the 2017 Scoping Plan and LCFS. DEIR at 3.8-22. However, the 2017 Scoping Plan targets do not distinguish between fuel technologies (e.g. HEFA v. Fischer-Tropsch) or feedstock (crop-based lipid v. cellulosic). Yet

¹⁸⁴ Seber et al., 2014. *Biomass and Bioenergy* 67: 108–118. <http://dx.doi.org/10.1016/j.biombioe.2014.04.024>. See also Karatzos et al., 2014. Report T39-T1, IEA Bioenergy Task 39. IEA ISBN: 978-1-910154-07-6. (See esp. p. 57: extra processing and hydrogen required for jet fuel over diesel.) <https://task39.sites.olt.ubc.ca/files/2014/01/Task-39-Drop-in-Biofuels-Report-FINAL-2-Oct-2014-ecopy.pdf> See also Karras, 2021b.

¹⁸⁵ Legislative Information, AB-32, California Global Warming Solutions Act of 2006 (Accessed November 29, 2021), [http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.html](http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_0001_0050_ab_32_bill_20060927_chaptered.html)

¹⁸⁶ Legislative Information, SB-32 California Global Warming Solutions Act of 2006: Emissions Limit, (Accessed November 29, 2021), from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

¹⁸⁷ Executive Order S-3-05. Executive Department, State of California, Arnold Schwarzenegger, Governor, State of California; <https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/5129-5130.pdf>.

¹⁸⁸ Executive Order B-55-18. Executive Department, State of California, Edmund Brown, Governor, State of California; <https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf>.

¹⁸⁹ Executive Order N-79-20. Executive Department, State of California, Gavin Newsom, Governor, State of California; <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>

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feedstock and technology make a significant difference on GHG emissions. If anything, the environmental analysis of the 2017 Scoping Plan, like that of the LCFS, predicted that crop-based biofuels would need additional Project-specific environmental analysis and mitigation.¹⁹⁰ This cursory invocation of the LCFS fails to address the problem of biofuel volume: too much biofuel production risks interfering with the ZEV goals most recently established by Governor Newsom. The overproduction problem is related in part to the higher carbon intensity of biofuel refining as compared to oil refining, and in part to its volume effects on the types, amounts, and locations of both zero-emission and petroleum fuels production and use. This problem of overproduction is not addressed in the LCFS. The LCFS, designed to establish incremental per-barrel impacts, is not set up to address the macro impact of overproduction or overuse of combustion fuels on California climate goals.

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In numerous state-sponsored studies, there is acknowledgment of the need to limit our biofuel dependence. These studies consistently demonstrate that California's climate goals require a dramatic reduction in the use of *all* combustion fuels in the state's transportation sector, not just petroleum-based fuels. They indicate the need for biofuel use to remain limited. Specifically, pathway scenarios developed by Mahone et al. for the California Energy Commission (CEC),¹⁹¹ Air Resources Board (CARB)¹⁹² and Public Utilities Commission,¹⁹³ Austin et al. for the University of California,¹⁹⁴ and Reed et al. for UC Irvine and the CEC⁵⁸ add semi-quantitative benchmarks to the 2050 emission target for assessing refinery conversions to biofuels. They join other work in showing the need to decarbonize electricity and electrify

¹⁹⁰ California Air Resources Board. Appendix F: Final Environmental Analysis for The Strategy for Achieving California's 2030 Greenhouse Gas Target, pp. 56, https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2030sp_appf_finalea.pdf.

¹⁹¹ Mahone et al., 2018. *Deep Decarbonization in a High Renewables Future: Updated results from the California PATHWAYS Model*; Report CEC-500-2018-012. Contract No. EPC-14-069. Prepared for California Energy Commission. Final Project Report. Energy and Environmental Economics, Inc.: San Francisco, CA. <https://ww2.energy.ca.gov/2018publications/CEC-500-2018-012/CEC-500-2018-012.pdf>

¹⁹² Mahone et al., 2020. *Achieving Carbon Neutrality in California: Pathways Scenarios Developed for the California Air Resources Board, California Air Resources Board, Energy and Environmental Economics, Inc.* https://ww2.arb.ca.gov/sites/default/files/2020-10/e3_cn_final_report_oct2020_0.pdf

¹⁹³ Mahone et al., 2020b. *Hydrogen Opportunities in a Low-Carbon Future: An Assessment of Long-Term Market Potential in the Western United States*; Energy and Environmental Economics, Inc.: San Francisco, CA. Report prepared for ACES, a joint development project between Mitsubishi Hitachi Power Systems Americas, Inc. and Magnum Development, LLC. Submitted to the California Public Utilities Commission June 2020. <https://www.ethree.com/?s=hydrogen+opportunities+in+a+low-carbon+future>

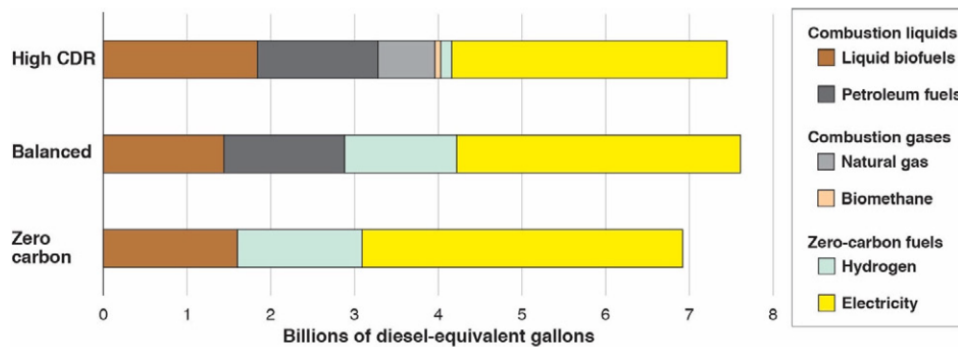
¹⁹⁴ Austin et al., 2021. *Driving California's Transportation Emissions to Zero*; Report No.: UC-ITS-2020-65. Institute of Transportation Studies, University of California. DOI: 10.7922/G2MC8X9X. <https://escholarship.org/uc/item/3np3p2t0>

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transportation.¹⁹⁵ Their work evaluates a range of paths to state climate goals,¹⁹⁶ analyzes the roles of liquid hydrocarbon combustion fuels and hydrogen in this context,¹⁹⁷ and addresses potential biomass fuel chain effects on climate pathways.¹⁹⁸

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Mahone’s study prepared for CARB explored three scenarios for achieving carbon neutrality by 2045.¹⁹⁹ The scenarios include “The Zero Carbon Energy scenario” which would achieve zero-fossil fuel emission by 2045 with minimal use of carbon dioxide removal (CDR) strategies, “The High CDR scenario” which would achieve an 80% reduction in gross GHG emissions by 2045 but relies heavily on CDR, and “The Balanced scenario” which serves as a midpoint between the other two scenarios. Notably, all three of these pathways cut liquid petroleum fuel use dramatically, with biofuels replacing only a portion of that petroleum. Chart 3 illustrates the transportation fuel mix for these three pathways:



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Chart 3: California Transportation Fuels Mix in 2045: Balanced and “bookend” pathways to the California net-zero carbon emissions goal.

Adapted from Figure 8 in Mahone et al. (2020).²⁰⁰ Fuel shares converted to diesel energy-equivalent gallons based on Air Resources Board LCFS energy density conversion factors. **CDR:** carbon dioxide removal (sequestration).

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¹⁹⁵ Mahone et al 2018; Mahone et al. 2020a; Mahone et al. 2020b; Austin et al. 2021; Reed et al., 2020. *Roadmap for the Deployment and Buildout of Renewable Hydrogen Production Plants in California*; Final Project Report CEC-600-2020-002. Prepared for the California Energy Commission by U.C. Irvine Advanced Power and Energy Program. Clean Transportation Program, California Energy Commission: Sacramento, CA. <https://efiling.energy.ca.gov/getdocument.aspx?tn=233292>; Williams et al., 2012. The Technology Path to Deep Greenhouse Gas Emissions Cuts by 2050: The Pivotal Role of Electricity. *Science* 53–59. <https://doi.org/DOI:10.1126/science.1208365>; Williams et al., 2015. Pathways to Deep Decarbonization in the United States; The U.S. report of the Deep Decarbonization Pathways Project of the Sustainable Development Solutions Network and the Institute of Sustainable Development and International Relations. Revision with technical supp. Energy and Environmental Economics, Inc., in collaboration with Lawrence Berkeley National Laboratory and Pacific Northwest National Laboratory. <https://usddpp.org/downloads/2014-technical-report.pdf>; Williams et al., 2021. Carbon-Neutral Pathways for the United States. *AGU Advances* 2, e2020AV000284. <https://doi.org/10.1029/2020AV000284>.

¹⁹⁶ Mahone et al. 2020a.

¹⁹⁷ Mahone et al. 2018; Mahone et al. 2020a; Mahone et al. 2020b; Austin et al. 2020; Reed et al. 2020.

¹⁹⁸ Mahone et al. 2018; Mahone et al. 2020a; Reed et al. 2020.

¹⁹⁹ Mahone et al., 2020. Achieving Carbon Neutrality in California: Pathways Scenarios Developed for the California Air Resources Board, California Air Resources Board, Energy and Environmental Economics, Inc. https://ww2.arb.ca.gov/sites/default/files/2020-10/e3_cn_final_report_oct2020_0.pdf

²⁰⁰ Mahone et al., 2020.

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Total liquid hydrocarbon combustion fuels for transportation in 2045, including both petroleum and biofuels, range among the pathways from approximately 1.6 to 3.3 billion gallons/year, with the lower end of the range corresponding to “The Zero Carbon Energy scenario,” and the higher end of the range corresponding to “The High CDR scenario.” The range represents roughly 9% to 18% of statewide annual petroleum transportation fuels use from 2013-2017, indicating the planned reduction in liquid hydrocarbon combustion fuels reliance by 2045.²⁰¹ Liquid biofuels account for approximately 1.4 to 1.8 billion gallons/year by 2045, which is roughly 40% to 100% of liquid transportation fuels use in 2045 depending on scenario, with 100% corresponding to “The Zero Carbon Energy Scenario.” So, in “The Zero Carbon Energy Scenario,” the most ambitious of the three, though biofuels constitute the entirety of liquid transportation fuel use, liquid transportation fuel use overall is greatly reduced.

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These State-commissioned studies suggest limits on the use of biofuels by specifically excluding or limiting the production of HEFA (“lipid”) fuels. PATHWAYS, the primary modeling tool for the AB 32 Scoping Plan, now run a biofuels module to determine a least-cost portfolio of the biofuel products ultimately produced (e.g. liquid biofuel, biomethane, etc.) based on biomass availability.²⁰² Mahone et al. chose to exclude purpose-grown crops because of its harmful environmental impacts and climate risks and further limited the biomass used to in-state production in addition to California’s population-weighted share of total national waste biomass supply.²⁰³ Consequently, it was assumed that all California biofuel feedstock should be cellulosic residues as opposed to the typical vegetable oil and animal fat HEFA feedstocks. A study by Austin et al. meanwhile, in considering pathways to reduce California’s transportation emissions, placed a cap on HEFA jet fuel and diesel use to a maximum of 0.5–0.6 and 0.8–0.9 billion gallons/year, respectively.²⁰⁴ Yet new in-state HEFA distillate (diesel and jet fuel) production proposed statewide, with a large share to come from the Refinery, would total approximately 2.1 billion gallons/year when fully operational.²⁰⁵ If fully implemented, HEFA

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²⁰¹ Mahone et al., 2020.

²⁰² E3 introduced a new biofuels module in the model that, unlike previous iterations of the PATHWAYS model, endogenously selects least-cost biofuel portfolios given the assumed available biomass. Mahone et al., 2020, footnote 2 at 19-20.

²⁰³ See e.g., Mahone et al., 2018. *Deep Decarbonization in a High Renewables Future: Updated results from the California PATHWAYS Model*; Report CEC-500-2018-012. Contract No. EPC-14-069. Prepared for California Energy Commission. Final Project Report. Energy and Environmental Economics, Inc.: San Francisco, CA. <https://ww2.energy.ca.gov/2018publications/CEC-500-2018-012/CEC-500-2018-012.pdf> (“most scenarios apply this more restrictive biomass screen to avoid the risk that the cultivation of biomass for biofuels could result in increased GHG emissions from natural or working lands.”, pp. 10).

²⁰⁴ Austin et al., 2021. *Driving California’s Transportation Emissions to Zero*; Report No.: UC-ITS-2020-65. Institute of Transportation Studies, University of California. DOI: 10.7922/G2MC8X9X. <https://escholarship.org/uc/item/3np3p2t0>

²⁰⁵ Supporting Material Appendix for *Changing Hydrocarbons Midstream: Fuel chain carbon lock-in potential of crude-to-biofuel petroleum refinery repurposing*; prepared for the Natural Resources Defense Council (NRDC) by Greg Karras, G. Karras Consulting, www.energy-re-source.com; *Application for Authority to Construct Permit and Title V Operating Permit Revision for Rodeo Renewed Project: Phillips 66 Company San Francisco Refinery (District Plant No. 21359 and Title V Facility # A0016)*; Prepared for Phillips 66 by Ramboll US Consulting, San Francisco, CA. May 2021; *Initial Study for: Tesoro Refining & Marketing Company LLC—Marathon Martinez Refinery Renewable Fuels Project*; received by Contra Costa County Dept. of Conservation and Development 1 Oct 2020; *April 28, 2020 Flare Event Causal Analysis; Tesoro Refining and Marketing Company, subsidiary of Marathon Petroleum, Martinez Refinery Plant #B2758*; report dated 29 June, 2020 submitted by Marathon to the

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fuel production could exceed caps of 0.0–1.5 billion gallons/year prescribed by the aforementioned state climate pathways.

In both studies, the reason given for limiting HEFA fuel reliance is the difficult-to-predict land use emissions associated with HEFA feedstocks. As discussed in the previous subsection, HEFA fuels can be associated with significant greenhouse gas emissions, on par with emissions from conventional oil production in some cases. Additionally, the refining emissions associated with HEFA production impact HEFA fuel cycle emissions—an impact that the DEIR did not consider. The carbon intensity of HEFA refining is roughly 180% to 240% of the carbon intensity of refining at the average U.S. crude refinery.²⁰⁶ Those refining emission increments would then add to the potentially larger effect of overuse of biofuels instead of ZEVs.

Repurposing refineries for HEFA biofuels production using steam reforming would thus increase the carbon intensity of hydrocarbon fuels processing when climate goals demand that carbon intensities decrease. That could contribute significantly to emissions in excess of the needed climate protection and state policy trajectory. California's goal of 2050²⁰⁷ goal of emissions 80% below 1990 levels by 2050 is equivalent to 86.2 million tons (MT) CO₂eq emissions in 2050. Given future projections of transportation fuel demand, HEFA diesel and jet fuel CO₂eq emissions could reach 66.9 Mt per year in 2050.²⁰⁸ Adding in emissions from remaining petroleum fuel production could push emissions to 91 Mt in 2050.²⁰⁹ Total 2050 emissions could thus be larger than the state target.

Similarly, the goal of carbon neutrality by 2045 either requires no emissions in 2045, or for emissions that do occur to be offset by negative emissions technologies such as carbon capture and storage (CCS). Relying on HEFA fuels in the future means that there will be emissions, so without CCS, carbon neutrality will not be reached. Yet carbon capture and storage has not been proven at scale, so it cannot be relied upon to offset HEFA fuel-associated emissions to meet mid-century emissions goals. Existing CCS facilities capture less than 1 percent of global carbon emissions, while CCS pilot projects have repeatedly overpromised and underdelivered in providing meaningful emissions reductions.²¹⁰ Therefore, repurposing idled petroleum refinery assets for HEFA biofuels will cause us to miss key state climate benchmarks.

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Bay Area Air Quality Management District: San Francisco, CA. <https://www.baaqmd.gov/about-air-quality/research-and-data/flare-data/flare-causal-reports>; *Paramount Petroleum, AltAir Renewable Fuels Project Initial Study*; submitted to City of Paramount Planning Division, 16400 Colorado Ave., Paramount, CA. Prepared by MRS Environmental, 1306 Santa Barbara St., Santa Barbara, CA; Brelsford, R. Global Clean Energy lets contract for Bakersfield refinery conversion project. *Oil & Gas Journal*. 2020. Jan. 9, 2020.

²⁰⁶ The difference between the upper and lower bounds of that range is driven by the (here undisclosed in the DEIR) difference between choices by the refinery to be made by Phillips 66 among HEFA feeds, and between diesel versus jet fuel production targets. Karras, 2021a.

²⁰⁷ The 80% is required as a direct emission reduction, not a net reduction that may take into consideration negative emission measures such as CCS. Executive Order S-3-05.

²⁰⁸ Karras, 2021a. For context, HEFA hydrogen steam reforming emissions alone could account for some 20 Mt/yr or more of this projected 66.9 Mt/yr.

²⁰⁹ *Id.*

²¹⁰ Center for International Environmental Law, *Confronting the Myth of Carbon-Free Fossil Fuels, Why Carbon Capture Is Not a Climate Solution* (2021), <https://www.ciel.org/wp-content/uploads/2021/07/Confronting-the-Myth-of-Carbon-Free-Fossil-Fuels.pdf>.

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The DEIR's conclusion that the Project is consistent with state climate directives without the analysis described above is a fatal flaw in that conclusion. A recirculated DEIR must evaluate all of the pathway studies and analysis described in this section, and make a determination regarding the Project's consistency with the state's climate law and policy based on all of the factors described in this comment.

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C. The DEIR Failed to Consider a Significant Potential GHG Emission Shifting Impact Likely to Result from the Project

Despite claims that biofuels have a carbon benefit, the data thus far show that increased production of the particular type of biofuel that the Project proposes has actually had the effect of *increasing* total GHG emissions, by simply pushing them overseas. Instead of replacing fossil fuels, adding renewable diesel to the liquid combustion fuel chain in California resulted in refiners increasing exports of petroleum distillates burned elsewhere, causing a worldwide net increase in GHG emissions. The DEIR improperly concludes the Project would decrease net GHG emissions²¹¹ without disclosing this emission-shifting (leakage) effect. A series of errors and omissions in the DEIR further obscures causal factors in the emission shifting by which the Project would cause and contribute to this significant potential impact.

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1. The DEIR Fails to Disclose or Evaluate Available Data Which Contradict Its Conclusion That the Project Would Result in a Net Decrease in GHG Emissions.

State climate law warns against "a reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state."²¹² However, the DEIR fails to evaluate this emission-shifting impact of the Project. Relevant state data that the DEIR failed to disclose or evaluate include volumes of petroleum distillates refined in California²¹³ and total distillates—petroleum distillates and diesel biofuels—burned in California.²¹⁴ Had the DEIR evaluated these data the County could have found that its conclusion regarding net GHG emissions resulting from the Project was wholly unsupported.

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As shown in Chart 4, petroleum distillate fuels refining for export continued to expand in California in the last two decades even as biofuel production ramped up in recent years. It is clear from this data that renewable diesel production during those decades -- originally expected to replace fossil fuels -- actually merely added a new source of carbon to the liquid combustion fuel chain. Total distillate volumes, including diesel biofuels burned in-state, petroleum distillates burned in-state, and petroleum distillates refined in-state and exported to other states and nations, increased from approximately 4.3 billion gallons per year to approximately 6.4 billion gallons per year between 2000 and 2019.^{215 216}

²¹¹ "Project operations would decrease emissions of GHGs that could contribute to global climate change" (DEIR p. 2-5) including "indirect emissions" (DEIR p. 4.8-258) and "emissions from transportation fuels" (DEIR p. 4.8-266).

²¹² CCR §§ 38505 (j), 38562 (b) (8).

²¹³ CEC, Fuel Watch data.

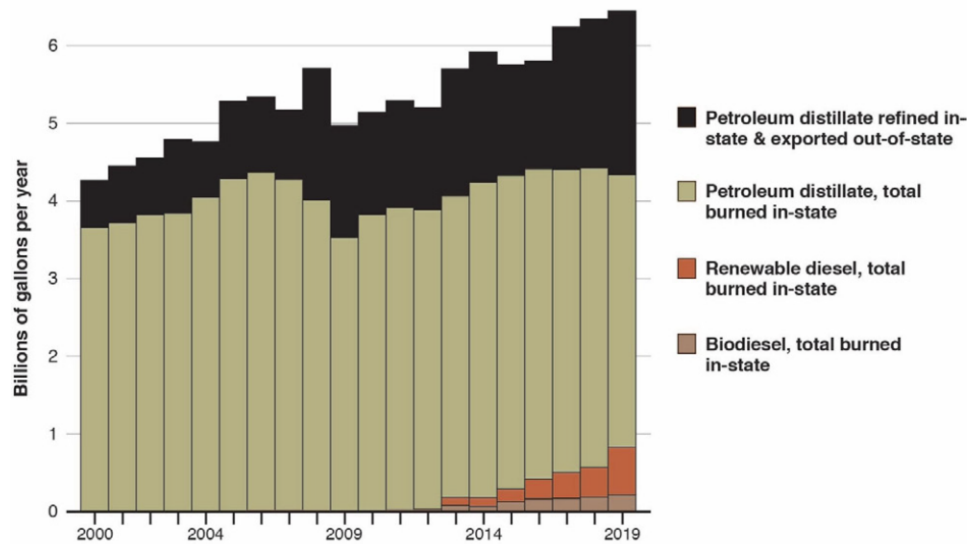
²¹⁴ CARB GHG Inventory Fuel Activity data, 2019 update.

²¹⁵ *Id.*

²¹⁶ CEC *Fuel Watch*. Weekly Refinery Production. California Energy Commission: Sacramento, CA. https://ww2.energy.ca.gov/almanac/petroleum_data/fuels_watch/output.php

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Specifically, crude refining for export (black in the chart) expanded after in-state burning of petroleum distillate (olive) peaked in 2006, and the exports expanded again from 2012 to 2019 with more in-state use of diesel biofuels (dark red and brown). From 2000 to 2012 petroleum-related factors alone drove an increase in total distillates production and use associated with all activities in California of nearly one billion gallons per year. Then total distillates production and use associated with activities in California increased again, by more than a billion gallons per year from 2012 to 2019, with biofuels accounting for more than half that increment. These state data show that diesel biofuels did not, in fact, replace petroleum distillates refined in California during the eight years before the Project was proposed. Instead, producing and burning more renewable diesel *along with* the petroleum fuel it was supposed to replace emitted more carbon.



Distillate fuel shares associated with all activities in California, 2000–2019.
Growth in total distillates excluding jet fuel and kerosene from State data.

CHART 4 Data from CEC Fuel Watch and CARB GHG Inventory Fuel Activity Data, 2019 update.

2. The DEIR Fails to Consider Exports in Evaluating the Project’s Climate Impact

The DEIR focuses on potential negative effects of reliance on imports if the proposed Project is rejected in favor of alternatives,²¹⁷ while ignoring fuels exports from in-state refineries and conditions under which these exports occur – a key factor in assessing the Project’s global climate impact, as discussed in the previous subsection. As a result the DEIR fails to disclose that crude refineries here are net fuels exporters, that their exports have grown as in-state and

²¹⁷ DEIR pp. 5-3 through 5-7, 5-9, 5-10, 5-19, 5-22 through 5-24.

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West Coast demand for petroleum fuels declined, and that the structural overcapacity resulting in this export emissions impact would not be resolved and could be worsened by the Project.

Due to the concentration of petroleum refining infrastructure in California and on the U.S. West Coast, including California and Puget Sound, WA, these markets were net exporters of transportation fuels before renewable diesel flooded into the California market.²¹⁸ Importantly, before diesel biofuel addition further increased refining of petroleum distillates for export, the structural over-capacity of California refining infrastructure was evident from the increase in their exports after in-state demand peaked in 2006. See Chart 4. California refining capacity, especially, is overbuilt.²¹⁹ Industry reactions -- seeking to protect those otherwise stranded refining assets through increased refined fuels exports as domestic markets for petroleum fuels declined -- resulted in California refiners exporting fully 20% to 33% of statewide refinery production to other states and nations from 2013–2017.²²⁰ West Coast data further demonstrate the strong effect of changes in domestic demand on foreign exports from this over-built refining center.²²¹ See Table 2.

Table 2. West Coast (PADD 5) Finished Petroleum Products: Decadal Changes in Domestic Demand and Foreign Exports, 1990–2019.

Total volumes reported for ten-year periods

Period	Volume (billions of gallons)		Decadal Change (%)	
	Demand	Exports	Demand	Exports
1 Jan 1990 to 31 Dec 1999	406	44.2	—	—
1 Jan 2000 to 31 Dec 2009	457	35.1	+13 %	-21 %
1 Jan 2010 to 31 Dec 2019	442	50.9	-3.3 %	+45 %

Data from USEIA, West Coast (PADD 5) *Supply and Disposition*; www.eia.gov/dnav/pet/pet_sum_snd_d_r50_mbbf_m_cur.htm

Current California and West Coast data demonstrate that this crude refining overcapacity for domestic petroleum fuels demand that drives the emission-shifting impact is unresolved and would not be resolved by the proposed Project and related Contra Costa County crude-to-biofuel conversion project. Accordingly, the Project can be expected to worsen in-state petroleum refining overcapacity, and thus the emission shift, by adding a very large volume of renewable diesel to the California liquid combustion fuels mix.

Despite the Project objective to provide renewable fuels to the California market, which could further shift petroleum fuels from this market, the DEIR fails to disclose or evaluate this causal factor in the observed emission shifting impact of recent renewable fuel additions.

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²¹⁸ USEIA, 2015.

²¹⁹ Karras, 2020. *Decommissioning California Refineries*.

²²⁰ *Id.*

²²¹ USEIA, West Coast (PADD 5) *Supply and Disposition*; www.eia.gov/dnav/pet/pet_sum_snd_d_r50_mbbf_m_cur.htm

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3. The DEIR Fails to Describe or Evaluate Project Design Specifications That Would Cause and Contribute to Significant Emission-Shifting Impacts

By failing to disclose and consider refinery export patterns, the DEIR fails to address the essential question of how fully integrating renewable diesel into petroleum fuels refining, distribution, and combustion infrastructure could worsen emission shifting by more directly tethering biofuel addition here to petroleum fuel refining for export. Compounding its error, the DEIR fails to evaluate the degree to which the Project's HEFA diesel production capacity could add to the existing statewide distillates production oversupply, and how much that could worsen the emission shifting impact. Had it done so, using readily available state default factors for the carbon intensities of these fuels, the County could have found that the Project would likely cause and contribute to significant climate impacts. See Table 3.

Table 3. Potential GHG Emission Impacts from Project-induced Emission Shifting: Estimates Based on Low Carbon Fuel Standard Default Emission Factors.

RD: renewable diesel PD: petroleum distillate CO₂e: carbon dioxide equivalents Mt: million metric tons

Estimate Scope	Phillips 66 Project	Marathon Project	Both Projects
Fuel Shift (millions of gallons per day) ^a			
RD for in-state use	1.860	1.623	3.482
PD equivalent exported	1.860	1.623	3.482
Emission factor (kg CO ₂ e/gallon) ^b			
RD from residue biomass feedstock	5.834	5.834	5.834
RD from crop biomass feedstock	8.427	8.427	8.427
PD (petroleum distillate [ULSD factor])	13.508	13.508	13.508
Fuel-specific emissions (Mt/year) ^c			
RD from residue biomass feedstock	3.96	3.46	7.42
RD from crop biomass feedstock	5.72	4.99	10.7
PD (petroleum distillate)	9.17	8.00	17.2
Net emission shift impact ^d			
Annual minimum (Mt/year)	3.96	3.46	7.42
Annual maximum (Mt/year)	5.72	4.99	10.7
Ten-year minimum (Mt)	39.6	34.6	74.2
Ten-year maximum (Mt)	57.2	49.9	107

a. Calculated based on DEIR project feedstock processing capacities, yield reported for refining targeting HEFA diesel by Pearlson et al., 2013, and feed and fuel specific gravities of 0.916 and 0.775 respectively. Pearlson, M., Wollersheim, C., and Hileman, J., A techno-economic review of hydroprocessed renewable esters and fatty acids for jet fuel production, *Biofuels, Bioprod. Bioref.* 7:89-96 (2013). DOI: 10.1002/bbb.1378. b. CARB default emission factors from tables 2, 4, 7-1, 8 and 9, Low Carbon Fuel Standard Regulation, CCR §§ 95484-95488. c. Fuel-specific emissions are the products of the fuel volumes and emission factors shown. d. The emission shift impact is the net emissions calculated as the sum of the fuel-specific emissions minus the incremental emission from the petroleum fuel v. the same volume of the biofuel. Net emissions are thus equivalent to emissions from the production and use of renewable diesel that does not replace petroleum distillates, as shown. Annual values compare with the DEIR significance threshold (0.01 Mt/year); ten-year values provide a conservative estimate of cumulative impact assuming expeditious implementation of State goals to replace all diesel fuels.

* Phillips 66 Project data calculated at 55,000 b/d feed, less than the 80,000 b/d feed capacity of the project.

Accounting for fuel yields on refining targeting renewable diesel²²² and typical feed and fuel densities noted in Table 3, at its 55,000 b/d processing capacity the Project could produce approximately 1.86 million gallons per day of renewable diesel, potentially resulting in crude

²²² Pearlson et al., 2013.

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refining for export of the equivalent petroleum distillates volume if current patterns continue. State default emission factors for full fuel chain “life cycle” emissions associated with the type of renewable diesel proposed²²³ account for a range of potential emissions from lower (“residue”) to higher (“crop biomass”) emission feeds, also shown in the table. The net emission shifting impact of the Project based on this range of state emission factors could thus be approximately 3.96 to 5.72 million metric tons (Mt) of CO₂e emitted per year. Table 3. Those potential Project emissions would exceed the 10,000 metric tons per year (0.01 Mt/year) significance threshold in the DEIR by 395 to 571 times.

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VII. THE DEIR FAILS TO ADEQUATELY DISCLOSE AND ANALYZE THE PROJECT’S AIR QUALITY IMPACTS

As discussed in Section III above, the DEIR is fatally flawed for having chosen a baseline that assumes an operating crude oil refinery rather than actual current conditions, in which the refinery is shut down with no plan or intention to continue processing crude oil. That flaw renders the entire analysis of air emissions in the DEIR inadequate, because the conclusion that the Project “would result in an overall reduction of local criteria pollutant emissions” (DEIR at 4.3-60) is based on a faulty premise and must be revisited; as must all air quality health impacts analysis and cumulative impacts analysis that is grounded in this conclusion. Starting from a zero baseline, the analysis should determine the increase in pollutants associated with operating the Project over current shutdown conditions. Since the calculations in the DEIR indicate that such emissions will be significant and unavoidable using the BAAQMD thresholds of significance, and the DEIR should further identify mitigation measures to address those emissions.

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Even aside from the faulty baseline, however, the DEIR analysis of air quality impacts suffers from three major flaws described in the subsections below. First, for reasons discussed in Section VI concerning GHG emissions, the analysis fails to take into account the widely differing air emissions impact associated with both different feedstocks and different product slates. Those differences should have been factored in the reasonable worst case scenario analysis to address uncertainty as to the feedstocks that will be used, *see* Sections II and IV, as well as any other feedstock scenarios appropriate to the analysis. Second, the DEIR air quality analysis systematically excludes acute exposures to short-term episodic facility emissions in nearby communities from consideration, even though the Project risks increasing acute exposures associated with flaring. And third, the DEIR odor analysis of new malodorous feedstock in new and repurposed facilities adjacent to vulnerable populations is too cursory and incomplete to approach sufficiency.

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A. The DEIR Air Impacts Analysis Fails to Take Into Account Varying Air Emissions from Different Feedstocks and Crude Slates

Section VI demonstrates that GHG emissions vary significantly with differing feedstocks and product slates. For these same reasons and others, emissions of multiple air pollutants vary with feedstock and product slate as well. Processing a different type of oil – including crude feedstock oils – can increase processing emissions in several ways. It can introduce

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²²³ Low Carbon Fuel Standard Regulation, CCR §§ 95484–95488, tables 2, 4, 7-1, 8 and 9.

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contaminants that escape the new feed and pass through the refinery into the local environment. It can require more severe, more energy-intensive processing that burns more fuel per barrel, increasing combustion emissions from the refinery. At the same time, processing the new feed can change the chemistry of processing to create new pollutants as byproducts or create polluting byproducts in greater amounts.

There are also potential increases in emissions of air pollutant emissions – including nitrogen oxides, particulate matter, sulfur dioxide, and polycyclic aromatic hydrocarbons, among others – associated with fossil fuel combustion and energy demand in proposed Project processes. The emissions result not only from the more intense hydrogen demands associated with certain feedstocks (see Section VI), but from the higher energy demands in addition to hydrogen reforming associated with processing certain types of feedstocks. More contaminated or difficult to pretreat feeds may require more energy in the proposed new feed pretreatment plant. Feeds that are more difficult to process may require more recycling in the same hydrotreater or hydrocracker, such that processing each barrel of fresh feed twice, for example, may double the load on pumps, compressors, and fractionators at that process unit, increasing the energy needed for processing. As another example further downstream in the Refinery, feeds that yield more difficult to treat combinations of acids and sour water as processing byproducts may need additional energy for pretreatment to prevent upsets in the main wastewater treatment system. Feeds that require more energy-intensive processing of this nature may increase combustion emissions of an array of toxic and smog-forming pollutants, including but not limited to those noted above.

Additionally, contaminants in the feedstocks themselves can be released during processing, adding to the air emissions burden. Fish oils can be contaminated with bio-accumulative lipophilic toxins such as polychlorinated biphenyls, dioxins, and polybrominated diphenyl ethers, which could be released from processing at 48,000 barrels per day in cumulatively significant amounts. So-called “brown grease” collected from sewage treatment plants – another potential feedstock whose use has not been ruled out - can adsorb and concentrate lipophilic toxic chemicals from across the industrial, commercial and residential sewerage collection systems—disposal and chemical fate mechanisms similar to those that have made such greases notoriously malodorous.

B. The DEIR Fails to Assess the Likelihood of Increased Air Pollution Associated With the Increased Likelihood of Process Upsets²²⁴

As discussed in Section V, running biofuel feedstocks risks increasing the likelihood of process upsets and flaring incidents at the Refinery. Any such incident will result release of in a significant volume of uncontrolled air emissions. Accordingly, the DEIR should have addressed those emissions, and ways to mitigate them, as part of its air quality impacts analysis. Specifically, the DEIR should have determined whether increased flaring is likely as a result of HEFA processes (per Section V); described the air impacts associated with flaring (which are

²²⁴ Supplemental information in support of this analysis is provided in Karras 2021c accompanying this comment, in the section entitled “Air Quality and Hazard Release Impacts of Project Flaring that Available Evidence Indicates Would be Significant are Not Identified, Evaluated, or Mitigated in the DEIR.”

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acute rather than chronic); and evaluated the possibility of limits on certain feedstocks prone to cause flaring as a mitigation measure.

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1. The DEIR Did Not Describe the Air Quality Impacts of Flaring

Although the inclusion of repurposed refinery flare systems in the Project clearly anticipates their use, and serious local air impacts have long been known to occur as a result of refinery flares, the DEIR simply does not describe those impacts. This is a fatal flaw in the DEIR independently from its flawed baseline analysis since, as discussed in Section V, the Project is likely to increase process upset incidents at the Refinery.

The County cannot argue that data for this essential impact description were not available. As described in a recent technical report:

Causal analysis reports for significant flaring show that hydrogen-related hazard incidents occurred at [the Phillips 66 Rodeo and Marathon Martinez] refineries a combined total of 100 times from January 2010 through December 2020 ... on average, and accounting for the Marathon plant closure since April 2020, another hydrogen-related incident at one of those refineries every 39 days.

... Sudden unplanned or emergency shutdowns of major hydro-conversion of hydrogen production plants occurred in 84 of these 100 reported safety hazard incidents. Such sudden forced shutdowns of *both* hydro-conversion and hydrogen production plants occurred in 22 of these incidents. ... In four of these incidents, consequences of underlying hazards included fires in the refinery.

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... Refinery flares are episodic air polluters. Every time the depressurization-to-flare safeguard dumps process gases in attempts to avoid even worse consequences, that flaring is uncontrolled open-air combustion. Flaring emits a mix of toxic and smog forming air pollutants—particulate matter, hydrocarbons ranging from polycyclic aromatics to methane, sulfur dioxide, hydrogen sulfide, and others—from partially burning off enormous gas flows. Most of the 100 incidents described above flared more than two million cubic feet of vent gas each, and many flared more than ten million.

... In 2005, flaring was linked to episodically elevated local air pollution by analyses of a continuous, flare activity-paired, four-year series of hourly measurements of the ambient air near the fence lines of four Bay Area refineries. By 2006, the regional air quality management district independently confirmed the link, assessed community-level impacts, and set environmental significance thresholds for refinery flares. These same significance thresholds were used to require [Phillips 66 and Marathon and previous owners of the Rodeo and Martinez refineries] to report the hazard data described above.

... Thus, each of the hundred hydrogen-related flaring incidents since 2010 at the P66 Rodeo and MPC Martinez refineries discussed above *individually* exceeded a relevant environmental significance threshold for air quality.²²⁵

²²⁵ Karras, 2021a.

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2. The DEIR Failed to Describe the Impact of Feedstock Switching on Flaring

With regard to causal factors for flaring, the allusion in the DEIR to reduced process hazards because the Project would result in fewer onsite equipment units where incidents could occur is specious. The hundred incidents described above include only those in which the type of process units to be repurposed for the Project *and* hydrogen-related hazards were causal factors in an environmentally significant flaring incident.²²⁶ Had the DEIR evaluated the same data source,²²⁷ the County could have found that the same refining processes that would be repurposed for the Project dominate the historic refinery flaring pattern.

All of the uniquely pronounced inherent process hazards resulting from converting crude refineries to HEFA refineries—which is what the Project proposes—result in *designing* HEFA conversions to dump process gas to flares when such hazards arise. The increased exothermic runaway reaction hazard due to more hydrogen-intensive processing of HEFA refining than crude refining, and associated need for upgraded capacity for rapid depressurization to flares, are noted industry-wide.^{228 229} Failure to evaluate this potential for Project HEFA refining to increase the frequency of refinery flaring compared with historic crude refining at the site is a major deficiency in the DEIR flaring analysis. Had the DEIR performed this essential evaluation, the County could have found that:

[D]espite current safeguards, hydro-conversion and hydrogen-related process safety hazards which their HEFA conversion projects could worsen contribute to significant flaring incidents at the P66 Rodeo and MPC Martinez refineries frequently. ...
[S]witching to HEFA refining is likely to further increase the frequency and magnitude of these already-frequent significant process hazard incidents ...

... The increased risk of process upsets associated with HEFA processing concomitantly creates increased risk to the community of acute exposures to air pollutants ... Therefore, by prolonging the time over which the frequent incidents continue, and likely increasing the frequency of this significant flaring, repurposing refineries for HEFA processing can be expected to cause significant episodic air pollution.”²³⁰

3. The DEIR Failed to Evaluate the Likelihood of Increased Flaring

Refinery flare incidents can be prevented by the same measures that can prevent the catastrophic explosion and fire incidents which flares are designed to (partially) mitigate; removing the underlying causes of those hazards. From an environmental health and safety perspective, this is the crucial fact about flaring. In this regard, its incomplete and misleading allusion to flaring as merely a way to make refining safer, which incidentally emits some

²²⁶ Karras, 2021a.

²²⁷ BAAQMD *Causal Analysis Reports for Significant Flaring*; Bay Area Air Quality Management District: San Francisco, CA. Reports submitted by Phillips and former owners of the Phillips 66 San Francisco Refinery at Rodeo, and submitted by Marathon and former owners of the Marathon Martinez Refinery, pursuant to BAAQMD Regulation 12-12-406. *See* Karras, 2021c, Attachment 33.

²²⁸ van Dyk et al., 2019.

²²⁹ Chan, 2020.

²³⁰ Karras, 2021a.

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pollutants, obscures a third fatal flaw in the DEIR flaring analysis: it failed to address the elective processing of feedstock types that would cause preventable flaring.

Refinery flares are designed and permitted for use only in emergencies, the only exception being limited to when unsafe conditions are both foreseeable *and* unavoidable.²³¹ Here in the Bay Area, preventable refinery flaring is an unpermitted activity that contravenes air quality policy and law.²³² The DEIR fails to address this fact. The DEIR declines to expressly define or limit the feedstocks that will be used, without addressing the issue that electing to process some of those feeds rather than others could result in more frequent environmentally significant flaring impacts, contrary to air quality policy and law.

Had the DEIR addressed this issue, the County could have found that:

- A portion of the range of potential HEFA feedstocks, including soybean oil, distillers corn oil and most other crop oils, have relatively higher process hydrogen requirements than other potential feedstocks for Project biofuel refining;²³³
- Electing to process feedstocks in that high process hydrogen demand category would release more heat during processing, thereby increasing the frequency of process temperature rise hazard incidents and hence environmentally significant flaring;²³⁴ and
- The resultant more frequent flaring from electing a feedstock which unnecessarily intensified underlying flaring would be preventable since another feedstock would reduce flaring frequency in accordance with air quality policy and law, and consequently, the proposed Project flaring could result in significant impacts.

C. The DEIR Fails to Address Acute Episodic Air Pollution Exposures

Although as described in the previous subsection flaring causes acute episodic air pollution exposure and will increase in frequency with the Project, the DEIR systematically excludes acute exposures to short-term episodic facility emissions associated with flaring and process upsets from consideration. The facility air permit itself specifies hourly and daily as well as annual emission limits.²³⁵ Yet the DEIR it erroneously conflates these acute and chronic exposure impacts, drawing numerous conclusions that facility emission impacts of the Project are less than significant based on average rates of emission from continuous sources alone; and fails entirely to disclose or address episodic emissions from potentially increased flaring, and their potential health impact..

Potential air quality impacts associated with acute exposures to short-term episodic emissions from the refining facilities are systematically excluded from DEIR consideration. The DEIR fails to evaluate or address episodic emissions from flaring, as discussed directly above in

²³¹ The limited exception does not apply where, as here, known measures to avoid flaring can be taken before unsafe conditions that result in flaring become locked into place, e.g., the inherently safer processing systems and designs are identified and can be implemented during construction or implementation.

²³² BAAQMD Regulation 12, Rule 12.

²³³ Karras, 2021a.

²³⁴ Karras, 2021a.

²³⁵ Major Facility Review Permit Issued To: Phillips 66–San Francisco Refinery, Facility #A0016, Dec. 27, 2018.

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subsection B. Even for criteria air pollutants, the DEIR calculations and estimates fail to account for combined effects of site-specific source, geographic, demographic, and climatic factors that worsen episodic air pollutant exposures locally. The DEIR further relies upon incomplete local air monitoring, which could not and did not measure incident plumes. Local air monitoring also excludes from measurement many air pollutants associated with upsets and flaring. Polycyclic aromatic hydrocarbons, carbonyl sulfide, dioxins, and even particulate matter less than 2.5 microns diameter (PM_{2.5}), for example, are not measured continuously in local air samples, such that episodically elevated one-minute or one-hour exposure levels during flaring remain unmeasured for these and many other chemicals known or suspected to be released by flares. The DEIR's error of conflating impacts of acute and chronic air pollutant exposures obscures its failure to consider acute exposure to short-term episodic emissions. In most cases, its comparisons underlying those conclusions appear to be grounded in no acute exposure or episodic emission data at all.²³⁶

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Additionally, the DEIR failed to consider potential means of mitigating the impact of flaring associated with HEFA processes by limiting uses of the feedstocks most prone to causing excess flaring. As discussed in Section VI, a portion of the range of potential HEFA feedstocks, including soybean oil, distillers corn oil and most other crop oils, have relatively higher process hydrogen requirements than other potential feedstocks for Project biofuel refining;²³⁷ Processing feedstocks with higher hydrogen demand releases more heat during processing, thereby increasing the frequency of process temperature rise hazard incidents -- and hence environmentally significant flaring.²³⁸ The DEIR should therefore have considered the possibility of capping or prohibiting the use of feedstocks with higher risk of causing flaring incidents.

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The DEIR must therefore be revised to include a disclosure and assessment of the likelihood of increased flaring associated with the proposed HEFA process, including reasonable worst case scenario analysis taking into account variation in flaring associated with different feedstocks. It must then calculate the increased acute air pollution associated with such flaring, and identify potential mitigation measures to diminish the likelihood of flaring associated with the HEFA process, including feedstock limitations.

D. The DEIR Fails to Adequately Address Potential Odors from the Project

Phillips 66 engineered some odor management measures such as leak seals and carbon canister treatment of odorous streams associated with the Project. The DEIR concludes that the Project would result in a significant odor impact despite the engineered measures, but concludes that odor impacts could be reduced to less than significant through use of an "Odor Management Plan" -- to be developed, implemented, maintained, monitored and updated as necessary *after* Project approval. 4.3-80 – 81. The DEIR does not discuss the effectiveness or pitfalls observed from prior or existing use of odor management plans at the Refinery.

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The DEIR's reliance on a not-yet-developed odor management plan is misplaced. In the first instance, such a plan runs afoul of the CEQA requirement that "Formulation of mitigation

²³⁶ Karras 2021c.

²³⁷ Karras, 2021a.

²³⁸ Karras, 2021a.

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measures shall not be deferred until some future time.” CEQA Guidelines § 15126.4(a)(1)(B); and that “Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments.” *Id.* at § 15126.4(a)(2).

Additionally, as a substantive matter, the DEIR does not adequately describe how the proposed mitigation would be effectively at reducing impacts to non-significance – specifically, how “odors similar to an animal and/or food processing facility unless properly managed” would be eliminated in the context of an open-plan petroleum refinery surrounded by densely packed communities. Moreover, any proposed mitigation – and description of its effectiveness – must account for the fact that the DEIR does not preclude use of any type of feedstock – meaning that a reasonable worst case scenario analysis must account for the possibility that highly odorous feedstocks will be used. The DEIR states that Project feedstocks could include “FOG” (fats, oils and grease) – a category of feedstock includes a particular type of “brown grease.” Brown grease is a highly malodorous oil and grease extracted from the grease traps, “mixed liquor” (microbial cultures with their decomposition products) and “biosolids” (sewage sludge) in publicly owned treatment works, commonly known as sewage plants, originating in the broad mix of residential, commercial and industrial waste water connections to sewage plants across urban and suburban landscapes.

The DEIR fails to adequately describe or account for malodorous properties of brown grease and other types of FOG in its impact evaluation. The DEIR further fails to provide a sufficiently detailed description and analysis of the infrastructure from which the odors may be emitted – including the transport system, the storage system, and the pre-processing system – including design specifications, potential points of atmospheric contact, and the proximity to adjacent populations. Such analysis is crucial to supporting the DEIR conclusions that an odor management plan will reduce the impact to less than significant.

VIII. THE DEIR’S ASSESSMENT OF ALTERNATIVES TO THE PROJECT IS INADEQUATE

Analysis of project alternatives, together with identification of mitigation, form the “core of the EIR.” *Jones v. Regents of University of California* (2010), 183 Cal.App.4th 818, 824-25. That core is deeply flawed here. First, the document fails to consider a “no project” alternative that realistically represents conditions without the project, since those conditions do not include an operating refinery. Second, the alternatives analysis artificially conflates numerous alternatives that can and should have been considered collectively as a means to reduce Project impacts. Second, while the analysis appropriately includes an electrolytic hydrogen alternative, the analysis of that alternative omits important criteria that should have been considered. Finally, the DEIR defines the Project in a manner that is so overly narrow as to skew the analysis of alternatives.

A. The DEIR Does Not Evaluate A Legally Sufficient No-Project Alternative

In examining a range of alternatives, an EIR is required to include a “no project” alternative to facilitate assessment of the impact of the remaining alternatives. “The purpose of describing and analyzing a no project alternative is to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed

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project. ..." CEQA Guidelines § 15126.6(e)(1). "The 'no project' analysis shall discuss the existing conditions ... as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. ..." CEQA Guidelines, § 15126.6, subd. (e)(2). It is essential that the "no project" alternative accurately reflect the status quo absent the project, to ensure that the baseline for measuring project impacts is not set too high, which would artificially diminish the magnitude of Project impacts. *See Ctr. for Biological Diversity v. Dep't of Fish & Wildlife* (2014), 234 Cal.App.4th 214, 253 (citation omitted) (emphasis in original) ("a no project alternative in an EIR 'provides the decision makers and the public with specific information about the environment if the project is not approved. It is a factually based forecast of the environmental impacts of *preserving the status quo*. It thus provides the decision makers with a base line against which they can measure the environmental advantages and disadvantages of the project and alternatives to the project.'").

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For reasons explained in Section II, concerning the project baseline, the DEIR incorrectly identified the no project alternative as the scenario where crude oil operations would return to historic rates, continuing crude oil processing operations indefinitely at historic levels. DEIR at 5-11. *See* DEIR at 3-37 (stating, in the discussion of baseline, that if the Project is not implemented, petroleum crude refining would continue at historic rates because Refinery throughputs will rebound from the lower level during the COVID-19 pandemic to "more typical" historic throughputs). Yet the DEIR provides no substantial evidence to support this conclusion. It is an unsubstantiated assumption contradicted by mountains of evidence – much of it provided in the Scoping Comments and even more provided in these Comments – that Phillips 66 will be winding down petroleum refining operations at the Refinery regardless of whether the Project is approved. It is imperative, to ensure a rational alternatives analysis, that the County include a no project alternative that is grounded in reality.

The validity of the no project alternative analysis is further undercut by the DEIR's faulty consideration of near-term future fuel market demand, as described in the next subsection. The Refinery cannot meet refined products demand (to the extent it exists) if it cannot access the feedstock to make those products in the first place – as is clearly the case. This fact undercuts the DEIR analysis of the no project alternative to the extent that analysis assumes, without considering feedstock supply, that the Refinery is positioned on a foregoing basis to meet purported product demand.

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A no project alternative reflecting the reality of the Refinery's closure would have found multiple significant impacts where the DEIR currently finds no significant impact or, in some cases, reduced impact. If, in fact, the Santa Maria refinery and/or the Rodeo refinery are being forced by current circumstances to limit or cease crude oil production, then no project conditions would likely have less environmental impact than any Project alternative. It is thus crucial that the County assess complete information concerning the volume of crude that would be refined at the Santa Maria and Rodeo facilities – if, indeed, any would be – in the absence of the Project.

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Additionally, a no project alternative reflecting that reality would need to address the need to decommission the refinery and address any hazardous waste issues, as discussed in Section X. The DEIR needs to confront the reality that if the Project is not approved, a massive – and environmentally impactful – cleanup effort will be required to address the decades of hazardous contamination fouling the idled site.

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B. The DEIR Analysis Rejecting Three Reduced Production Alternatives is Grounded in Erroneous Assumptions Regarding Petroleum Fuel Markets

The DEIR dismissed from consideration three alternatives involving decommissioning or production reduction: the alternative of shutting down the Santa Maria facility but continuing operations at the Refinery (DEIR at 5-3 – 4), the alternative of eliminating gasoline blending (DEIR at 5-4), and the full decommissioning alternative (DEIR at 5-9 – 10). These alternatives, as well as the no project alternative, were evaluated and rejected based on stated assumptions regarding crude oil supply and refined products markets. The analysis rejecting these alternatives is consistently grounded in an assumption that the Refinery is essential to meet regional refined product demand..

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Specifically, the DEIR hypothesizes that decommissioning would lead to transportation fuels supply/demand imbalances which “would likely lead to regional shortages that could trigger imports and higher prices” in the “near term.” DEIR at 5-9. Similarly, in rejecting the decommissioning of the Santa Maria facility only alternative, the DEIR states, “Phillips 66 is a critical supplier of transportation fuels to the region,” and that “any reduction in regional supply will result in increased imports of gasoline from other areas.” DEIR at 5-3 – 4. It further posits that rebounding post-COVID fuels demand, coupled with the closure of the Marathon Martinez refinery, could “reduce regionally-available supply to meet regional demand” for petroleum fuels if the Santa Maria facility closes (DEIR at 5-3) and “would likely lead to regional shortages that could trigger imports and higher prices” if the Rodeo facility closes. DEIR at 5-9. Additionally, the DEIR states, in rejecting the elimination of gasoline blending, that “Phillips 66 is a critical supplier of conventional transportation fuels to the region.”

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These statements regarding fuels supply and demand, however, are demonstrably rebutted by facts – undercutting the entire logic of its rejection of the three reduced production alternatives. While the DEIR asserts a concern that in the rejected alternative scenarios, near-future demand for refined products will exceed supply in the fuels market, leading to increased imports and attendant gas price spikes, and references generally a “tightening” of the supply/demand balance for diesel (DEIR at 5-9), it nowhere supports a conclusion that any of the decommissioning or reduction alternatives would actually create a supply shortage. In fact, available evidence indicates the exact opposite. Comparisons of fuels supply, demand, and statewide fuels refining spare capacity while meeting demand and exporting fuels strongly suggest that currently available refining capacity is fully sufficient to meet demand even without both the Refinery and the shuttered Marathon Martinez refinery. This error in the DEIR skews its analysis of the reduced production alternatives. This error must be corrected both to accurately describe the no project alternative, and to support a reasonably accurate impacts comparison between alternatives.

It bears note at the outset that under existing conditions, the crucial barrier which limits petroleum fuels movements, hence affecting supply and price, is mountainous terrain between West Coast (PADD 5) and other U.S. refining districts. This leads to normal supply movements between the Bay Area and Southern California²³⁹ -- which the DEIR misleading labels

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²³⁹ USEIA, 2015. *West Coast Transportation Fuels Markets*; U.S. Energy Information Administration: Washington, D.C. <https://www.eia.gov/analysis/transportationfuels/padd5>

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“imports.” In fact, as a consequence of this geographic constraint, the existing condition of refinery overcapacity results in both California and the West Coast of the U.S. overall being net exporters of gasoline and diesel to other states and nations.²⁴⁰ This fact calls deeply into question the DEIR’s hypothesis that the Refinery is central to local supply.

And in fact, California’s on-the-ground experience with supply and demand before and during the pandemic years undercuts the DEIR hypothesis of the necessity of the Refinery for meeting in-state demand. Available supply and demand data show that even after the closure of the Marathon Martinez refinery in 2020, and even after demand for refined products rebounded in 2021 from their early pandemic decline, California refineries have operated significantly under capacity.

California and the West Coast (Petroleum Administration Defense District 5) fuels demand data are summarized in Tables 4 and 5.

Table 4. California Taxable Fuel Sales Data: Return to Pre-COVID Volumes

Fuel volumes in millions of gallons (MM gal.) per month

	Demand in 2021	Pre-COVID range (2012–2019)			Comparison of 2021 data with the same month in 2012–2019
		Minimum	Median	Maximum	
Gasoline (MM gal.)					
Jan	995	1,166	1,219	1,234	Below pre-COVID range
Feb	975	1,098	1,152	1,224	Below pre-COVID range
Mar	1,138	1,237	1,289	1,343	Below pre-COVID range
Apr	1,155	1,184	1,265	1,346	Approaches pre-COVID range
May	1,207	1,259	1,287	1,355	Approaches pre-COVID range
Jun	1,196	1,217	1,272	1,317	Approaches pre-COVID range
Jul	1,231	1,230	1,298	1,514	Within pre-COVID range
Jet fuel (MM gal.)					
Jan	10.74	9.91	11.09	13.69	Within pre-COVID range
Feb	10.80	10.13	11.10	13.58	Within pre-COVID range
Mar	13.21	11.23	11.95	14.53	Exceeds pre-COVID median
Apr	13.84	10.69	11.50	13.58	Exceeds pre-COVID range
May	15.14	4.84	13.07	16.44	Exceeds pre-COVID median
Jun	17.08	8.67	12.75	16.80	Exceeds pre-COVID range
Jul	16.66	11.05	13.34	15.58	Exceeds pre-COVID range
Diesel (MM gal.)					
Jan	203.5	181.0	205.7	217.8	Within pre-COVID range
Feb	204.4	184.1	191.9	212.7	Exceeds pre-COVID median
Mar	305.4	231.2	265.2	300.9	Exceeds pre-COVID range
Apr	257.1	197.6	224.0	259.3	Exceeds pre-COVID median
May	244.5	216.9	231.8	253.0	Exceeds pre-COVID median
Jun	318.3	250.0	265.0	309.0	Exceeds pre-COVID range
Jul	248.6	217.8	241.5	297.0	Exceeds pre-COVID median

Data from net taxable fuel sales (CDTFA, various years). Pre-COVID statistics are for the same month in 2012–2019. Multiyear comparison range shown accounts for interannual variability in fuels. Jet fuel totals exclude fueling in California for fuels presumed to be burned outside the state during interstate and international flights.

²⁴⁰ USEIA, 2015.

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Table 5. West Coast (PADD 5) Fuels Demand Data: Return to Pre-COVID Volumes

Fuel volumes in millions of barrels (MM bbl.) per month

	Demand in 2021	Pre-COVID range (2010–2019)			Comparison of 2021 data with the same month in 2010–2019
		Minimum	Median	Maximum	
Gasoline (MM bbl.)					
Jan	38.59	42.31	45.29	49.73	Below pre-COVID range
Feb	38.54	40.94	42.75	47.01	Below pre-COVID range
Mar	45.14	45.23	48.97	52.53	Approaches pre-COVID range
Apr	44.97	44.99	47.25	50.20	Approaches pre-COVID range
May	48.78	46.79	49.00	52.18	Within pre-COVID range
Jun	48.70	45.61	48.14	51.15	Exceeds pre-COVID median
Jul	50.12	47.33	49.09	52.39	Exceeds pre-COVID median
Jet fuel (MM bbl.)					
Jan	9.97	11.57	13.03	19.07	Below pre-COVID range
Feb	10.35	10.90	11.70	18.33	Below pre-COVID range
Mar	11.08	11.82	13.68	16.68	Below pre-COVID median
Apr	11.71	10.83	13.78	16.57	Within pre-COVID range
May	12.12	12.80	13.92	16.90	Approaches pre-COVID range
Jun	14.47	13.03	14.99	17.64	Within pre-COVID range
Jul	15.31	13.62	15.46	18.41	Within pre-COVID range
Diesel (MM bbl.)					
Jan	15.14	12.78	14.41	15.12	Exceeds pre-COVID range
Feb	15.01	12.49	13.51	15.29	Exceeds pre-COVID median
Mar	17.08	14.12	15.25	16.33	Exceeds pre-COVID range
Apr	15.76	14.14	14.93	16.12	Exceeds pre-COVID median
May	16.94	15.11	15.91	17.27	Exceeds pre-COVID median
Jun	14.65	14.53	16.03	16.84	Within pre-COVID range
Jul	16.94	15.44	16.40	17.78	Exceeds pre-COVID median

Data for “Product Supplied” from *West Coast (PADD 5) Supply and Disposition*, (USEIA, various years). Product Supplied approximately represents demand because it measures the disappearance of these fuels from primary sources, i.e., refineries, natural gas processing plants, blending plants, pipelines, and bulk terminals. PADD 5 includes AK, AZ, CA, HI, NV, OR, and WA. Pre-COVID statistics are for the same month in 2010–2019. This multiyear comparison range accounts for interannual variability in fuels demand.

These tables show that demand for refined products rebounded to pre-COVID levels in 2021. In California, from April through June 2021 taxable fuel sales approached the range of interannual variability from 2012–2019 for gasoline and reached the low end of this pre-COVID range in July, while taxable jet fuel and diesel sales exceeded the maximum or median of the 2012–2019 range in each month from April through July of 2021. See Table 4. Similarly, West Coast fuels demand in April and May 2021 approached or fell within the 2010–2019 range for gasoline and jet fuel and exceeded that range for diesel. In June and July 2021 demand for gasoline exceeded the 2010–2019 median, jet fuel fell within the 2010–2019 range, and diesel fell within the 2010–2019 range or exceeded the 2010–2019 median. See Table 5.

Yet throughout this rebound, petroleum refining remained shuttered at the Marathon Martinez refinery with no plans to restart. Nonetheless, California and West Coast refineries supplied the rebound in fuels demand *while running well below capacity*, as summarized in Tables 6 and 7.

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Table 6. Total California Refinery Capacity Utilization in Four-week Periods of 2021.

Four-week period	barrel (oil): 42 U.S. gallons	barrels/calendar day: see table caption below	
	Calif. refinery crude input (barrels/day)	Operable crude capacity (barrels/calendar day)	Capacity utilized (%)
12/26/20 through 01/22/21	1,222,679	1,748,171	69.9 %
01/23/21 through 02/19/21	1,199,571	1,748,171	68.6 %
02/20/21 through 03/19/21	1,318,357	1,748,171	75.4 %
03/20/21 through 04/16/21	1,426,000	1,748,171	81.6 %
04/17/21 through 05/14/21	1,487,536	1,748,171	85.1 %
05/15/21 through 06/11/21	1,491,000	1,748,171	85.3 %
06/12/21 through 07/09/21	1,525,750	1,748,171	87.3 %
07/10/21 through 08/06/21	1,442,750	1,748,171	82.5 %
08/07/21 through 09/03/21	1,475,179	1,748,171	84.4 %
09/04/21 through 10/01/21	1,488,571	1,748,171	85.1 %
10/02/21 through 10/29/21	1,442,429	1,748,171	82.5 %

Total California refinery crude inputs from CEC Fuel Watch, various dates. Statewide refinery capacity as of 1/1/21, after the Marathon Martinez refinery closure, from USEIA, 2021a. Capacity in barrels/calendar day accounts for down-stream refinery bottlenecks, types and grades of crude processed, operating permit constraints, and both scheduled and unscheduled downtime for inspection, maintenance, and repairs.

Statewide, four-week average California refinery capacity utilization rates from March 20 through August 6, 2021 ranged from 81.6% to 87.3% (Table 3), similar to those across the West Coast, and well below maximum West Coast capacity utilization rates for the same months in 2010–2019 (Table6). Moreover, review of Table 6 reveals 222,000 b/d to more than 305,000 b/d of spare California refinery capacity during this period when fuels demand rebounded.

Table 7. West Coast (PADD 5) Percent Utilization of Operable Refinery Capacity.

Month	Capacity Utilized in 2021	Pre-COVID range for same month in 2010–2019		
		Minimum	Median	Maximum
January	73.3 %	76.4 %	83.7 %	90.1 %
February	74.2 %	78.2 %	82.6 %	90.9 %
March	81.2 %	76.9 %	84.8 %	95.7 %
April	82.6 %	77.5 %	82.7 %	91.3 %
May	84.2 %	76.1 %	84.0 %	87.5 %
June	88.3 %	84.3 %	87.2 %	98.4 %
July	85.9 %	83.3 %	90.7 %	97.2 %
August	87.8 %	79.6 %	90.2 %	98.3 %
September	NR	80.4 %	87.2 %	96.9 %
October	NR	76.4 %	86.1 %	91.2 %
November	NR	77.6 %	85.3 %	94.3 %
December	NR	79.5 %	87.5 %	94.4 %

NR: Not reported. Utilization of operable capacity, accounting for downstream refinery bottlenecks, types and grades of crude processed, operating permit constraints, and both scheduled and unscheduled downtime for inspection, maintenance, and repairs, from USEIA, 2021b. PADD 5 includes AK, AZ, CA, HI, NV, OR, and WA. Pre-COVID data for the same month in 2010–2019. 2021 data account for Marathon Martinez closure.

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Thus, spare California refining capacity during this period when fuels demand increased to reach pre-COVID levels and crude processing at the Marathon Martinez refinery remained shut down (222,000–305,000 b/d) *exceeded the total 120,200 barrel per calendar day crude capacity of the refinery.*²⁴¹ Other refiners could have used that idled capacity to meet this temporary surge in demand and reduction in supply, and would have been incented to do so, had the hypothesized market tightening necessitated it. Yet that is not what actually happened.

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In fact, existing conditions—namely idled crude refining assets during the current surge in petroleum fuels demand—show that the unsupported hypothesis of a supply-demand imbalance which threatens to cause local fuel price spikes from greatly increased imports hypothesized in the DEIR is both unsupported and, in the recent demand surge, false. Thus, the DEIR analysis rejecting reduced production alternatives lacks valid factual support.

C. The DEIR Inappropriately Dismissed the Hydrogen Generation Technology Alternative From Consideration

Splitting water with renewable power through electrolysis to produce zero-emission hydrogen (ZEH) is a proven technology that could be installed instead of repurposing fossil gas steam reforming hydrogen plants at the Refinery for the Project. Commentors raised multiple issues in support of ZEH in their Scoping Comment are incorporated herein and reasserted, as they remain relevant and were not addressed in the DEIR.

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The DEIR dismisses from consideration the “hydrogen generation technology alternative” (herein ZEH) on the grounds of purported technical and economic infeasibility. DEIR at 5-7 – 9. This conclusion not supported by substantial evidence. It is not based on a facility-specific evaluation of feasibility,²⁴² but rather a back-of-the-envelope calculation of potential PG&E energy costs based on general information. DEIR 5-7, 5-33 – 34.

In the first instance, the County’s rejection of the ZEH alternative is baseless in view of the fact that this same alternative was treated as feasible in the DEIR for the Marathon Martine project - a discrepancy that the County makes no attempt to reconcile. Nothing in either DEIR provides any reason why the Rodeo Renewed project differs in any way from the very similar Marathon project that would affect the feasibility of the hydrogen alternative. On that basis alone, the rejection of this alternative is unsupported by substantial evidence.

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²⁴¹ Although USEIA labels the SFR refining site as Rodeo, both RF and SMF equipment capacities are included in the USEIA data table reporting the 120,200 b/cd operating and total operable capacity of the refinery. *See* USEIA, 2021a. *Refinery Capacity Data by Individual Refinery as of January 1, 2021*; U.S. Energy Information Administration: Washington, D.C. Accessed 3 Nov 2021. <https://www.eia.gov/petroleum/data.php>

²⁴² Commenter NRDC submitted a Public Records Act request to the County for analysis associated with the cost estimates at DEIR 5-7 – 5-8, and “[a]ny and all additional records pertaining to electrolysis or ‘green’ hydrogen at the Phillips 66 Rodeo refinery in connection with the Rodeo Renewed project and associated California Environmental Quality Act (CEQA) review.” Letter dated November 9, 2021 from Ann Alexander to Lawrence Huang. In response, via the email from Lawrence Huang to Ann Alexander also dated November 9, 2021, the County provided no site-specific analysis concerning the rejected electrolysis hydrogen alternative.

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Beyond that basic problem, the DEIR provides no valid basis for rejection of the electrolytic hydrogen alternative as infeasible. The document presents only general information concerning the technology and a statement of arithmetic that is both obvious and meaningless, without considering an array of factors that could make electrolytic hydrogen necessary and both economically and technically feasible.

ZEH should have been considered as an alternative in the DEIR for the reasons specified below.

1. The DEIR Failed to Consider ZEH as Mitigation for Significant Project Impacts

The Project has reasonable potential to result in multiple significant impacts that the DEIR did not identify and remain unmitigated in the DEIR, as explained in Section V. A major part of that impact would be accounted for by the proposed repurposing of fossil gas hydrogen steam reforming plants. See Sections II and VI. Project hydrogen plant emissions alone could reach approximately 1.5 to 2.3 million metric tons per year.²⁴³ ZEH would eliminate those steam reforming emissions. However, having failed to identify this significant potential GHG impact, the DEIR failed to propose mitigation for it. ZEH should have been considered as such a mitigation measure.

The cursory, general, and flawed cost analysis provided as a reason for rejecting ZEH was clearly focused solely on the cost to the Project proponent. As discussed in subsection 3, this is not a reasonable sole basis for rejecting a needed mitigation measure.

2. The DEIR Ignored a Critical Fact Supporting the Scalability of ZEH

The DEIR concluded that ZEH would be technically infeasible based on the large scale of total ZEH hydrogen production that would be needed by the Project. DEIR at 5-8. However, this conclusion is based on an implicit flawed assumption about how scalability of ZEH works – *i.e.*, that a demonstration at small scale does not support a conclusion of feasibility on a larger scale. That assumption does not reflect the nature of the technology, which makes ZEH inherently scalable. This is because ZEH consists of multiple smaller electrolyzer units, that can be stacked to the desired total production scale. Indeed, the DEIR recognizes the modular nature of ZEH technology, stating, “At this time, the largest electrolyzer in service is 20 MW ... meaning that approximately 37 units would need to be installed to supply the necessary amounts of hydrogen. Electrolysis projects similar in size to that requires for the Rodeo Refinery have been announced” *Id.* Yet without further analysis, and without consideration of the import of this modular construction for scalability, the DEIR concludes in the same paragraph of the same page that ZEH is “infeasible for both technical and financial reasons” – with the reason given that “[t]he scale of the electrolysis operation that would be required [exceeding] any facility that has been put into operation in the world.” *Id.*

Indeed, as an example of a large PEM hydrogen facility, Shell plans to scale up the capacity of a proton exchange membrane (PEM) hydrogen electrolysis plant in Germany from the current 10 megawatts to 100 megawatts.²⁴⁴ Furthermore, Reed et al used a scale factor of 0.9

²⁴³ Karras, 2021a.

²⁴⁴ <https://www.shell.de/media/shell-media-releases/2021/shell-energy-and-chemicals-park-rheinland.html>

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for projecting cost of larger central installations in their analysis of the costs of electrolysis hydrogen production.²⁴⁵

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3. The DEIR Rejected ZEH Based on Unsupported, Invalid and Biased Cost Analysis

The DEIR concluded that ZEH is financially infeasible without disclosing, evaluating, or apparently attempting virtually any of the elements of a valid cost analysis specific to the site and Project. A Public Records Act request from Commenter NRDC seeking information concerning the cost calculation turned up essentially no support for it.²⁴⁶

The DEIR did not identify the electrolysis technology or technologies to which its cost conclusion pertained. In fact, there are three types of electrolysis technology, each with its own capabilities, limitations, site footprint and costs.²⁴⁷ The DEIR also did not present any verified onsite power cost. Had it done so, the County might have found costs of self-generated wind or solar power may be as low and 2.6 cents per kilowatt-hour (kWh),²⁴⁸ thus lower than the \$120/MWh for third-party power at current utility rates the DEIR asserted. DEIR at 5-8. Moreover, the DEIR failed to disclose that crude refineries in California may contract with utilities for refinery-specific power sales as well as power purchases at potentially lower cost to refiners. Rather, the DEIR asserted that \$120/MWh power cost based, apparently, on general utility rates, without disclosing or evaluating the rate Phillips 66 actually pays for grid power.

It is particularly problematic that the DEIR relays ZEH capital cost estimates from Phillips 66 of \$0.75 billion to \$1.1 billion (DEIR at 5-8) without disclosing any attempt to verify that information, as noted above. Had it attempted a contemporary survey, the DEIR might have found current ZEH capital costs, which as expected are trending downward, of approximately \$500 to \$650 per kW²⁴⁹ -- which, again, would be lower, had the DEIR checked and found that available information, at approximately \$0.37 billion to \$0.48 billion.

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Other cost data is generally available as well, and should have been considered by the County. Hydrogen companies, such as Nel Hydrogen, which has US operations, can provide estimated construction costs of a ZEH facility.²⁵⁰ Operating costs can also be readily determined based on the source of renewable energy, which can be from both an on-site solar facility and from the grid. The cost of the solar facility is minimal, with it being built on the refinery's contaminated property that cannot be used for other purposes. There is only the cost of installing the panels, and the maintenance cost is minimal. Furthermore, using green grid electricity will allow the flow of green energy to go both ways, with the ZEH being used to balance the grid

²⁴⁵ Reed et al, p. A-10..

²⁴⁶ Letter dated November 9, 2021 from Ann Alexander to Lawrence Huang. In response, via the email from Lawrence Huang to Ann Alexander also dated November 9, 2021.

²⁴⁷ Reed et al., 2020. Roadmap for the Deployment and Buildout of Renewable Hydrogen Production Plants in California; California Energy Commission Clean Transportation Project Final Project Report. Prepared for the Commission by U.C. Irvine Advanced Power and Energy Program. June 2020. CEC-600-2020-002.

²⁴⁸ Personal communication, Clair Brown and Greg Karras with Jeffrey Reed, U.C. Irvine Advanced Power and Energy Program, on Monday, 6 December 2021.

²⁴⁹ *Id.*

²⁵⁰ Typically brownfield construction costs 10% less than greenfield production, which is in line with using a factor of 0.9 to predict the cost of scaling up the modular ZEH.

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during peak hours. The benefit of grid balancing is large and depends on the opportunity costs of grid balancing using batteries and gas peaker plants, both of which have high costs.

Furthermore, the DEIR failed to take into account cost scaling factors. Consequently, despite asserting the unprecedented scale of the Project ZEH need as a reason for rejecting ZEH as infeasible (DEIR at 5-8), the DEIR failed to disclose or evaluate this exactly opposite effect of scale: larger centralized ZEH installations, and especially brownfield installations, which would be the Project condition, are cheaper per kW installed than smaller installations. Even a cursory check by the DEIR could have informed the County that the hydrogen road map analysis the California Energy Commission and U.C. Irvine reported for state consideration of climate stabilization pathways applies a scaling factor of 0.9,²⁵¹ thus quantifying *reduced* incremental cost with increasing scale for the large-scale ZEH installation it asserts.

Additionally, the net costs (costs minus benefits) for the ZEH alternative is not even mentioned, with only the private costs assumed to be too high. In view of the very high GHG emissions and other air pollution from the legacy gray hydrogen facility, ZEH a major economic and social benefit. For this reason, the costs and benefits of the alternatives examined should have been evaluated not only in the context of project economics, but also the larger context of social costs. For example, the County can estimate the public health costs of the PM_{2.5} emissions from the hydrogen operations on people living nearby.²⁵² Because the Refinery is situated in a densely populated urban area, the health costs from the pollution caused by the hydrogen operation are very high, and the comparable health costs from ZEH are zero.

Finally, despite describing LCFS credits which would be available to the Project, the DEIR stacks the deck against ZEH by excluding costs to the refiner associated with forgoing those credits for ZEH-produced renewable fuels. It states that “the capital costs of hydrolysis technology make it financially infeasible compared to the steam reformation process currently employed at the Rodeo Refinery” (DEIR at 5-8), but ignores the LCFS debit costs of that fossil steam reforming. Had this analytical bias been absent, the DEIR could have found that, by eliminating the approximately 1.5 to 2.3 million metric tons of annual emissions cited above, with current and future LCFS credits of \$100 to \$200 per metric ton, ZEH could provide cost savings in the range of \$150 million to \$460 million annually, or \$1.5 billion to \$4.6 billion over ten years. These savings that the DEIR could have found exceed the likely-inflated ZEH capital cost of \$0.75 billion to \$1.1 billion that the DEIR reports from unverified refiner estimates. DEIR at 5-8.

The DEIR, however, failed to seek, disclose or evaluate any of this data and information. The analysis of the ZEH alternative should not only have found the alternative to be feasible, but in considering it should have evaluated the ways in which this alternative would mitigate the Project’s significant impacts – as identified in these Comments but not addressed in the DEIR.

²⁵¹ Reed et al., 2020.

²⁵² Each 1 µg/m³ of PM_{2.5} that reaches 100,000 people living nearby causes 2.3 premature deaths annually. With a Value of a Statistical Life of \$10,000,000 estimated by the EPA in 2019, then causing each additional 2.3 deaths leads to a social cost of \$25M annually. Burnett R, Chen H, Szyszkowicz M et al. 2018; Global estimated of mortality associated with long-term exposure to outdoor fine particulate matter, PNAS 115 (38):9592-9597.

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D. The DEIR Alternatives Analysis Artificially Separates Alternatives that are Not Mutually Exclusive

In addition to the (inappropriately characterized) no project alternative, the DEIR considered three additional alternatives in addition to the Project: the “reduced project” alternative, the “terminal only” alternative, and the “no temporary increase in crude oil” alternative. DEIR at 5-11 – 34. These alternatives were among those appropriate for consideration, as they are feasible means to reduce Project impacts. However, the DEIR presents no reason why two of these – the reduced project alternative and the no temporary increase alternative - were evaluated as separate options rather than collectively. Nothing about them is mutually exclusive: the Project could have been reduced in scale *and* completed without the no temporary increase in crude throughput over the wharf. The DEIR should therefore have either considered those two alternatives collectively in addition to separately, or else provided sufficient evidence and reasoning as to why this combined approach would not be feasible.

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E. The Project Purpose is Defined in a Manner So Narrow as to Skew the Analysis of Alternatives

The Project objectives are drawn in an overly narrow fashion that may unfairly bias consideration of the green hydrogen alternative. The list of Project objectives in the DEIR twice references a goal of repurposing Refinery infrastructure (“convert existing equipment and infrastructure” and “repurpose and reuse the facility’s existing equipment capacity”). DEIR at 3-22. However, framing the Objectives in this manner by nature weighs against any alternatives – such as the green hydrogen alternative – that would upgrade and replace heavily polluting refinery infrastructure while still allowing biofuel production to proceed. The fundamental goal of the Project is to manufacture biofuels; “repurposing” is merely a strategy by which Phillips 66 seeks to hold costs down. Why the company may for that reason consider repurposing economically advantageous, allowing every strategy to economize to rise to the level of a fundamental Project objective would bias the CEQA process in favor of the cheapest and most polluting alternatives, and against alternatives that are costlier but more environmentally sound. Defining project objectives in such an “artificially narrow” fashion violates CEQA. *North Coast Rivers Alliance v. Kawamura* (2015), 243 Cal.App.4th 647, 654.

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IX. THE DEIR’S ANALYSIS OF CUMULATIVE IMPACTS WAS DEFICIENT

CEQA requires a cumulative project impacts analysis because “the full environmental impact of a proposed ... action cannot be gauged in a vacuum.” *Whitman v. Board of Supervisors* (1979) 88 Cal.App.3d 397, 408. Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Guidelines §15355. 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. *Id.* The discussion of each type of cumulative impact in an EIR need only be proportional to the severity of the impact and the likelihood of its occurrence, Guidelines § 15130(b), but even an insignificant impact must be justified as such, Guidelines § §15130(a). For each cumulative impact, its geographic scope must be supported by a reasonable explanation. Guidelines §

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15130(b)(3). Otherwise, an underinclusive cumulative impacts analysis “impedes meaningful public discussion and skews the decision maker’s perspective concerning the environmental consequences of a project, the necessity for mitigation measures, and the appropriateness of project approval.” *Citizens to Preserve the Ojai v. County of Ventura* (1985) 176 Cal.App.3d 421, 431. See also *Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th 859.

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The cumulative impacts analysis in the DEIR falls far short of these requirements, and fails to meet basic criteria for rationality. The DEIR largely confined its cumulative impacts analysis to projects located within 3 miles of the Project site or Santa Maria facility. No rationale or evidentiary support is provided for use of this particular geographic limitation; or, indeed, for selecting the evaluated projects based on a geographic limitation at all. The suite of projects swept up in this 3-mile radius are random and highly disparate, many being radically different in type from the Project and having few if any correlative impacts. These “cumulative” projects include, *inter alia*, a waterfront park, a mixed-use building, and a water purification project. DEIR at 6-3 – 5.

The very similar Marathon Martinez biofuel conversion project, lost in this strange mix, receives barely a mention in the analysis. The Marathon project is described in a single paragraph, but “discussion” of its cumulative impacts consists only of passing single-sentence and non-substantive general references such possible impacts – and those only including impacts to marine species, hazardous materials risks, and water quality. DEIR at 6-6, 8 – 9.

This approach is deficient in multiple respects. First, other than articulating very general criteria (DEIR at 6-2 – 3), the DEIR failed to specify a specific rational basis for the universe of projects considered in the cumulative impacts analysis – with respect to either the 3 mile radius or the particular array of projects evaluated within that radius. In particular, it failed to explain why projects were included in the cumulative impacts analysis whose impacts are clearly unrelated in type to the impacts of the Project. Second, the analysis is almost entirely non-quantitative, even though the Project’s impacts are quantified with respect to key issues, including criteria air pollutant emissions and GHG emissions. And third, the document contains functionally zero cumulative impacts analysis of the Project as considered together with the closely related Marathon Martinez project, even though the two projects will necessarily have very similar impacts, and will cumulatively impact regional air quality, upstream agricultural land use, and the State’s climate goals to a significantly greater degree than the impact of each project individually.

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Rather than taking the unreasoned approach it did, the DEIR should have identified a universe of projects to include in its analysis based on information concerning those projects’ impacts, and the likelihood that they will intersect with the impacts of the Project. Including a compliment of local projects in that universe would be appropriate when analyzing cumulative impacts that are local in scale; but confining the analysis entirely to local projects does not make sense with respect to project impacts that are regional (e.g., air quality impacts), statewide (impact on the state’s climate policy), or national and international (climate, upstream indirect land use impacts).

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Using these criteria, it is clear that, at minimum, comparable refinery biofuel conversion projects – including but not limited to the Marathon project – needed to be included in the cumulative impacts analysis. The refinery feedstock market is national, and even global, in scale. Both biodiesel and renewable diesel projects in the United States compete for the same, limited supply of crop oils and animal fats. As a result, a cumulative impacts analysis should have included existing HEFA projects currently under construction and proposed in California, such as the AltAir Paramount²⁵³ and Alon Bakersfield²⁵⁴ refinery projects as well as anticipated future conversion projects nationwide that are likely to produce similar large-scale impacts – e.g., due to anticipated use of similar feedstocks because of similar processing technology or transportation routes.

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The following sections discuss particular categories of cumulative impacts that should have received scrutiny in the DEIR but did not.

A. The DEIR Should Have Analyzed the Cumulative Impact of California and Other US Biofuel Projects on Upstream Agricultural Land Use

As discussed in Section IV.D above, the Project alone has the potential to consume an enormous portion of the entire US production of the agricultural products it proposes to use as feedstocks. Project feedstock demand could boost demand for biofuel feedstock oils, currently 113,000 b/d nationwide total, by 71% (80,000 b/d). The Project could in principle, standing alone, consume up to 39 percent of the total U.S. soybean oil production for all uses.

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The similar Marathon Martinez conversion project would cumulatively impact feedstock consumption levels, and hence on agricultural resources and their availability. As Commenters described in separate comments concerning the DEIR for that project, the Marathon project could increase demand for biofuel feedstock oils by 42% and could consume up to 24 percent of the nation's total production of soybean oil for all uses.²⁵⁵ Yet the overall limitation on HEFA feedstock availability is well documented within the scientific community,²⁵⁶ the financial

²⁵³ See Lillian, Betsy. "World Energy Acquires AltAir Renewable Fuel Assets in California." March 22 2018. <https://ngnews.com/world-energy-acquires-altair-renewable-fuel-assets-in-california>; Alt/Air World Energy Paramount, CEQAnet Web Portal, Governor's Office of Planning and Research (June 2020), <https://ceqanet.opr.ca.gov/2020069013/2>.

²⁵⁴ Delek US Holdings, Inc, Delek US Holdings Announces Closing of Bakersfield Refinery Sale, Global Newswire (May 07, 2020). <https://www.globenewswire.com/news-release/2020/05/07/2029947/0/en/Delek-US-Holdings-Announces-Closing-of-Bakersfield-Refinery-Sale.html> (accessed Dec 8, 2021).

²⁵⁵ Comments by Biofuelwatch et al dated December 17, 2021 concerning Martinez refinery renewable fuels project, File No. CDLP20-02046.

²⁵⁶ Portner 2021, pp. 18-19, 28-29, 53-58.; Searchinger, 2008.

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industry,²⁵⁷ the environmental justice community,²⁵⁸ as well as within the biofuel industry²⁵⁹ itself. Currently planning a biofuel refinery conversion in Bakersfield, Global Clean Energy Holdings, Inc. remarked in its SEC 10-K filing, “[t]he greatest challenge to the wide adoption of [HEFA] renewable fuels is the limited availability of the plant oils and animal fats that are the feedstock of [HEFA] renewable fuels.”²⁶⁰ Given these constraints, a single biofuel conversion project of this magnitude could dramatically induce land use changes and makes the need for a cumulative analysis all the more dire.

The U.S. biofuel industry already consumes a significant portion of existing farm production of oils and animal fats. As shown in Table 8, as of fall 2021, there are eight operating renewable biofuel facilities and 75 biodiesel facilities, with a combined potential consumption of 235,000 barrels per day, or 3.6 billion gallons per year of lipid feedstocks. Meanwhile, the U.S. currently produces 372,000 barrels per day of oils and animal fats for all uses. Thus, at full capacity, these existing projects could consume up to 63% of existing U.S. production. Meanwhile, between these projects, the feedstock actually consumed (which is less than the amount theoretically possible under full production capacity) represented 31% of total U.S. production. See Table 8.

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²⁵⁷ Kelly, S., U.S. renewable fuels market could face feedstock deficit, *Reuters* (Apr. 8, 2021), <https://www.reuters.com/article/us-usa-energy-feedstocks-graphic/us-renewable-fuels-market-could-face-feedstock-deficit-idUSKBN2BW0EO> (accessed Dec 8, 2021).

²⁵⁸ See e.g., Press Release, California Environmental Justice Alliance, IPCC Report Shows Urgent Need to Zero Out Fossil Fuels, Reduce Direct Emissions (Aug. 17, 2021), https://caleja.org/wp-content/uploads/2021/08/CEJA_IPCC_2021-3.pdf; Rachel Smolker, *Bioenergy in Hoodwinked in the Hothouse: Resist False Solutions to Climate Change*, Biofuelwatch, Energy Justice network, Global Alliance for Incinerator Alternatives, ETC Group, Global Justice Ecology Project, Indigenous Climate Action, Indigenous Environmental Network, Just Transition Alliance, La Via Campesino, Movement Generation Justice and Ecology Project, Mt. Diablo Rising Tide, Mutual Aid Disaster Relief, North American Megadam Resistance Alliance, Nuclear Information and Resource Service, Rising Tide North America, Shaping Change Collaborative 19-20 (3d ed. Apr. 2021), https://d5i6is0eze552.cloudfront.net/documents/Destination-deforestation_Oct2019.pdf.

²⁵⁹ Nickle et al., 2021. Renewable diesel boom highlights challenges in clean-energy transition (Mar 3, 2021), *Reuters*. <https://www.reuters.com/article/us-global-oil-biofuels-insight-idUSKBN2AV1BS>.

²⁶⁰ Global Clean Energy Holdings, Inc., Annual Report (Form 10-K) April 13, 2021, https://www.sec.gov/Archives/edgar/data/748790/000152013821000195/gceh-20201231_10k.htm#a003_v1.

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Table 8: US Biofuel Source-Specific Feedstock Production & Consumption

MM t/y: Million Metric tons per year b/d: barrel, 42 U.S. gallons, per day

Lipid Type	All-Use US Production		Consumed in US As Biofuel Feedstock		
	Volume (b/d) ^{a b}	Mass (MM t/y) ^{a b}	Volume (b/d) ^c	Mass (MM t/y) ^c	As Percentage of US Production (%)
Poultry Fat	22,573	1.1	1,455	0.07	6%
Tallow	51,386	2.68	3,312	0.17	6%
White Grease	13,420	0.75	4,793	0.27	36%
Yellow Grease	18,272	0.96	11,928	0.63	65%
Canola oil	14,425	0.77	10,604	0.56	74%
Corn oil	49,201	2.62	15,249	0.81	31%
Soybean oil	202,672	10.77	66,113	3.51	33%
All Lipids	371,948	19.65	112,544	6.03	31%

a. US production for poultry fat, tallow (specifically inedible tallow, edible tallow, and technical tallow), white grease (specifically lard and choice white grease), and yellow grease taken from USDA estimates for 2017 through 2020. USDA National Agricultural Statistics Service "Fats and Oils: Oilseed Crushings, Production, Consumption and Stocks" Annual Summaries for 2017 through 2020. National Agricultural Statistics Service, "Fats and Oils: Oilseed Crushings, Production, Consumption and Stocks Annual Summary", 2017 through 2020, <https://usda.library.cornell.edu/concern/publications/mp48sc77c>. (accessed Dec. 14, 2021). Volume to mass conversions use specific gravities of 0.84, 0.96, and 0.91 for poultry fat, white grease, and yellow grease, respectively. b. Production for canola oil, corn oil (which includes distillers' corn oil), and soybean oil taken from USDA Oil Crops Yearbook Tables 5, 26, and 33, averaged from Oct. 2016 to Sept. 2020. USDA, Oil Crops Yearbook Tables 5, 26, and 33, Mar. 26, 2021, <https://www.ers.usda.gov/data-products/oil-crops-yearbook/> (accessed Dec. 14, 2021). Volume to mass conversions use specific gravities of 0.914, 0.916, and 0.916 for canola oil, corn oil, and soybean oil, respectively. c. Lipid feedstocks consumed for biodiesel production are averages of 2018 through 2020 taken from EIA Monthly Biodiesel Production Report, Table 3. EIA, Monthly Biodiesel Production Report Table 3, Feb. 26, 2021, <https://www.eia.gov/biofuels/biodiesel/production/table3.pdf> (accessed Dec. 14, 2021). Biofuel feedstock estimates for canola oil are an average of 2019 and 2020 data because 2018 data were suppressed. Volume to mass conversions use specific gravities identified in a. and b.

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In recent years, numerous additional biofuel projects have been proposed, with several already under construction. A review of news publications and other reports found 16 future projects either proposed, under construction, or under active consideration by refineries, in addition to the Marathon proposal. In total, these projects could triple the total amount of lipids consumed to a total capacity of 693,000 barrels per day, which would drastically exceed current, total U.S. lipid production. At full production these past and future projects would represent nearly double the entire nation's output. As a result, it is foreseeable that cumulatively, these projects will require massive increases in domestic oil crop production or foreign imports, either of which will be associated with massive environmental and climate impacts from land use changes.

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Table 9: Current and Future Lipid-Based US Biofuel Projects

b/d: barrel, 42 U.S. gallons, per day

Refinery	Site Location	Status	Lipid Feedstock	
			Capacity (b/d)	Capacity As Percentage of US Lipid Supply (%)
East Kansas Agri-Energy Renewable Diesel	Garnett, KS	Operational	206	0.1%
Dakota Prairie Refining LLC	Dickinson, ND	Operational	13,183	3.5%
Diamond Green Diesel LLC	Norco, LA	Operational	23,139	6.2%
REG-Geismar LLC	Geismar, LA	Operational	6,866	1.8%
Wyoming Renewable Diesel CO	Sinclair, WY	Operational	8,033	2.2%
Altair Paramount LLC	Paramount, CA	Operational	2,884	0.8%
American GreenFuels	Encinitas, CT	Operational	2,403	0.6%
Down To Earth Energy LLC	Monroe, GA	Operational	137	0.0%
World Energy Rome	Rome, GA	Operational	1,373	0.4%
Cape Cod Biofuels Inc	Sandwich, MA	Operational	69	0.0%
Maine Bio-Fuel Inc	Portland, ME	Operational	69	0.0%
Blue Ridge Biofuels LLC	Newton, NC	Operational	137	0.0%
Renewable Fuels by Peterson	North Haverhill, NH	Operational	549	0.1%
World Energy Harrisburg LLC	Camp Hill, PA	Operational	1,305	0.4%
Lake Erie Biofuels LLC	Erie, PA	Operational	3,090	0.8%
Newport Biodiesel Inc	Newport, RI	Operational	481	0.1%
Southeast Biodiesel/South Carolina LLC	Charleston, SC	Operational	343	0.1%
Reco Biodiesel LLC	Reco Biodiesel, VA	Operational	137	0.0%
Virginia Biodiesel Refinery LLC	Kilmarnock, VA	Operational	343	0.1%
AG Processing - Algona	Algona, IA	Operational	5,218	1.4%
AG Processing - Sgt Bluff	Sgt Bluff, IA	Operational	5,218	1.4%
REG - Newton	Newton, IA	Operational	2,609	0.7%
REG - Ralston	Ralston, IA	Operational	3,364	0.9%
Lva Crawfordsville Biofuel LLC	Crawfordsville, IA	Operational	687	0.2%
Cargill Inc	Iowa Falls, IA	Operational	3,845	1.0%
Iowa Renewable Energy LLC	Washington, IA	Operational	2,472	0.7%
Reg - Mason City	Mason City, IA	Operational	2,609	0.7%
Western Dubuque Biodiesel LLC	Farley, IA	Operational	2,472	0.7%
Western Iowa Energy LLC	Wall Lake, IA	Operational	3,090	0.8%
Adkins Energy LLC	Lena, IL	Operational	275	0.1%
REG - Danville	Danville, IL	Operational	3,433	0.9%
REG - Seneca	Seneca, IL	Operational	5,218	1.4%

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Incobrasa Industries Ltd	Gilman, IL	Operational	3,021	0.8%
Alternative Fuel Solutions LLC	Huntington, IN	Operational	206	0.1%
Integrity Bio-Fuels LLC	Morristown, IN	Operational	343	0.1%
Louis Dreyfus Agricultural Industries LLC	Claypool, IN	Operational	6,797	1.8%
Cargill Inc	Wichita, KS	Operational	4,120	1.1%
Darling Ingredients Inc	Butler, KY	Operational	137	0.0%
Owensboro Grain Biodiesel LLC	Owensboro, KY	Operational	3,708	1.0%
Adrian Lva Biofuel LLC	Adrian, MI	Operational	1,030	0.3%
Thumb Bioenergy LLC	Sandusky, MI	Operational	-	-
Ever Cat Fuels LLC	Isanti, MN	Operational	206	0.1%
Minnesota Soybean Processors	Brewster, MN	Operational	2,472	0.7%
Reg - Albert Lea	Albert Lea, MN	Operational	3,158	0.8%
AG Processing - St. Joseph	St. Joseph, MO	Operational	2,884	0.8%
Deerfield Energy LLC	Deerfield, MO	Operational	3,433	0.9%
Ethos Alternative Energy of Missouri LLC	Lilborne, MO	Operational	343	0.1%
Seaboard Energy Marketing St Joseph	St. Joseph, MO	Operational	2,403	0.6%
Mid-America Biofuels, LLC	Mexico, MO	Operational	3,433	0.9%
Natural Biodiesel Plant LLC	Hayti, MO	Operational	343	0.1%
Paseo Cargill Energy LLC	Kansas City, MO	Operational	3,845	1.0%
Archer-Daniels-Midland Company	Velva, ND	Operational	5,836	1.6%
Cincinnati Renewable Fuels LLC	Cincinnati, OH	Operational	6,248	1.7%
Seaboard Energy Marketing Inc	Guymon, OK	Operational	2,609	0.7%
Bioenergy Development Group LLC	Memphis, TN	Operational	2,472	0.7%
REG - Madison	De Forest, WI	Operational	1,923	0.5%
Walsh Bio Fuels LLC	Mauston, WI	Operational	343	0.1%
Hero Bx Alabama LLC	Moundville, AL	Operational	1,373	0.4%
Delek Renewables Corp	Crossett, AR	Operational	1,030	0.3%
Futurefuel Chemical Company	Batesville, AR	Operational	4,120	1.1%
Solfuels USA LLC	Helena, AR	Operational	2,746	0.7%
Delek US	New Albany, MS	Operational	824	0.2%
Scott Petroleum Corporation	Greenville, MS	Operational	1,167	0.3%
World Energy Natchez LLC	Natchez, MS	Operational	4,944	1.3%
REG - Houston	Seabrook, TX	Operational	3,639	1.0%
World Energy Biox Biofuels LLC	Galena Park, TX	Operational	6,179	1.7%
Delek Renewables LLC	Clerburne, TX	Operational	824	0.2%
Eberle Biodiesel LLC	Liverpool, TX	Operational	-	-
Global Alternative Fuels LLC	El Paso, TX	Operational	1,030	0.3%
Rbf Port Neches LLC	Houston, TX	Operational	9,887	2.7%

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Sabine Biofuels II LLC	Houston, TX	Operational	2,060	0.6%
Alaska Green Waste Solutions LLC	Anchorage, AK	Operational	-	-
Greycycle Arizona LLC	Tucson, AZ	Operational	137	0.0%
Crimson Renewable Energy LP	Bakersfield, CA	Operational	1,923	0.5%
American Biodiesel Inc	Encinitas, CA	Operational	1,373	0.4%
Imperial Western Products Inc	Coachella, CA	Operational	824	0.2%
New Leaf Biofuel LLC	San Diego, CA	Operational	412	0.1%
Simple Fuels Biodiesel	Chilcoot, CA	Operational	69	0.0%
Big Island Biodiesel LLC	Keaau, HI	Operational	412	0.1%
Sequential-Pacific Biodiesel LLC	Salem, OR	Operational	824	0.2%
REG - Grays Harbor	Hoquiam, WA	Operational	7,347	2.0%
Marathon ^a	Dickinson, ND	Operational	12,631	3.4%
Camber Energy ^b	Reno, NV	Operational	2,952	0.8%
All Operational Projects			235,298	63.3%
Global Clean Energy Holdings ^c	Bakersfield	Under Construction	15,000	4.0%
HollyFrontier Corp ^d	Artesia, NM	Under Construction	8,583	2.3%
HollyFrontier Corp ^e	Cheyenne, WY	Under Construction	6,179	1.7%
Diamond Green Diesel ^f	Port Arthur, TX	Under Construction	36,390	9.8%
Diamond Green Diesel ^g	Norco, LA	Under Construction	27,464	7.4%
CVR ^h	Wynnewood, OK	Proposed	6,866	1.8%
Ryze Renewables ⁱ	Las Vegas, NV	Under Construction	7,894	2.1%
NEXT Renewable Fuels Oregon ^j	Clatskanie, OR	Proposed	50,000	13.4%
Renewable Energy Group ^k	Geismar, LA	Under Construction	17,165	4.6%
World Energy ^l	Paramount, CA	Proposed	21,500	5.8%
Grön Fuels LLC ^m	Baton Rouge, LA	Proposed	66,312	17.8%
PBF ⁿ	Chalmette, LA	Proposed	24,722	6.6%
Calumet ^o	Great Falls, MT	Proposed	12,631	3.4%
Seaboard Energy ^p	Hugoton, KS	Under Construction	6,842	1.8%
Chevron ^q	El Segundo, CA	Under Construction	10,526	2.8%
CVR Energy ^r	Coffeyville, KS	Under Consideration	11,578	3.1%
Phillips 66 ^s	Rodeo, CA	Proposed	80,000	21.5%
Marathon ^t	Martinez, CA	Proposed	48,000	12.9%
All Future Projects			457,652	123.0%

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All Operational & Future Projects	692,950	186.3%
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All projects from EIA 2021 "U.S. Renewable Diesel Fuel and Other Biofuels Plant Production Capacity" and "U.S. Biodiesel Plant Production Capacity" reports unless otherwise noted. "-" indicates that capacity data was suppressed in the EIA data. EIA, U.S. Renewable Diesel Fuel and Other Biofuels Plant Production Capacity, Petroleum Reports, Sept. 3, 2021, <https://www.eia.gov/biofuels/renewable/capacity/renewablescapacity.xlsx> (accessed Dec. 14, 2021).; EIA, U.S. Biodiesel Plant Production Capacity, Petroleum Reports, September 3, 2021, <https://www.eia.gov/biofuels/biodiesel/capacity/biodieselcapacity.xlsx> (accessed Dec. 14, 2021). a. Frohke, U. 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Thus, while the impacts of either project standing alone on agricultural resources and land use would be large, the combined impact of the two projects together could be catastrophic in scale – even more so when other existing and planned projects are considered in the cumulative impacts mix. Among other things, this level of market disruption would greatly increase that likelihood that other types of fungible food crop oils – including palm oil – would start to replace the dwindling supply of soy and other food crop oils, with attendant destructive impacts. The sheer amount the land required to grow food crop oils for existing and projected



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biofuel projects domestically indicates dramatic land use changes will inevitably occur at a global scale. Despite the novelty of this type of refinery conversion in California, even just the national data shows the Project is entering a large biodiesel market which has already contributed to the significant indirect land use changes documented in Section IV above.

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B. The DEIR Should Have Analyzed the Cumulative Impact of California Biofuel Production on the State’s Climate Goals²⁶¹

As discussed in Section VI, large-scale biofuel production is incompatible with California’s climate goals, which contemplate large-scale electrification via BEVs, and a phase-out of combustion fuel. That impact cannot be fully disclosed, measured, and analyzed, however, without looking at the cumulative impact of all of the biofuel production existing or contemplated in the state. The DEIR erred in not undertaking that analysis.

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Such analysis would reveal that, in fact, current proposals to repurpose in-state crude refining assets for HEFA biofuels could exceed the biofuel caps in state climate pathways by 2025. New in-state HEFA distillate (diesel and jet fuel) production proposed by this Project, the Marathon, AltAir, and the Global Clean Energy (GCE) projects for the California fuels market would, in combination, total ~2.1 billion gal./y and is planned to be fully operational by 2025.²⁶² If fully implemented, these current plans alone would exceed the HEFA diesel and jet fuel caps of 0.0-1.5 billion gal./y in state climate pathways.

Further HEFA biofuels growth could also exceed total liquid fuels combustion benchmarks for 2045 in state climate pathways. As BEVs replace petroleum distillates along with gasoline, crude refiners could repurpose idled petroleum assets for HEFA distillates before FCEVs ramp up, and refiners would be highly incentivized to protect those otherwise stranded assets (Chapter 1).

Chart 5 illustrates a plausible future HEFA biofuel growth trajectory in this scenario. Declining petroleum diesel and jet fuel production forced by gasoline replacement with BEVs (gray-green, bottom) could no longer be fully replaced by currently proposed HEFA production (black) by 2025–2026. Meanwhile the idled crude refinery hydrogen production and processing assets repurpose for HEFA production (light brown, top). As more petroleum refining assets are

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²⁶¹ Additional support for this section is provided in Karras, 2021a.

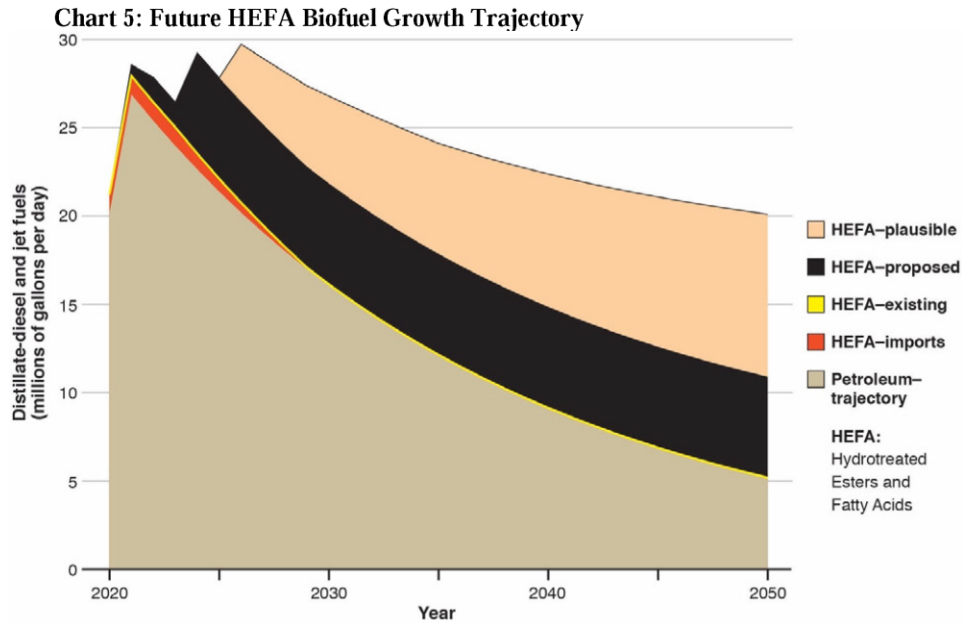
²⁶² Supporting Material Appendix for Changing Hydrocarbons Midstream: Fuel chain carbon lock-in potential of crude-to-biofuel petroleum refinery repurposing; prepared for the Natural Resources Defense Council (NRDC) by Greg Karras, G. Karras Consulting, www.energy-re-source.com; Application for Authority to Construct Permit and Title V Operating Permit Revision for Rodeo Renewed Project: Phillips 66 Company San Francisco Refinery (District Plant No. 21359 and Title V Facility # A0016); Prepared for Phillips 66 by Ramboll US Consulting, San Francisco, CA. May 2021; Initial Study for: Tesoro Refining & Marketing Company LLC—Marathon Martinez Refinery Renewable Fuels Project; received by Contra Costa County Dept. of Conservation and Development 1 Oct 2020; April 28, 2020 Flare Event Causal Analysis; Tesoro Refining and Marketing Company, subsidiary of Marathon Petroleum, Martinez Refinery Plant #B2758; report dated 29 June, 2020 submitted by Marathon to the Bay Area Air Quality Management District: San Francisco, CA. <https://www.baaqmd.gov/about-air-quality/research-and-data/flare-data/flare-causal-reports>; Paramount Petroleum, AltAir Renewable Fuels Project Initial Study; submitted to City of Paramount Planning Division, 16400 Colorado Ave., Paramount, CA. Prepared by MRS Environmental, 1306 Santa Barbara St., Santa Barbara, CA; Brelsford, R. Global Clean Energy lets contract for Bakersfield refinery conversion project. Oil & Gas Journal. 2020. Jan.9, 2020.

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stranded, more existing refinery hydrogen production is repurposed for HEFA fuels, increasing the additional HEFA production from left to right in Chart 5.

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4. Combustion fuels additive potential of HEFA diesel and jet production in California. As electric vehicles replace gasoline, stranding petroleum refining assets, continuing HEFA biorefining expansion could add as much as 15 million gallons per day (290%) to the remaining petroleum distillate-diesel and jet fuel refined in California by 2050. Locking in this combustion fuels additive could further entrench the incumbent combustion fuels technology in a negative competition with cleaner and lower-carbon technologies, such as renewable-powered hydrogen fuel cell electric vehicles (FCEVs). That could result in continued diesel combustion for long-haul freight and shipping which might otherwise be decarbonized by zero emission hydrogen-fueled FCEVs. **Petroleum-trajectory** for cuts in petroleum refining of distillate (D) and jet (J) fuels that will be driven by gasoline replacement with lower-cost electric vehicles, since petroleum refineries cannot produce as much D+J when cutting gasoline (G) production. It is based on 5.56%/yr light duty vehicle stock turnover and a D+J:G refining ratio of 0.615. This ratio is the median from the fourth quarter of 2010–2019, when refinery gasoline production is often down for maintenance, and is thus relatively conservative. Similarly, state policy targets a 100% zero-emission LDV fleet by 2045 and could drive more than 5.56%/yr stock turnover. Values for 2020-2021 reflect the expected partial rebound from COVID-19. **HEFA-imports** and **HEFA-existing** are the mean D+J "renewable" volumes imported, and refined in the state, respectively, from 2017-2019. The potential in-state expansion shown could squeeze out imports. **HEFA-proposed** is currently proposed new in-state capacity based on 80.9% D+J yield on HEFA feed including the Phillips 66 Rodeo, Marathon Martinez, Altair Paramount, and GCE Bakersfield projects, which represent 47.6%, 28.6%, 12.8%, and 11.0% of this proposed 5.71 MM gal/day total, respectively. **HEFA-plausible:** as it is idled along the petroleum-based trajectory shown, refinery hydrogen capacity is repurposed for HEFA biofuel projects, starting in 2026. This scenario assumes feedstock and permits are acquired, less petroleum replacement than state climate pathways, and slower HEFA growth than new global HEFA capacity expansion plans targeting the California fuels market²⁶³ anticipate. Fuel volumes supported by repurposed hydrogen capacity are based on H₂ demand for processing yield-weighted feedstock blends with fish oil growing from 0% to 25%, and a J : D product slate ratio growing from 1: 5.3 to 1: 2, during 2025–2035. For conceptual analysis see Karras, 2021a; for data and methodological details see Karras, 2021a Table A7.²⁶³

²⁶³ Supporting Material Appendix for Changing Hydrocarbons Midstream: Fuel chain carbon lock-in potential of crude-to-biofuel petroleum refinery repurposing; prepared for the Natural Resources Defense Council (NRDC) by Greg Karras, G. Karras Consulting, www.energy-re-source.com.

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Refining and combustion of HEFA distillates in California could thus reach ~15.0 million gal./d (5.47 billion gal./y), ~290% of the remaining petroleum distillates production, by 2050.²⁶⁴ HEFA distillate production in this scenario (5.47 billion gal./y) would exceed the 1.6-3.3 billion gal./y range of state climate pathways for combustion of *all* liquid transportation fuels, including petroleum and biofuel liquids, in 2045.²⁶⁵ This excess combustion fuel would squeeze out cleaner fuels, and emit future carbon, from a substantial share of the emergent petroleum distillate fuels replacement market — a fuel share that HEFA refiners would then be motivated to retain.

The scenario shown in Chart 5 is an illustration, not a worst case. It assumes slower growth of HEFA biofuel combustion in California than global investors anticipate, less petroleum fuels replacement than state climate pathways, and no growth in distillates demand. Worldwide, the currently planned HEFA refining projects targeting California fuel sales total ~5.2 billion gal./y by 2025.²⁶⁶ HEFA growth by 2025 in the Chart 5 scenario is less than half of those plans. Had the DEIR considered that 5.2 billion gallon/year estimate by California Energy Commission staff,²⁶⁷ for example, the County could have found that the Project would contribute to exceeding the state climate pathway constraint discussed in Section V of 0.5–0.6 and 0.8–0.9 billion gallons/year total HEFA jet fuel, and HEFA diesel combustion, respectively, based on that fact alone. Additionally, State climate pathways reported by Mahone et al. replace ~92% of current petroleum use by 2045, which would lower the petroleum distillate curve in Chart 5, increasing the potential volume of petroleum replacement by HEFA biofuel. Further, in all foreseeable pathways, refiners would be incentivized to protect their assets and fuel markets.

C. The DEIR Did Not Adequately Disclose and Analyze Cumulative Marine Resources Impacts

There is currently a boom in proposals for biofuel conversions. Unlike existing fossil fuel refining, there is little existing transportation infrastructure for biofuel feedstocks, so, as with the Project, much of that transportation will take place via ship. This means that there will be cumulative impacts to marine resources that have not been adequately evaluated in the DEIR. For example, increases in feedstock demand will implicate economic and transportation impacts to marine resources all over the world.

²⁶⁴ *Id.*

²⁶⁵ Mahone et al., 2020a. Achieving Carbon Neutrality in California: PATHWAYS Scenarios Developed for the California Air Resources Board, DRAFT: August 2020; Energy and Environmental Economics, Inc.: San Francisco, CA. https://ww2.arb.ca.gov/sites/default/files/2020-08/e3_cn_draft_report_aug2020.pdf

²⁶⁶ Schremp (2020). Transportation Fuels Trends, Jet Fuel Overview, Fuel Market Changes & Potential Refinery Closure Impacts. BAAQMD Board of Directors Special Meeting, May 5 2021, G. Schremp, Energy Assessments Division, California Energy Commission. In Board Agenda Presentations Package; https://www.baaqmd.gov/-/media/files/board-of-directors/2021/bods_presentations_050521_revised_op-pdf.pdf?la=en

²⁶⁷ *Id.*



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In 2017 Phillips 66 proposed a marine terminal expansion. According to the Project Description for that project, it was to

modify the existing Air District permit limits to allow an increase in the amount of crude and gas oil that may be brought by ship or barge to the Marine Terminal at the Phillips 66 Company (Phillips 66) San Francisco Refinery in Rodeo, California (Rodeo Refinery). The refinery processes crude oil from a variety of domestic and foreign sources delivered by ship or barge at the Marine Terminal and from central California received by pipeline. The Proposed Project would allow the refinery to receive more waterborne-delivered crude and gas oil, and thereby to replace roughly equivalent volumes of pipeline-delivered crudes with waterborne-delivered crudes. However, the Proposed Project would not affect the characteristics of the crude oil and gas oil the refinery is able to process.

The proposed increase in offloading and the additional ship and barge traffic necessitates modification of Phillips 66's existing Permit to Operate and the Major Facility Review (Title V) Permit, which was issued by the Air District to the Phillips 66, San Francisco Refinery (BAAQMD Facility #A0016). Approval of the proposed air permit modifications would be a discretionary action by the Air District, requiring CEQA review (BAAQMD Regulation 2-1-310).

Phillips 66 Marine Terminal Permit Revision Project, Notice of Preparation, June 2017, p. 2. The final EIR must evaluate past proposals such as the 2017 marine terminal expansion proposal, to determine whether there are cumulative impacts and whether those proposals are likely to be approved.

The record for BAAQMD's analysis of the 2017 project proposal should be incorporated into the record for the current CEQA review.

X. THE DEIR SHOULD HAVE MORE FULLY ADDRESSED HAZARDOUS CONTAMINATION ISSUES ASSOCIATED WITH CONSTRUCTION AND DECOMMISSIONING

The DEIR failed to adequately address the interrelated issues of site decommissioning and contamination hazards. The Refinery site is heavily contaminated, which gives rise to issues concerning both how decommissioned portions of the refinery will be addressed, and how Project construction and operation may affect ongoing remediation and monitoring activities. Additionally, given the likely short and definably finite commercial lifetime of the Project, the DEIR should have evaluated the impact of full site decommissioning.

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A. The DEIR Inadequately Evaluate Project Impacts on Hazardous Waste Cleanup Operations

The fails to disclose and analyze information concerning the multiple cleanup orders that have been issued for the site, and how Project construction may impact the cleanup work. The general overview of specific water quality remediation projects (DEIR at 4.10-356) is an incomplete description of such activities. Described below are specific measures taken by agencies to address hazardous contamination at the Refinery, which should have been addressed.

The Department of Toxic Substances Control (DTSC) is monitoring two areas under Facility EPA ID Number: CAD009108705 affected by hazardous contamination. The first is the Primary Basin, whose latest Post Closure Facility Permit was effective February 21, 2012 and will expire February 20, 2022.²⁶⁸ The DTSC has also placed deed restrictions on contaminate areas at the Refinery, banning land use for residences, hospitals, schools, and day cares.²⁶⁹

Additionally, the San Francisco Bay Regional Water Quality Control Board (Water Board) is extensively addressing hazardous contaminants affecting water quality, but the DEIR only references at a high level (DEIR 4.10-356). The Water Board has two active correction actions with the refinery: a waste discharge requirement and a site cleanup requirement.²⁷⁰

²⁶⁸ The Primary Basin is located in the southern portion of the facility east of the Unit 100 wastewater facility. The permit will allow the facility to conduct closure activities, groundwater monitoring, liner and leachate collection/leak detection system inspection and maintenance, and emergency storage. The second is the Land Treatment Area (LTA) whose latest Post Closure Facility Permit was effective 1/9/17 and will expire 1/8/27. The LTA is in the southern portion of the facility and received hazardous wastes between 1976 and 1983. The LTA has been a US EPA Post-closure permit since 1989. The permitted activities are conduct post closure activities, groundwater monitoring, soil sampling, inspection and maintenance of the wells and cap/vegetative cover. See Hazardous Waste Post Closure Facility Permit Land Treatment Area issued to Phillips 66 Co., effective Date January 9, 2017; Hazardous Waste Post Closure Facility Permit, Primary Basin, issued to ConocoPhillips, Effective Date: February 21, 2012.

²⁶⁹ The DTSC has filed three such deed restrictions all on 8/26/19. Two relate to Post-Closure Permits and the third is joint effort with the Water Board on surface and subsurface hazardous wastes. The first one is for 1.37 acres of the Primary Basin. The second one is for 6.4 acres of the LTA. The third one is for 1.06 acres of the Former Container Storage Unit (FCSU). Per a March, 1996 agreement with the Water Board, the DTSC would oversee the closures of the surface containment structures (asphalt pads, concrete slabs) and the Water Board would address the subsurface issues as part of Inactive Waste Site 6C correction action process. A Closure Certification Report was submitted to DTSC on 10/31/11 and approved 7/31/12 (noted in recorded deed) noting that the certification was conditioned on recording of a land use covenant. See Closure Certification Report, Former Container Storage Unit ConocoPhillips San Francisco Refinery Rodeo, California, EPA ID No. 009108705, October 31, 2011; Covenant to Restrict Use of Property Environmental Restriction, Contra Costa County Assessor's Parcel No. 357-300-005, Primary Basin within the Phillips 66 Company San Francisco Refinery (Rodeo, California), EPA ID No. CAD009108705, DTSC Site Code: 200203; Covenant to Restrict Use of Property Environmental Restriction Contra Costa County Assessor's Parcel No. 358-010-008, Land Treatment Area within the Phillips 66 Company San Francisco Refinery (Rodeo, California), EPA ID Number CAD009108705, DTSC Site Code: 200203.

²⁷⁰ Both these requirements are conditioned by Final Revised Groundwater Self-Monitoring Plan (SMP) dated April 29, 2015. The SMP reviewed the then current groundwater monitoring and reporting requirements that were included in the Waste Discharge Requirements (WDR) Order No. R2-2005-0026, adopted by the Water Board in June 2005, and referred to in the SCR Order No. R2 2006-0065 adopted by the Water Board in October 2006. In accordance with Task 11 of the San Francisco Bay Regional Water Quality Control Board (Water Board) Site

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These actions involve an extensive monitoring program associated with both the DTSC and the Water Board cleanup actions.²⁷¹

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Of particular note is that the Water Board identified an issue with tar seeps at the Refinery site.²⁷² The investigation of the area for tar seep was carried out between 2016 and 2019 and the remediation in 2020. Approximately 127 metal drums and wood barrels were removed. A total of approximately 601.5 tons of waste soil and tar were excavated. The waste was characterized as Class II non-hazardous material, and was transported offsite.²⁷³

All of these historic and ongoing actions should have been evaluated in sufficient depth to determine whether Project construction and operation has the potential to negatively impact them, either by disturbing contaminated areas or interfering with remediation and monitoring.

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With regard to contaminated areas, the tar seep issue illustrates the critical importance of assessing the impact on these areas of excavation and movement of material that will be involved in conversion construction. Historically, numerous tar seeps have been observed on the pavement surface throughout the areas surrounding the warehouse building and the laboratory building. Although the tar is firm and immobile during the colder months, elevated ambient temperatures

Cleanup Requirements (SCR) Order No. R2-2006-0065, the SMP realigned the groundwater-monitoring program to the current site conditions.

²⁷¹ The SMP evaluated the current groundwater monitoring program at the site includes wells associated with the WDR, the SCR, and the DTSC Permits, in addition to wells associated with various voluntary investigation and evaluations programs at the refinery that are not specifically defined under a regulatory order, directive, or permit. Wells associated with the WDR are generally monitored under a detection-monitoring program, intended to detect indications of a potential release from the subject waste management unit. Wells associated with the SCR are monitored under a corrective action evaluation program, intended to evaluate the effectiveness of the specific corrective action. See California Regional Water Quality Control Board San Francisco Bay Region, Order No. R2-2006-0065, Site Cleanup Requirements and Rescission of Order No. 93-046 for ConocoPhillips Company San Francisco Refinery, October 11, 2006; California Regional Water Quality Control Board San Francisco Bay Region, Order No. R2-2005-0026, Updated Waste Discharge Requirements and Rescission of Order No. 97-027 for ConocoPhillips Company San Francisco Refinery, June 15, 2005.

²⁷² Based on the SMP, the Water Board and Phillips updated the WDR to R2-2015-0046 and the SCR to R2-2018-0014 with the updates to monitoring hazardous waste and groundwater. SCR R2-2018-0014 contained several mandatory tasks that needed special attention. These included Main Interceptor Trench (MIT) Alignment C Extension Completion Report, A-E Gap Hydraulic Containment System Completion Report, Area 6 FPLH Recoverability Evaluation Report, and the Tar Seep Area Investigation Report. California Regional Water Quality Control Board San Francisco Bay Region, Order No. R2-2018-0014, Updated Site Cleanup Requirements and Rescission of Order Nos. R2-2006-0065 and R2-2012-0081 for Phillips 66 Company San Francisco Refinery, April 13, 2018; California Regional Water Quality Control Board San Francisco Bay Region, Order No. R2-2015-0046, Updated Waste Discharge Requirements and Rescission of Order No. R2-2005-0026 for Phillips 66 Company San Francisco Refinery, November 23, 2015.

²⁷³ The waste tar drums, and impacted soil were transported and disposed of offsite at Republic Services' Keller Canyon landfill in Pittsburg, California. A new utility duct-bank was installed around the perimeter of the excavation from the existing power pole then south to the laboratory building. After the duct-back was installed, the cables in the two pre-existing utility duct-banks were taken out of service and removed. Two unanticipated pipeline segments were encountered, removed or abandoned in-place during the excavation. Along the southeastern excavation area, approximately 30 linear feet of 8-inch diameter wooden-stave storm drainpipe removed. A metal 10-inch diameter pipe segment, buried approximately 6 feet bgs, capped in-place with concrete. As you can from the remediation efforts, there is risk to any remediation to any area of the refinery.

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during the summer months soften the tar, causing it to seep and expand vertically via viscous flows to the ground surface and spread by gravity, adhering to the wheels of vehicles, and the shoes of pedestrians.²⁷⁴ A similar problem of buried contamination arose when a rusted 55 gallon drum was found in 2021 around Tank 302 when the Main Interceptor Trench was being upgraded per Task 1 of R2-2018-0014. These excavation risks should be explained more clearly in the DEIR²⁷⁵

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With regard to monitoring activities, the DEIR inadequately describes the potential impact of the new Sulfur Treatment Unit (STU) and Pre-Treatment Unit (PTU) will have on existing Inactive Waste Units (IWS) and current monitoring of wastes and groundwater. Figure 3.2 of the DEIR shows the positions of the new STU and PTU units and where the three storage tanks will be torn down. Figures 4 and 6 of SCR-R2-20018-0014 seem to indicate that the STU and PTU will be built over IWS 4. The DEIR should have addressed the potential impacts of this construction in IWS 4, and proposed mitigation to minimize disturbance. Similarly, the DEIR did not address impacts of Project activities on monitoring associated with the Carbon Plant, which is also under a WDR.²⁷⁶

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The DEIR should have disclosed in detail all of these historic and ongoing cleanup and monitoring operations, and described the Project's impact on them.. Without such disclosure, the DEIR's cursory conclusion that construction and operation activities will not impact them is unsupported by substantial evidence. DEIR at 4.9-326-327; 339-340.

B. The DEIR Should Have More Fully Evaluated Impacts of Partial and Complete Decommissioning

The DEIR addresses decommissioning at the Project site only with respect to infrastructure that would not be used in connection with the Project, including the pipeline sites, Carbon Plant, and Santa Maria facility; and construction of new Project infrastructure. DEIR at 3-31, 4.9-326-327 and 339-340. However, as discussed in Section II, the foreseeable likelihood is that biofuel demand in California will wane significantly within the relatively near term as

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²⁷⁴ Letter dated September 25, 2020 to Ross Steenson from Christopher M. Swartz re Tar Drums Removal Summary Report Phillips 66 San Francisco Refinery, Rodeo, California
Task 7, Site Cleanup Requirements Order No. R2-2018-0014 CRWQCB-SFB File No. 2119.1051.

²⁷⁵ Letter dated June 9, 2021 from Christopher M. Swartz re Tank 302 GW Barrier System Construction - Buried Drum Removal Summary Report Site Cleanup Requirements Order No. R2-2018-0014 CRWQCB-SFB File No. 2119.1051.

²⁷⁶ WDR R2-2008-0013 regulates stormwater at the Carbon Plant. The previous owner constructed the Basin System, consisting of two settling basins and a large surface impoundment, in 1983. The Basin System was designed to recover water used at the Facility, including 1) cooling tower blowdown water, 2) dust control water, and 3) storm water runoff; and recover coke fines. This water is recycled from the surface impoundment and used in Facility processes, in a closed loop system. Amendment R2-2013-0008 was added to update the self-monitoring system. The DEIR did not mention the risks to the groundwater by the removal and demolishing of the Carbon Plant. See California Regional Water Quality Control Board San Francisco Bay Region, Order No. R2-2013-0008, Amendment of Waste Discharge Requirements Order No. R2-2008-0013 for Phillips 66 Company Rodeo Carbon Plant, March 13, 2013; California Regional Water Quality Control Board San Francisco Bay Region, Order No. R2-2008-0013, Updated Waste Discharge Requirements and Rescission of Order No. 98-038 for ConocoPhillips Company Contra Costa Carbon Plant, March 17, 2008.

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California transitions to a zero-emissions transportation economy. As noted, Contra Costa County itself has signed a pledge to be “diesel free by ’33.” Accordingly, the realistic likelihood is that the Project’s commercial life will be short. Thus, in order to fully inform that public regarding foreseeable impacts, and to guide the County’s thinking about planning for the Project site’s future, the DEIR should have examined the impacts of full decommissioning of the site (even though such full decommissioning was rejected as a Project alternative, DEIR at 5-9).

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The DEIR, however, does not substantively evaluate decommissioning impacts at all – either with respect to the infrastructure it acknowledges will be decommissioned, or the remaining infrastructure whose decommissioning in the not-distant future is inevitable. The DEIR should have disclosed and analyzed the impact of decommissioning in both these scenarios. With respect to decommissioning envisioned as part of the Project, the DEIR notes that the Project “includes the cessation of operations at the Carbon Plant and of the crude handling units, sulfur recovery unit, reformer, and isomerization unit.” The DEIR should specify what will be done with this equipment, and how Phillips 66 will address any site contamination associated with it.

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With respect to the inevitable decommissioning of the entire Refinery, the DEIR should have addressed the high level of existing contamination, and disclosed and analyzed the impacts of addressing it upon full decommissioning. Various oil companies refined oil at the Rodeo site since 1896,²⁷⁷ some 75 years before the environmental protection wave of the early 1970s, and through waves of toxic gasoline additives—tetraethyl lead and then MTBE, from the 1930s through the early 2000s—and refinery releases to land persist to this day. Today, evidence that refinery byproduct waste disposal continues on surrounding land is here for all to see, at the carbon plant, where toxics-laden petroleum coke particulates dust the surrounding soil.

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XI. THE DEIR INADEQUATELY ADDRESSED THE PROJECT’S IMPACTS ON MARINE RESOURCES

Even if the DEIR’s baseline is taken at face value, in spite of the lack of any evidence that purported baselines reflect the actual amount of refining occurring at the Facility, the Project contemplates a drastic increase in the amount of feedstock and other potential pollutants crossing through the marine terminal. The DEIR claims that current product received through the marine terminal is 35,000 bpd, while the completed Project contemplates 118,000 pbd, an over 300% increase. DEIR at xxii (Table ES-1). This is reflected in the drastic increase in the number of taker and barge trips documented in the DEIR, up to 361 visits per year, an increase of 121 tanker vessels and 71 barges over baseline.

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The DEIR’s No Project Alternative shows 170 ship and barge trips per year. DEIR xxvii (Table ES-2). This is not an accurate depiction of the average number of trips over the last few years, nor is it an accurate estimate of how many trips would be taken if this Project were not completed at all. Regardless, the contemplated increase in ship traffic in San Francisco Bay over what currently occurs cannot be understated, as it is truly massive.

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²⁷⁷ *California Refinery History*; California Energy Commission: Sacramento, CA. <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil>.

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A. The Wharf Throughput Expansion Would Result in Significant Water Quality Impacts, With Attendant Safety Hazards

The water quality impacts from expansion of marine terminal operations must be thoroughly examined, from impacts associated with the extraction and/or production of feed stocks to the dilution of those feedstocks and shipment to other ports, through the loading process onto tankers and the shipping routes they take to San Francisco Bay, then to the unloading of those feedstocks and transport into the refinery, the separation and reuse or disposal of unused portions or diluents, the eventual shipment of refined or reused products to end markets, and finally through to impacts from the use of end products. This lifecycle analysis must take into account global effects such as climate change and ocean acidification, as well as local water quality impacts that could have serious consequences for the communities at production sites, ports, along the shipping routes, and near the actual Project site in Rodeo. This analysis must also disclose the extent to which unknowns exist, such as the lack of concrete information concerning effective marine spill cleanup methodologies for feedstocks and the environmental impacts of such spills, and evaluate the risks taken as a result of those unknowns.

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Each tanker trip carries an added risk of a spill, as a reported 50% of large spills occur in open water.²⁷⁸ The majority of spills, however, are less than 200,000 gallons, and most of these spills happen while in port.²⁷⁹ Two types of tanker will likely be used to transport feedstocks to the Facility, coastal tankers, which can carry as much as 340,000 barrels of oil (14.3 million gallons), and coastal tank barges, which typically carry 50,000 to 185,000 barrels of oil, though newer models can carry as much as a coastal tanker. In fact, the DEIR itself states that the maximum capacity of a single ship calling at the terminal is 1 million barrels. DEIR 4.9-330. “Therefore, as tanker/barge volumes could range as high as 1 million barrels, a theoretical maximum spill size from a barge or tanker contents that is used for planning purposes in the USCG-required vessel response plans could range up to 1 million barrels (based on the largest tanker capacity).” DEIR 4.9-330 – 4.9-331. No rationale or explanation is given for the selection of the much lower 10,000-20,000-barrel spill as a worst-case scenario. DEIR 4.9-331. The final EIR must evaluate an actual worst-case scenario instead of the watered down version discussed in the DEIR.

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California’s 45-billion-dollar coastal economy has a lot to lose to a spill.²⁸⁰ California commercial fisheries for instance, produced from 186-361 million pounds of fish from 2013-2015, at a value of 129-266 million dollars.²⁸¹ After the Costco Busan disaster spilled 53,000 gallons of oil into San Francisco Bay, the Governor closed the fishery, a significant portion of which was either contaminated or killed, closed more than 50 public beaches, some as far south as Pacifica, and thousands of birds died. All told that spill resulted in more than 73 million dollars in estimated damages and cleanup costs.²⁸²

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²⁷⁸ The International Tanker Owners Pollution Federation (2016 spill statistics), p. 8.

²⁷⁹ *Id.*

²⁸⁰ *California Ocean and Coastal Economies*, National Ocean Economics Program (March 2015).

²⁸¹ Based on California Department of Fish and Wildlife and National Marine Fisheries Service data.

²⁸² See, e.g., *Incident Specific Preparedness Review M/V Cosco Busan Oil Spill in San Francisco Bay Report on Initial Response Phase*, Baykeeper, OSPR, NOAA, et al. (Jan. 11, 2008).

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A DEIR evaluating the environmental impacts of expanding operations at the Phillips 66 Marine Terminal must take into account the increased risk of a spill into San Francisco Bay or at any other point along the route transport tankers and barges will take. "Any increase in risk is considered to be a significant impact." DEIR 4.9-320. However, the DEIR fails to evaluate impacts from the handling of hazardous materials along transportation corridors, and from the presence of hazardous materials along shorelines in the event of a spill. DEIR 4.9-322 ("No existing or proposed schools are located within 0.25 mile of the Rodeo Site or the Carbon Plant Site; therefore, no hazardous materials would be handled within 0.25 mile of an existing school. Therefore, no impact would occur"). The final EIR must remedy this error.

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Uncertainty over how to clean up spills of feedstocks extends to the specific technology used for cleanup efforts. "The environmental impacts associated with oil spill clean-up efforts (e.g. mechanical or chemical) may increase the magnitude of ecological damage and delay recovery."²⁸³ Recent surveys have not found any studies on the response of "trophic groups within eelgrass and kelp forest ecosystems to bitumen in the environment, or the impacts of different spill-response methods."²⁸⁴

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Operation of the Project could result in discharges into waters of the San Pablo and San Francisco Bays from vessels (barges and tankers) transporting feedstocks and blending stocks to, and refined products from, the Marine Terminal. At full operation, 201 tankers and 161 barges would call each year, an increase of approximately 113 percent over baseline. Therefore, potential impacts related to vessel spills would be significant.

DEIR 4.9-331. The final EIR must do more to evaluate these impacts.

There are additional mitigation measures that should be considered and included in the final EIR to help mitigate spill risk. First, all ships carrying feedstocks, petroleum products, or any other hazardous material that could spill into San Francisco Bay or any of the other waters along the Project's transport routes should be double-hulled. "Recent studies comparing oil spillage rates from tankers based on hull design seem to suggest that double hull tankers spill less than pre-MARPOL single hull tankers, double bottom tankers, and double sided tankers."²⁸⁵ Second, incentives for vessel speed reductions, as well as documentation and tracking of vessel speeds, as detailed elsewhere in these comments, would also reduce spill risks. Finally, additional yearly funding for the study of feedstock spills, the impact of such spills, and the most effective cleanup and mitigation methodologies would also help mitigate this risk and should be included in the final EIR.

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²⁸³ Green *et al.*, 2017.

²⁸⁴ *Id.*

²⁸⁵ *A Review of Double Hull Tanker Oil Spill Prevention Considerations*, Nuka Research & Planning Group, LLC. (Dec. 2009), p. 3, available at https://www.pwsrccac.org/wp-content/uploads/filebase/programs/oil_spill_prevention_planning/double_hull_tanker_review.pdf.

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A recent spill at the Phillips 66 Marine Terminal serves as a warning of what could result from increased marine terminal operations. According to press reports, “BAAQMD issued two ‘public nuisance’ violations to Phillips 66 for its Sept. 20, 2016 spill, which leaked oil into the bay and sent an estimated 120 people to the hospital from fumes.”²⁸⁶ That spill, which occurred while the Yamuna Spirit was offloading at the Phillips 66 Marine Terminal in Rodeo, was responsible for more than 1,400 odor complaints and a shelter-in-place order for the 120,000 residents of Vallejo, in addition to the hospital visits already mentioned.²⁸⁷ The DEIR disavows responsibility for this incident, claiming (in spite of BAAQMD’s contrary finding) that “An investigation ruled out the Marine Terminal and the Rodeo Refinery as the source.” DEIR 4.9-296.

Instead, the DEIR claims that

A release at the Marine Terminal would not present a significant safety hazard to members of the public due to the separation distance from public receptor locations. Even for low-probability large spills from the Marine Terminal, it is anticipated that separation distance of the Marine Terminal from public areas would provide time to respond with warnings and access controls before the spill could spread to public areas, which would limit the potential for unsafe levels of exposure to hazardous constituents in the spilled product or thermal radiation from a fire. Therefore, impacts from a spill and subsequent fire at the Marine Terminal would be less than significant.

DEIR 4.9-330. 120 people who went to the hospital in Vallejo may disagree that a release from the terminal would not represent a significant safety hazard. Spill events are also high variance, in that they are relatively unlikely to occur, and high impact, in that the repercussions of such an event have the potential to cause extensive damage. Typical baseline analysis, therefore, is inappropriate. A baseline analysis that said there was no risk of tanker spills based on baseline data from the previous 3 years, for instance, would be clearly inadequate in hindsight after an event like the Exxon Valdez. So, too, here, spill risk in the final EIR must be calculated and mitigated based on the worst case scenario, not on a baseline compiled over recent years that do not include any major oil spills.

In light of these concerns, Contra Costa must consider an independent study on feedstock cleanup, the adequacy of existing cleanup procedures and the need for additional cleanup and restitution funds, and increased monitoring for water and air quality impacts to communities surrounding the Project, whether those communities are located in the same county or not. Furthermore, the Bay Area Air Quality Management District should be considered as a responsible agency.

²⁸⁶ Katy St. Clair, “Supervisor Brown says ‘no way’ to proposed Phillips 66 expansion,” Times-Herald (Aug. 5, 2017), available at <http://www.timesheraldonline.com/article/NH/20170805/NEWS/170809877>; see also Ted Goldberg, “Refinery, Tanker Firm Cited for Fumes That Sickened Scores in Vallejo,” KQED News (June 16, 2017), available at <https://www.kqed.org/news/2017/06/16/refinery-tanker-firm-cited-for-fumes-that-sickened-scores-in-vallejo/>; Ted Goldberg, “Phillips 66 Seeks Huge Increase in Tanker Traffic to Rodeo Refinery,” KQED News (July 27, 2017) (available at <https://www.kqed.org/news/2017/07/27/phillips-66-seeks-big-increase-in-tanker-traffic-to-rodeo-refinery/>).

²⁸⁷ Ted Goldberg, “Refinery, Tanker Firm Cited for Fumes That Sickened Scores in Vallejo,” *id.*

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As pointed out by California State Senator Bill Dodd, it is vital that the causes of this spill be thoroughly investigated and a determination made on how such a spill can be prevented in the future.²⁸⁸ Such an investigation must be completed before any additional ships are authorized to use the same marine terminal where the spill was reported. Without a thorough report on past spills that includes a description of what happened and how such accidents can be prevented in the future, the DEIR will not be able to adequately evaluate the Project's potential environmental impacts.

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Additional National Pollutant Discharge Elimination System ("NPDES") effluent criteria may be needed, a possibility which must be—but is not—evaluated in the DEIR. Foreseeable spill rates from an increase in marine terminal activity might qualify as a discharge to waters of the United States because it is reasonably predictable that a certain number of spills will occur. With this and other water quality impacts in mind, the regional water board should at least be another responsible agency, if not the lead agency evaluating a permit to increase marine terminal operations. Furthermore, different feedstock may result in a change in the effluent discharged by the refinery under their existing NPDES permit, another reason why the regional water board should at least be a responsible party. The DEIR must evaluate an updated NPDES permit that reflects the changing feedstock that will result from the Project.

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No reasonable mitigation or planning can be done with regard to the risk posed by the transport of feedstocks to the Phillips 66 refinery in Rodeo without specific information as to the chemical composition of the feedstocks being transported. Details on the types of feedstock expected to arrive on the tankers utilizing the Marine Terminal's expanded capacity must be part of the DEIR and must be made publicly available. It is irresponsible to conduct risk assessment and best practices for the handling of feedstocks without at least knowing exactly what the chemical composition of the feedstock is, and how it differs from conventional oil. Additional research into best management practices, spill prevention practices, and cleanup and response planning is needed before permitting a major increase in the amount of refinery-bound tanker traffic coming into California's waters.

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We ask that the final EIR contain and make publicly available an independent scientific study on the risks to – and best achievable protection of – state waters from spills of feedstocks. This study should evaluate the hazards and potential hazards associated with a spill or leak of feedstocks. The study should encompass potential spill impacts to natural resources, the public, occupational health and safety, and environmental health and safety. This analysis should include calculations of the economic and ecological impacts of a worst-case spill event in the San Francisco Bay ecosystem, along the California coast, and along the entire projected shipping route for the expanded marine terminal.

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Based on this study, the final EIR should also include a full review of the spill response capabilities and criteria for oil spill contingency plans and oil spill response organizations (OSROs) responsible for remediating spills. We respectfully request that the final EIR include

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²⁸⁸ See Senator Bill Dodd, Letter Re: Vallejo Odor and Bay Area Air Quality Management District Response (March 8, 2017), available at <https://www.documentcloud.org/documents/3514729-Sen-Dodd-BAAQMD-Letter-3-8-17.html>.

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an analysis indicating whether there are OSROs currently operating in California capable of responding adequately to a spill of the contemplated feedstocks. Further, the adequacy of an OSRO's spill response capability should be compared to the baseline of no action rather than to a best available control technology standard.

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While California's regulatory agencies have recently been granted cleanup authority over spills of biologically-derived fuel products, no such authority or responsibility has been granted for feedstocks. If there are no current plans for OSROs to respond to spills of feedstocks in California waters, the final EIR must evaluate the impacts of such a spill under inadequate cleanup scenarios. The DEIR fails to adequately evaluate how spills of feedstocks will be remediated, if at all.

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Additional ships delivering oil to the Project would be passing through a channel that the Army Corps of Engineers has slated for reduced dredging. The Project thus contemplates increasing ship traffic through a channel that could be insufficiently dredged. The final EIR must evaluate the safety risks posed by reduced Pinole Shoal Navigation Channel Maintenance Dredging.²⁸⁹ Should Phillips 66 be required to dredge the channel, it must fully evaluate and disclose impacts from such dredging in its environmental analysis.

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Finally, the final EIR must evaluate ship maintenance impacts. Increased shipping means increased maintenance in regional shipyards and at regional anchorages, and these impacts must be analyzed.

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B. The DEIR Wrongly Concludes There Would be No Aesthetic Impacts

The DEIR claims that there would be no aesthetic impacts, and fails to analyze the significant increase in ship traffic. DIER xxix (Table ES-3). San Francisco Bay is considered a world class scenic vista, with billions of dollars of tourism dependent on a setting of natural beauty. The DEIR even acknowledges that "[b]ackground views of the bay provide a scenic quality." DEIR 4.2-12. Yet minimal analysis has been done of what impact such a drastic increase in ship traffic would do to San Francisco Bay's aesthetics, including a significant new source of light or glare (ships).

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Marine traffic in San Pablo Bay is part of the existing visual character. The San Pablo Bay has other industrial shipping facilities and marine terminals in proximity to the Rodeo Site that contribute to vessel traffic in the Bay. The proposed increase in marine traffic may result in a slight degradation of the natural views of the Bay and from the Bay of the surrounding natural landscape and hillsides. However, given the existing industrial visual character of the Rodeo Refinery and current Marine

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²⁸⁹ Memorandum for Commander, South Pacific Division (CWSPD-PD), FY 17 O&M Dredging of San Francisco (SF) Bay Navigation Channels, U.S. Army Corps of Engineers (Jan. 12, 2017) (Army Corps memo discussing deferred dredging).

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Terminal activity, the increase in marine traffic would not be highly noticeable. Impacts on scenic views would be less than significant. No mitigation is required.

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DEIR 4.2-27. Tripling ship traffic and then stating it does not constitute an impact because the area is already degraded by the same sorts of impacts is false, cynical, and ignores environmental justice concerns. The final EIR must take a hard look at these impacts, as well as impacts along expected transportation corridors and impacts from an increase in spill risk.

C. Air Quality Impacts Must Be Evaluated for an Adequate Study Area

Air quality impacts evaluated by the DEIR must include an adequate study area in order to appropriately estimate the Project's potential to result in substantial increases in criteria pollutant emissions. An increase to 361 ships per year carries with it obvious air quality impacts from ship exhaust. DEIR 4.3-70 ("marine traffic annual mass emissions are expected to increase during the Project due to increased vessel traffic"). These impacts must be evaluated by location, as is done for rail impacts (see DEIR 4.3-72, "Rail Transport Outside the SFBAAB (Significant and Unavoidable, Mitigation Pre-Empted)"), for every mile the ships travel, and for every community along their route, not just between the refinery and various anchorage points. The DEIR fails to do so, and also fails to evaluate health impacts from these routes and at various locations. Ships will not arrive at the Project terminal from out of a vacuum, and each additional ship beyond those currently in fact using the terminal – not just those currently permitted – must be evaluated.

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Phillips 66 does not have a good record of avoiding air quality violations at its Rodeo refinery. Within the last couple of years, BAAQMD settled for nearly \$800,000 with Phillips 66 for 87 air quality violations between 2010 and 2014.²⁹⁰ Such past violations must be evaluated when considering the likelihood of future violations that may relate to a change in feed stock or increased refinery activity as a result of the marine terminal expansion.

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Provision of shore power should also be considered as a mitigation measure.

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D. Recreational Impacts Are Potentially Significant

The DEIR states that there is no possibility of impact to recreation and that it has been eliminated from detailed analysis. DEIR 4-6 (4.1.5 Recreation). This is error. San Francisco Bay is a massive recreational area, and the increase in maritime traffic has a direct impact on opportunities for recreation on the Bay. Increased ship traffic qualifies as substantial physical deterioration of an existing facility. In addition, spills of feedstocks or finished products either from ships moving to and from the refinery or from the refinery itself have the potential to impact existing recreational sites. The DEIR contemplates a huge increase in the amount of product carried by ship across the Pacific Ocean and through San Francisco Bay, and each additional ship carries with it an increased chance of a spill. The final EIR must evaluate

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²⁹⁰ "Air District settles case with Phillips 66," BAAQMD Press Release (August 3, 2016), available at http://www.baaqmd.gov/-/media/files/communications-and-outreach/publications/news-releases/2016/settle_160803_phillips-pdf.pdf?la=en.

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recreational impacts from increased ship traffic and spill risk, both in San Francisco Bay and at every point along contemplated transportation corridors.

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E. The Project Implicates Potential Utilities and Service System Impacts

The DEIR states that there is no possibility of impacts to utilities and service systems and that it has been eliminated from detailed analysis. DEIR 4-7 (4.1.6 Utilities and Service Systems). This is error. The increase in maritime traffic has a direct impact on ship maintenance, anchorages, and upkeep on the Bay. Increased ship traffic would accelerate deterioration of existing facilities. In addition, spills of feedstocks or finished products either from ships moving to and from the refinery or from the refinery itself have the potential to impact existing ship facilities. The DEIR contemplates a huge increase in the amount of product carried by ship across the Pacific Ocean and through San Francisco Bay, and each additional trip carries with it an increased chance of a spill. The final EIR must evaluate utility and service system impacts from increased ship traffic and spill risk, both in San Francisco Bay and at every point along contemplated transportation corridors.

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F. Biological Impacts and Impacts to Wildlife are Potentially Significant and Inadequately Mitigated

The DEIR makes clear that there are numerous special status marine and aquatic species present, yet does not sufficiently protect these species. For each of the following impact areas, we request that adequate mitigation be evaluated and applied for each species type.

Increased shipping as a result of biofuel production and transport causes stress to the marine environment and can thus impact wildlife. Wake generation, sediment re-suspension, noise pollution, animal-ship collisions (or ship strikes), and the introduction of non-indigenous species must all be studied as a part of the EIR process. "Wake generation by large commercial vessels has been associated with decreased species richness and abundance (Ronnberg 1975) given that wave forces can dislodge species, increase sediment re-suspension (Gabel et al. 2008), and impair foraging (Gabel et al. 2011)."²⁹¹ Wake generation must be evaluated as an environmental impact of the Project.

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The DEIR contains ample data supporting vessel speed reduction as a means to avoid adverse impacts from ship strikes. *See, e.g.*, DEIR 4.4-128. Yet vessel speed reductions are not mandatory, and there is no requirement that the increased vessel traffic contemplated by the Project would adhere to speed recommendations to protect wildlife. The mitigation measures proposed by the DEIR amount to nothing more than sending some flyers. The final EIR should contemplate additional mitigation that includes tracking actual vessel speeds and mitigation for vessels that exceed 10 knots, as well as incentives for vessels to adhere to recommended speeds such as monetary bonuses or fines. Mitigation Measures BIO-1(a) and (b) are insufficient because they do not contemplate effective measures to ensure safe vessel speeds and to mitigate for exceedances.

²⁹¹ Green *et al.* 2017.

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Acoustic impacts can also be extremely disruptive. As the DEIR points out, “broadly elevated underwater noise and concentration may occur in areas with major ports and harbors (Erbe et al. 2012; Redfern et al. 2017).” DEIR 4.4-130. “Increased tanker traffic threatens marine fish, invertebrate, and mammal populations by disrupting acoustic signaling used for a variety of processes, including foraging and habitat selection (e.g. Vasconcelos et al. 2007; Rolland et al. 2012), and by physical collision with ships – a large source of mortality for marine animals near the surface along shipping routes (Weir and Pierce 2013).”²⁹² Acoustic impacts must be evaluated as an environmental impact of the Project. However, in spite of the DEIR’s admission that porpoises have a threshold for injury of 173 dB, and that median vessel sound levels would be 177.9-178.1 dB, it still finds only minimal disturbance and concludes that “No noise-related injuries would be expected.” DEIR 4.4-132 – 4.4-133. This discrepancy must be explained in the final EIR, and mitigation measures, such as reducing vessel speed and the other potential mitigations listed in the DEIR (though not implemented, see DEIR 4.4-134) must be implemented and incentivized. In addition, the DEIR must require that acoustic safeguards comport with recent scientific guidance for evaluating the risk to marine species.²⁹³

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Oil spill impacts are not adequately evaluated for biological resources and wildlife in the DEIR. The DEIR erroneously assumes that spills feedstocks for biofuels can be treated the same as petroleum-based spills. See, e.g., DEIR 4.4-139. There is no evidence that this is the case presented in the DEIR, and there is no evidence that current spill response capabilities are capable of or even authorized to respond to spills of non-petroleum feedstocks. The DEIR’s proposed mitigation measures are insufficient to address these concerns.

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Invasive species are also a dangerous side effect of commercial shipping. “Tankers also serve as a vector for the introduction of non-indigenous species (NIS) via inadvertent transfer of propagules from one port to another (Drake and Lodge 2004), with the probability of introduction depending on the magnitude and origin of shipping traffic along tanker routes (Table 1 and Figure 3; Lawrence and Cordell 2010).” Invasive species impacts must be evaluated as an environmental impact of the Project. Yet the DEIR’s mitigation measures are insufficient. Again, sending a flyer does not prevent the problems identified in the DEIR. DEIR 4.4-142. Additional recommended mitigation measures include incentives for ballast water remediation that ensures protection of sensitive areas and requiring documentation of ballast water exchanges from all visiting ships.

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In addition, the GHG emissions from the Project will contribute to climate change and in turn harm marine species. The combined GHG emissions from the facility, increased vessel traffic, and upstream and downstream emissions will have adverse impacts on marine species through temperature changes and ocean acidification. These changes may trigger changes to population distributions or migration, making ship strikes in some areas more likely.²⁹⁴

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²⁹² *Id.*

²⁹³ See Southall et al., Marine Mammal Noise Exposure Criteria: Assessing the Severity of Marine Mammal Behavioral Responses to Human Noise, *Aquatic Mammals*, (2021) 47(5), 421-464.

²⁹⁴ See Redfern et al., Effects of Variability in Ship Traffic and Whale Distributions on the Risk of Ships Striking Whales, *Frontiers in Marine Science* (Feb. 2020) Vol. 6, art. 793.

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G. Noise and Vibration Impact Analysis is Insufficient

According to the DEIR, “[t]he Project would not result in an increased number of vessels calling at the Marine Terminal on a peak day. Accordingly, noise levels would not increase as a result of peak-day vessel activity.” DEIR 4.12-396. This analysis is insufficient. The DEIR admits that overall vessel trips will drastically increase, but no analysis is made of what noise impacts will result from the increased number of vessels. The final EIR must evaluate noise impacts associated with the increase in vessel trips.

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H. Transportation and Traffic Impacts Analysis is Inadequate

Additional impacts must be analyzed starting at the port that ships associated with the Project take on their cargos and ending at the ports they discharge it to. The EIR should include shipping impacts to public or non-Project commercial vessels and businesses, including impacts to recreational boaters and ferries, that might experience increased delay, anchorage waits or related crowding, and increased navigational complexity. Collision and spill analysis should not be limited to just the vessels calling at the marine terminal associated with the Project: increased ship traffic could result in accidents among other ships or waterborne vessels. This likelihood must be analyzed in the final EIR, just as vehicular traffic increases are analyzed for their impact on overall accident rates and traffic, generally. Such shipping traffic impact evaluations should extend to spills, air quality, marine life impacts from ship collisions, and other environmental impacts evaluated by the DEIR that could impact shipping traffic.

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I. Tribal Cultural Resources Impacts Analysis is Inadequate

The only tribal cultural impacts examined by the DEIR are construction impacts. But many of the people who historically called this area home had an intimate relationship with the Bay and the water, so impacts from increased marine terminal use and increased shipping traffic, as well as associated increased spill risk and impacts to fish and wildlife, must be examined in the final EIR as well. Examples of tribes that should be consulted include the Me-Wuk (Coast Miwok), the Karkin, the Me-Wuk (Bay Miwok), the Confederated Villages of Lisjan, Graton Rancheria, the Muwekma, the Ramaytush, and the Ohlone.

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J. The Project Risks Significant Environmental Justice and Economic Impacts

To the extent the Project utilizes offsets or credits, these have an undue impact on disadvantaged and already polluted communities, and the environmental justice impacts of such use must be evaluated. Violations, such as the air quality violations referenced above, also have an undue impact on disadvantaged and already polluted communities, impacts that cannot be addressed through monetary penalties.

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Rodeo ranks in the top 8% of the state’s highest concentration of hazardous waste facilities, has a high concentration of contamination from Toxic Release Inventory chemicals,

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ranking in the top 3% for that factor.²⁹⁵ Moreover, Rodeo also suffers from a high rate of low birth weights and asthma, ranking in the top 1% and 16%, respectively.²⁹⁶

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Fisheries would also be a major casualty of any large spill, and struggling fishing communities would be hardest hit by such impacts. Dungeness crab landings, for instance, were 3.1 million pounds in 2015, down almost 83% from the year before, with Oregon landings down a similar percentage.²⁹⁷ Additional stress on these fisheries as a result of a spill or from other impacts from increased tanker traffic could have catastrophic consequences that need to be examined in the final EIR. Overall, California produced 366 million pounds of fish worth 252.6 million dollars in 2014 and 195 million pounds of fish worth 143.1 million dollars in 2015, and threats to this industry that result from the Project must be evaluated in the EIR.

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K. The DEIR Fails to Disclose and Analyze Significant Additional Impacts

1. Public Trust Resources

The marine terminal that the Project targets for drastically increased ship traffic occupies 16.7 acres of leased land, filled and unfilled. This land is California-owned sovereign land in San Pablo Bay, and as a result the California State Lands Commission is a responsible party. Public trust impacts to this land and to other public trust resources must be evaluated in the final EIR.

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2. Cross-Border Impacts

Shipping and ship traffic impacts extend across state and national borders. The final EIR must take into account environmental impacts that occur outside of California as a result of actions within California.

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3. Terrorism Impacts

More ships bring increased risk. Anti-terrorism and security measures, as well as the potential impacts from a terrorist or other non-accidental action, must be evaluated in the final EIR.

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XII. CONCLUSION

We request that the County address and correct the errors and deficiencies in the DEIR explained in this Comment. Given the extensive additional information that needs to be provided in an EIR to satisfy the requirements of CEQA, we request that the new information be included in a recirculated DEIR to ensure that members of the public have full opportunity to comment on it.

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²⁹⁵ OEHHA, Cal Enviro Screen 1.1 (amended), Statewide Zip Code Results, Rodeo, *available at* <http://oehha.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=1d202d7d9dc84120ba5aac97f8b39c56>.

²⁹⁶ *Id.*

²⁹⁷ See 2015 NOAA Fisheries of the United States.

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Thank you for your consideration of these Comments.

Very truly yours,

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Comment Letter 36 and Responses to Comments continue in Volume 2.