

Chapter 7

Response to Comments

SCH# 2023060293

Volume 3

CARBONFRONTIER CCS PROJECT

by Aera Energy, LLC (PP23402)



Kern County
Planning and Natural Resources Department
Bakersfield, California

August 2024

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**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

August 30, 2024

FILE: ZCC No. 4, Map 51; ZCC No. 3, Map 74;
ZCC No. 4, Map 75; CUP No. 9, Map 51;
CUP No. 10, Map 51; CUP No. 7, Map 74;
CUP No. 9, Map 74; CUP No. 7, Map 75;
CUP No. 11, Map 75; CUP No. 9, Map 96.
S.D. #4 – Couch

Addressee List (See Distribution List)

Response to Comments for the Draft Environmental Impact Report (DEIR) to the CarbonFrontier CCS Project by AERA Energy, LLC. (PP23402)(SCH#2023060293)

Dear Interested Party,

This is to advise that the Kern County Planning and Natural Resources Department has prepared a document entitled Volume 3 – Chapter 7 – Response to Comments, for the above referenced proposed project. Section 15088 of the California Environmental Quality Act (CEQA) Guidelines requires the Lead Agency to evaluate comments on environmental issues received from persons who reviewed the DEIR and prepared written responses addressing each comment. This document has been posted with the Kern County Clerk and provided to commenting agencies and interested parties by mail at least 10 days prior to the scheduled Planning Commission Hearing.

This document is Chapter 7 of the Final Environmental Impact Report (FEIR) and is available for review at the Planning and Natural Resources Department, which is located at 2700 "M" Street, Suite 100, Bakersfield, CA 93301 or on the Department website at: <https://kernplanning.com/environmental-doc/carbonfrontier-ccs-project/>.

A public hearing has been scheduled with the Kern County Planning Commission to consider this request on September 12, 2024 at 7:00 p.m., or soon thereafter, at the Chambers of the Board of Supervisors, First Floor, Kern County Administrative Center, 1115 Truxtun Avenue, Bakersfield, California.

Thank you for your participation in the environmental process for this proposed project. If you have any questions, please do not hesitate to contact me at (661) 862-5015 or via email at AlvidrezK@kerncounty.com.

Sincerely,

Keith Alvidrez
Keith Alvidrez, Planner II
Planning and Natural Resources Department

Commenting Agencies and Interested Persons: California Department of Fish & Wildlife; Caltrans; Kern County Public Works; Center for Biological Diversity; Tom Twisselman; Chisholm Twisselman; Ashley Twisselman; Sage Twisselman; Rose Twisselman; Susie Sneed; Richard Garcia; Torrance Valley Pipeline Company; Organization Group; Kathy Anderson; San Manuel Nation; SoCalGas.

CarbonFrontier CCS Project
RTC Notification List

CA Department of Fish & Wildlife
1234 East Shaw Avenue
Fresno, CA, 93710

Caltrans District 6
Planning/Land Bank Bldg.
P.O. Box 12616
Fresno, CA 93778

Kern County Public Works
Department

Center for Biological Diversity
Attn: Victoria Bogdan Tejada
1212 Broadway, Suite 800
Oakland, CA 94612

Tom Twisselman
17750 7th Standard Road
McKittrick, CA 93251

Chisholm Twisselman
17750 7th Standard Road
McKittrick, CA 93251

Ashley Twisselman
17750 7th Standard Road
McKittrick, CA 93251

Sage Twisselman
17750 7th Standard Road
McKittrick, CA 93251

Rose Twisselman
17750 7th Standard Road
McKittrick, CA 93251

Susie Sneed
PO Box 129
Maricopa, CA 93252

Kern County LULAC,
Council 3272
Attn: Richard Garcia
167 Dunford Street
Buttonwillow, CA 93206

Torrance Valley Pipeline Company
Attn: Eleanor Marx
12851 E. 116th Street
Cerritos, CA 90703

Jason Pfeifle
1212 Broadway, Suite 800
Oakland, CA 94612

Kathy Anderson
4 Cherry Lane
Taft, CA 93268

San Manuel Nation
26569 Community Center Drive
Highland, CA 92346

Southern California Gas Co.
9400 Oakdale Ave
Chatsworth, CA 91311

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613

For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2023060293

Project Title: CarbonFrontier CCS Project by Aera Energy, LLC

Lead Agency: Kern County Planning and Natural Resources Department

Contact Person: Keith Alvidrez

Mailing Address: 2700 "M" Street Suite 100

Phone: (661) 862-5015

City: Bakersfield

Zip: 93301

County: Kern

Project Location: County: Kern

City/Nearest Community: Community of Lost Hills

Cross Streets: Lerdo Highway and State Highway 33

Zip Code: 93249 / 93251

Lat. / Long.: 35.49980° N, -119.75522° W (NAD 83)

Total Acres: 13,362

Assessor's Parcel No.: Multi

Section: Multi

Twp.: Multi

Range: Multi

Base: SBB&M

Within 2 Miles: State Hwy #: SR-33

Waterways: N/A

Airports: N/A

Railways: N/A

Schools: N/A

Document Type:

CEQA: ☐ NOP
☐ Early Cons
☐ Neg Dec
☐ Mit Neg Dec

☐ Draft EIR
☐ Supplement/Subsequent EIR
(Prior SCH No.)
Other Response to Comments / FEIR

NEPA: ☐ NOI
☐ EA
☐ Draft EIS
☐ FONSI

Other: ☐ Joint Document
☐ Final Document
☐ Other

Local Action Type:

☐ General Plan Update
☐ General Plan Amendment
☐ General Plan Element
☐ Community Plan

☐ Specific Plan
☐ Master Plan
☐ Planned Unit Development
☐ Site Plan

☒ Rezone
☐ Prezone
☒ Use Permit
☐ Land Division (Subdivision, etc.)

☐ Annexation
☐ Redevelopment
☐ Coastal Permit
☐ Other:

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational _____
☐ Recreational _____

☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: Carbon Capture and Storage (CCS)

Project Issues Discussed in Document:

☒ Aesthetic/Visual	☐ Fiscal	☒ Recreation/Parks	☒ Vegetation
☒ Agricultural Land	☒ Flood Plain/Flooding	☒ Schools/Universities	☒ Water Quality
☒ Air Quality	☒ Forest Land/Fire Hazard	☒ Septic Systems	☒ Water Supply/Groundwater
☒ Archeological/Historical	☒ Geologic/Seismic	☒ Sewer Capacity	☒ Wetland/Riparian
☒ Biological Resources	☒ Minerals	☒ Soil Erosion/Compaction/Grading	☒ Wildlife
☐ Coastal Zone	☒ Noise	☒ Solid Waste	☒ Growth Inducing
☒ Drainage/Absorption	☒ Population/Housing Balance	☒ Toxic/Hazardous	☒ Land Use
☒ Economic/Jobs	☒ Public Services/Facilities	☒ Traffic/Circulation	☒ Cumulative Effects
☒ Other GHG, Wildfire, Tribal Cultural Resources, Energy			

Present Land Use/Zoning/General Plan Designation: Oil and Gas Exploration and Production / A (Exclusive Agriculture), A-1 (Limited Agriculture, NR (20) (Natural Resources – 20 acre min) / 8.1 (Intensive Agriculture), 8.3 (Extensive Agriculture), 8.4 (Mineral and Petroleum), 8.1/2.5 (Intensive Agriculture – Flood Hazard Overlay), 8.3/2.5 (Extensive Agriculture – Flood Hazard Overlay), 8.4/2.5 (Mineral and Petroleum – Flood Hazard Overlay).

Project Description: The proposed project would construct and operate a CCS facility for permanent underground storage of up to 40 million metric tons of carbon dioxide (CO₂) in the storage space (referred to as the 64 Zone reservoir) on approximately 12,362 surface acres in the North and South Belridge oilfield in unincorporated Kern County. The CCS facility would be comprised of four (4) CO₂ capture sites which consist of one (1) pre-combustion and three (3) post-combustion sources, up to nine (9) Class VI underground injection control (UIC) wells, up to eight (8) monitoring wells, and approximately 14.5 miles of CO₂ facility pipelines.

The proposed CCS project would capture CO₂ from an initial source of existing produced gas streams (pre-combustion) and emissions from existing stationary sources (post-combustion) within the South Belridge Oil Field and transport the CO₂ through a facility pipeline to the North Belridge oilfield for injection at up to the nine (9) dedicated Class VI UIC wells. The proposed CO₂ underground storage pace, which is approximately 2,290 acres in size (maximum modeled CO₂ plume area), would be located within the North Belridge oilfield within the CCS Surface Land Area rights held by Aera

Energy and other private owners. Oil and gas production activities would cease within the established CCS underground geologic formation where CO₂ would be stored, prior to commencement of the proposed project.

Implementation of the proposed project includes the following requests :

- Zone Change Cases (ZCC No. 4, Map No 51, ZCC No. 3, Map No. 74, ZCC No. 4, Map No. 75) from A-1 (limited Agriculture) to A (Exclusive Agriculture) on approximately 1,737 acres and from A/NR (Natural Resources – 20-acre minimum) to A (Exclusive Agriculture) on approximately 80 acres.
- Conditional Use Permits (CUP No. 9, Map 51, CUP No. 10, Map 51; CUP No. 7, Map 74; CUP No. 9, Map 74; CUP No. 7, Map 75; CUP No. 11, Map 75; CUP No. 9, Map 96) to permit the construction and operation of the CCS facility on approximately 12,362 acres with site installation of nine (9) Class VI UIC injection wells, up to eight (8) CO₂ monitoring wells, one (1) downhole seismic monitoring station, transport of CO₂ by facility pipeline, and the construction and operation of accessory infrastructure for CO₂ storage capacity of up to 40 million metric tons of CO₂ within the A (Exclusive Agriculture) Zone District.

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency, please denote that with an "S".

☐ Air Resources Board	☐ Office of Emergency Services
☐ Boating & Waterways, Department of	☐ Office of Historic Preservation
☐ California Highway Patrol	☐ Office of Public-School Construction
☐ CalFire	☐ Parks & Recreation
☒ Caltrans District # <u>6</u>	☐ Pesticide Regulation, Department of
☐ Caltrans Division of Aeronautics	☐ Public Utilities Commission
☐ Caltrans Planning (Headquarters)	☐ Regional WQCB # _____
☐ Central Valley Flood Protection Board	☐ Resources Agency
☐ Coachella Valley Mountains Conservancy	☐ S.F. Bay Conservation & Development Commission
☐ Coastal Commission	☐ San Gabriel & Lower L.A. Rivers and Mtns Conservancy
☐ Colorado River Board	☐ San Joaquin River Conservancy
☐ Conservation, Department of	☐ Santa Monica Mountains Conservancy
☐ Corrections, Department of	☐ State Lands Commission
☐ Delta Protection Commission	☐ SWRCB: Clean Water Grants
☐ Education, Department of	☐ SWRCB: Water Quality
☐ Energy Commission	☐ SWRCB: Water Rights
☒ Fish & Game Region # <u>Fresno</u>	☐ Tahoe Regional Planning Agency
☐ Food & Agriculture, Department of	☐ Toxic Substances Control, Department of
☐ General Services, Department of	☐ Water Resources, Department of
☐ Health Services, Department of	
☐ Housing & Community Development	☐ Other _____
☐ Integrated Waste Management Board	☐ Other _____
☐ Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date August 30, 2024 Ending Date September 30, 2024

Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: _____
Address: _____	Address: _____
City/State/Zip: _____	City/State/Zip: _____
Contact: _____	Phone _____
Phone: _____	

Signature of Lead Agency Representative: _____ **Date:** 8/30/2024

Keith Alvidrez, Planner II

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

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Chapter 7

Response to Comments

SCH# 2023060293

Volume 3

CARBONFRONTIER CCS PROJECT

by Aera Energy, LLC (PP23402)

Kern County Planning and Natural Resources Department
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Technical Assistance by:
WSP USA
Wells Fargo Bank Building
401 B Street Suite 1650
San Diego, CA 92101
(619) 338-9376

August 2024

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Appendix A: Carbon Dioxide Health Hazard Information Sheet

Appendix B: Center for Biological Diversity References

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Acronyms and Abbreviations

AB	Assembly Bill
APN	Assessor Parcel Number
BNLL	blunt-nosed leopard lizard
CalEnviroScreen 2.0	California Communities Environmental Health Screening Tool, Version 2.0
CalEPA	California Environmental Protection Agency
CalGEM	California Geologic Energy Management Division
Caltrans	California Department of Transportation
CARB	California Air Resources Board
C.C.R.	California Code of Regulations
CCS	carbon capture and storage
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CISN	California Seismic Network
CO ₂	carbon dioxide
County	Kern County Planning and Natural Resources Department
CPUC	California Public Utilities Commission
CRC	California Resources Corporation
CTV1	CarbonTerravault 1
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
DEIR	Draft Environmental Impact Report
DRC	Dixon Risk Consulting
EIR	Environmental Impact Report
EOR	enhanced oil recovery
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
ITP	Incidental Take Permit
KCFD	Kern County Fire Department
Kern EDC	Kern Economic Development Foundation
LCFS	Low Carbon Fuel Standard
MM	Mitigation Measure

MW	megawatts
NEPA	National Environmental Policy Act
NO _x	oxides of nitrogen
NOP	Notice of Preparation
OEHHA	Office of Environmental Health Hazards Agency
OPR	Office of Planning and Research
PHMSA	Pipeline and Hazardous Materials Safety Administration
PRC	Public Resources Code
QRA	Quantitative Risk Assessment
RDEIR	Recirculated Draft Environmental Impact Report
REIR	Recirculated Environmental Impact Report
ROG	reactive organic gases
SB	Senate Bill
SDWA	Safe Drinking Water Act
SJVAPCD	San Joaquin Valley Air Pollution Control District
SREIR	Supplemental Recirculated Environmental Impact Report
UIC	Underground Injection Control
U.S. DOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Plan

Chapter 7

Response to Comments

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7.1 Introduction

7.1.1 Purpose

As defined by Section 15050 of the California Environmental Quality Act (CEQA) Guidelines, the Kern County Planning and Natural Resources Department is serving as “Lead Agency” for preparation of the Final Environmental Impact Report (EIR) for the Aera CarbonFrontier Project (project) proposed by Aera Energy LLC (Aera or project proponent). The Final EIR presents the environmental information and analyses that have been prepared for the Project, including comments received addressing the adequacy of the Draft EIR, and responses to those comments. The Draft EIR was circulated for a 45-day public review period. All comments have been included and responses provided for the circulation. In addition to the responses to comments, clarifications, corrections, or revisions have been made to the Draft EIR and are included in this Chapter 7, Response to Comments. The Final EIR, which includes the responses to comments, the Draft EIR, and the Mitigation Monitoring Program, will be used by the Planning Commission and Board of Supervisors in the decision-making process for the Project.

7.1.2 Public Process

Kern County prepared and circulated an Initial Study (IS)/Notice of Preparation (NOP) to the State Clearinghouse (SCH# 2023060293), public agencies, special districts, responsible and trustee agencies, and other interested parties for review and comment on June 9, 2023. In conjunction with this public notice, Kern County hosted a scoping meeting at 1:30 p.m. on July 10, 2023, at the Kern County Planning and Natural Resources Department. The purpose of the meeting was to introduce the Project and to solicit input from agencies, organizations, and other interested parties regarding the proposed Project, alternatives, mitigation measures, and environmental impacts to be analyzed in the EIR. The IS/NOP, scoping meeting, and comment letters received, and a complete summary of all scoping comments are included as Appendix A of the DEIR.

7.1.3 Revised Summary of Impacts, Mitigation Measures, and Significance Conclusions and Errata

The following section includes a listing of all errata/revisions made to the text of the Draft Environmental Impact Report (DEIR). Amended text is identified by page number. Additions to the DEIR text are shown with underline and text removed from the DEIR is shown with ~~strikethrough~~. The errata/revisions as outlined below, fall within the scope of the original project analysis included in the DEIR and do not result in an increase to any identified impacts or produce

any new impacts. No new significant environmental impacts would result from the changes. Therefore, no significant revisions have been made which would require recirculation of the DEIR pursuant to CEQA Guideline 15088.5 (Recirculation of an EIR Prior to Certification).

Chapter 1 Executive Summary, Page 1-1

The DEIR is revised to implement the following revision in Chapter 1, Executive Summary and all other applicable locations throughout the DEIR.

approval of a Zone Change Case (ZCC No. 4, Map No 51, ZCC No. 3, Map No. 74, ZCC No. 4, Map No. 75, ZCC No. 9, Map No. 51) from A-1 (Limited Agriculture) to A (Exclusive Agriculture) on approximately 1,737 acres and from A/NR (Natural Resources – 20-acre minimum) to A (Exclusive Agriculture) on approximately 4780 acres and the approval of a Conditional Use Permit (CUP) (CUP No. 9, Map No. 51, CUP No. 7, Map No. 74, CUP No. 7, Map No. 75, CUP No. 9, Map No. 96, CUP No. 10, Map No. 51, CUP No. 9, Map No. 74, CUP No. 11, Map No. 75) for the construction and operation of an approximately 12,362-acre carbon capture and storage (CCS) facility with related capture facilities and pipeline for carbon dioxide (CO₂) captured from existing sources within the South Belridge oilfield.

Chapter 3 Project Description, Page 3-5

Zone Classification Change: ZCC No. 4, Map No 51, ZCC No. 3, Map No. 74, ZCC No. 4, Map No. 75, and ZCC No. 9, Map No. 51 from A-1 (limited Agriculture) to A (Exclusive Agriculture) on approximately 1,738 acres and from A/NR (Natural Resources – 20-acre minimum) to A (Exclusive Agriculture) on approximately 4680 acres.

Chapter 4, Cumulative Settings, Impacts, and Mitigation Measures for each Resource Section

The DEIR is revised to insert the following text in each “Cumulative Setting” section immediately following the paragraph beginning either “The documents provide...” or “The aforementioned documents provide...”:

Other potential future CO₂ source projects are insufficiently definite for a detailed assessment of their contribution to potentially significant cumulative impacts. In addition, it is not certain what other sources are likely to contribute CO₂ for storage at the Project and there are no currently operational CCS projects in California on which to base a more concrete analysis of CO₂ source impacts. The extent of contributions to cumulative impacts from these projects are dependent on many variables and are not knowable at this time. However, any such project in the County would be accompanied by a separate CUP and associated environmental review process. It is reasonably anticipated that these future projects would be sited consistent with zoning and land use controls, would comply with all applicable federal, state, and local regulations, and would implement mitigation measures to minimize or avoid environmental impacts. As a result, these source projects are anticipated to result in impacts typical of similar scale development projects.

Section 4.1 Aesthetics, Page 4.1-35 (Impact 4.1-5: Contribute to Cumulative Aesthetics Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would

be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to aesthetic resources. However, construction and operation of these facilities nonetheless has the potential to introduce or increase features such as heavy equipment or buildings that could degrade the visual character of their surroundings. The extent of contribution to the visual impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.2 Agriculture and Forestry Resources, Page 4.2-20 (Impact 4.2-6: Contribute to Cumulative Agriculture and Forest Resources Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Depending on siting, these facilities have the potential to result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, Williamson Act conservation contracts, or forest land or timberland, resulting in impacts to these resources. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.3 Air Quality, Page 4.3-83 (Impact 4.3-5: Result in Other Cumulatively Considerable Air Quality Impacts)

Regarding impacts to air quality, the project has the potential to contribute to cumulative impacts within the region. A complete analysis and evidence for the record of the cumulative impacts on air quality of the various activities from oil and gas are provided 4.3, Air Quality of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to sensitive receptors. However, construction and operation of these facilities nonetheless has the potential to result in increases in criteria air pollutants and toxic air contaminants in the vicinity of such operations, as well as potentially offensive odors near sensitive receptors. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.4 Biological Resources, Page 4.4-86

MM 4.4-19 The following additional measures shall be implemented to avoid and minimize potential significant adverse impacts to Protected and Sensitive Species:

- a. All vehicles shall observe a 20-mile-per-hour speed limit in all areas of disturbance and on unpaved roads unless otherwise posted. Off-road traffic

outside of designated access routes is prohibited. Speed limit signs shall be posted in visible locations at the point of site entry and at regular intervals on all unpaved access roads.

- b. All disturbance activities, except emergency situations or drilling that may require continuous operations, shall only occur during daylight hours. Nighttime disturbance activity for drilling purposes shall use directed lighting, shielding methods, and comply with applicable lighting mitigation measures.
- c. The project will limit nighttime activity to essential personnel only, including emergency response or security personnel, to ensure that vehicle traffic necessary during nighttime hours will minimize effects on Giant Kangaroo Rat and San Joaquin Antelope Squirrel.
- ed. The project will initiate a trash abatement program before starting project activities and will continue the program for the duration of the project. All food-related trash items and all forms of micro trash, such as wrappers, cans, bottles, bottle tops, and food scraps shall be disposed of in closed, animal-proof containers and removed daily from the site.
- de. The project will minimize new disturbance and habitat fragmentation by consolidating infrastructure and confining all project-related parking, storage, laydown, and temporary equipment storage areas to previously disturbed areas to the greatest extent practicable.
- ef. Excavations, spoils piles, access roadways, and parking and staging areas shall subject to dust control as set forth in the dust control mitigation measures.
- eg. The use of herbicides for vegetation control shall be restricted to those approved by the USFWS and the CDFW. No rodenticides shall be used on any site unless approved by the USFWS, and the CDFW, and shall observe label and other restrictions mandated by the United States Environmental Protection Agency, California Department of Food and Agriculture, and State and federal laws and regulations. For split estates, no herbicides for vegetation control may occur in Tier 2 areas without surface owner approval.
- fh. No plants or wildlife shall be collected, taken, or removed from the site or any adjacent locations except as necessary for project-related vegetation removal or wildlife relocation by a qualified biologist and subject to all applicable permits and authorizations.
- gi. All open trenches or excavations shall be covered at the end of each workday to prevent wildlife entrapment. The agency-approved biologist will inspect all such materials for special-status wildlife before they are moved, buried or capped. If an excavation is too large to cover, escape ramps shall be installed at an incline ratio of no greater than 2:1. All

trenches and pipes shall be inspected for the presence of wildlife each day prior to the commencement of work.

- ~~h~~i. To enable San Joaquin kit foxes and other wildlife to pass through the project site, any perimeter fencing shall include a 4- to 8-inch opening between the fence mesh and the ground, or the fence shall be raised 4 inches above the ground except blunt-nosed leopard lizard exclusion fencing. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife.
- ~~i~~k. All vertical tubes used in project construction and chain link fencing poles, shall be temporarily or permanently capped to avoid the entrapment and death of special-status wildlife and birds. All pipes 1.5 inches or greater in diameter stored overnight on a project location must have end caps or other physical barriers that prevent wildlife from entering the pipe.
- ~~j~~l. All dead or injured special status wildlife shall be left in place and reported to the USFWS and the CDFW within 48 hours of discovery for rescue or salvage. Discovery of State or federal listed species that are injured, or dead shall also be managed consistent with regulatory requirements, including being reported immediately via telephone and within 24 hours in writing, and with a copy to Kern County Planning and Natural Resources.
- ~~k~~m. All drilling installations and operations will comply at all times with the applicable federal, State, County, and local law ordinances and regulations.
- ~~h~~n. During preconstruction surveys, the qualified biologist shall delineate previously disturbed areas to be used by the owner/operator to minimize the amount of new disturbance.
- ~~m~~o. All concrete and asphalt debris should be removed from the site for recycling or disposal at an authorized, permitted facility.
- ~~n~~p. No vehicles or construction equipment shall be parked within a wetland or waterbody/dry wash.
- ~~o~~q. No vehicles shall park within 50 feet of known special-status species dens, burrows, or precincts.
- ~~o~~r. To the greatest extent feasible, vehicles left overnight will not be located within 50 feet of small mammal burrows.
- ~~o~~s. Tracked vehicles and other construction equipment must be washed or maintained to be weed-free prior to entering and working within areas of new disturbance.
- ~~p~~t. All washing of trucks, paint, equipment, or similar activities should occur in areas where runoff is fully contained for collection and off-site disposal. Wash water may not be discharged from the site and shall be located at least 100 feet from any water body, or sensitive Biological Resources.

- ~~qu.~~ Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries or waterbody, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.
- ~~rv.~~ In the event that oil, produced water, or drilling mud containing oil are accidentally conveyed to an excavated area, the project proponent will implement measures to preclude Blunt Nose Leopard Lizard, Giant Kangaroo Rat, and San Joaquin Kit Fox access to the excavated area until oil and oil residues have been removed and no longer pose exposure risk to wildlife. Measures will include installation of temporary netting or covering to preclude species access.
- ~~rw.~~ All areas that must be avoided as result of the pre-disturbance surveys, and areas where new disturbance will occur, shall be clearly delineated by fencing or staking and flagging and/or rope or cord.
- ~~sx.~~ No firearms shall be allowed on any site.
- ~~ty.~~ No pets shall be allowed on any site.
- ~~uz.~~ No smoking may occur except in designated areas.

Section 4.4 Biological Resources, Page 4.4-93 (Impact 4.4-7: Contribute to Cumulative Biological Resource Impacts)

Regarding impacts to biological resources, the project has the potential to contribute to cumulative impacts within the region. A complete analysis and evidence for the record of the cumulative impacts on biological resources of the various ground-disturbing activities from oil and gas are provided 4.4, Biological Resources of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to biological resources. However, construction and operation of these facilities nonetheless has the potential to result in disturbance of undeveloped areas or developed areas suitable for certain species, which may adversely affect biological resources potentially present in those areas. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.5 Cultural Resources, Page 4.5-28 (Impact 4.5-4: Contribute to Cumulative Cultural Resources Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would

be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to cultural resources. However, construction and operation of these facilities nonetheless has the potential to result in ground disturbing activities that could adversely impact prehistoric and historical archaeological sites, paleontological resources, historic buildings and structures. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.6 Energy, Page 4.6-18 (Impact 4.6-3: Contribute to Cumulative Energy Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Construction and operation of these facilities nonetheless has the potential to result in temporary increases in energy demand associated with construction as well as operational demands for gas and electricity. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.7 Geology and Soils, Pages 4.7-17-18

Mitigation Measures

MM 4.7 1 The owner/operator shall prepare a comprehensive seismic activity monitoring plan that includes, . . .

In addition, implement MMs 4.3-6, 4.3-8, 4.7-2 through 4.7-4, 4.8-1, 4.9-4, 4.9-9, 4.9-10, 4.9-12, 4.9-14, 4.9-18, 4.10-4, 4.11-1 through 6, and 4.15-4.

Section 4.7 Geology and Soils, Page 4.7-18

Mitigation Measures

Implement MM 4.7-1, as described above, and MMs 4.3-6, 4.3-8, 4.7-2 through 4.7-4, 4.8-1, 4.9-4, 4.9-9, 4.9-10, 4.9-12, 4.9-14, 4.9-18, 4.10-4, 4.11-1 through 6, and 4.15-4.

Section 4.7 Geology and Soils, Page 4.7-27

Mitigation Measures

Implement MM 4.7-1 to MM 4.7-6, as described above, and MMs 4.3-6, 4.3-8, 4.8-1, 4.9-4, 4.9-9, 4.9-10, 4.9-12, 4.9-14, 4.9-18, 4.10-4, 4.11-1 through 6, and 4.15-4.

Section 4.7 Geology and Soils, Page 4.7-25 (Impact 4.7-10: Contribute to Cumulative Geologic and Soils Impacts)

Regarding impacts associated with geology and soil, the project has the potential to contribute to cumulative impacts within the region. A complete analysis and evidence for the record of the

cumulative impacts on air quality of the various activities from oil and gas are provided 4.6, Geology and Soils of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. Construction and operation of these facilities nonetheless has the potential to be located in areas of potentially hazardous geological or soil conditions. The specific design, location, slope, geologic and soil conditions for every CO₂ source project are not known at this time and would be analyzed on a site-specific basis at the project level. Thus, the extent of these impacts from potential source projects are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.8 Greenhouse Gas Emissions, Page 4.8-26

Additional sources will need to be identified by the applicant and permitted by the ~~applicant and project proponents for~~ those sources and must be legally permitted and disclosed as required by Mitigation Measure (MM) 4.9-11 (Hazards and Hazardous Materials).

Section 4.8 Greenhouse Gas Emissions, Page 4.8-33 (Impact 4.8-3: Contribute to Cumulative Greenhouse Gas Emissions Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Construction and operation of these facilities has the potential to result in increases in GHG emissions. The extent of these impacts from potential CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.9 Hazards and Hazardous Materials, Page 4.9-61-62

MM 4.9-4 All CCS related CO₂ facility pipelines shall require prior to construction, review and approval of a CUP Compliance Site Plan ~~permit site plan review~~ by the Kern County Planning and Natural Resources Department.

- A. All pipelines or distribution lines that transport CO₂ shall be located within the approved CUP boundary and be located a minimum of 2,200 feet from the property line of any parcel. not owned or controlled by private agreement of the owner/operator of the project, outside the CUP boundary. With the exception of minor deviations of up to 10 feet on either side, the pipeline shall be constructed in the location shown on the approved CUP Compliance Site Plan and any such deviations shall be shown on a modified CUP Compliance Site Plan after construction. in the construction permit site plan.

- B.** The site plan shall include the full location of the facility pipeline, width of easement for the pipeline with a maximum of 50 feet, location and spacing of automatic shut off valves, location of infra-red cameras for monitoring, construction and coatings used for the pipeline and all other requirements of federal and State regulations. Safety fencing shall be provided at specific locations along the pipeline to protect critical components such as valves, controls, and safety devices. General reference to “compliance with regulations” will not be considered sufficient. The site plan package shall concurrently be submitted to the Kern County Planning and Natural Resources Department, Kern County Fire Marshall and California State Fire Marshall for review and approval.
- C.** The plan shall include all details and features to show compliance with 49 CFR Part 195. The U.S. Department of Transportation (U.S. DOT) and the Pipeline and Hazardous Materials Safety Administration (PHMSA) has delegated CO₂ pipeline oversight to the State Fire Marshall, who will evaluate pipelines for compliance with PHMSA. All pipeline / distribution line conveyances of CO₂ not under the authority of PHMSA shall be reviewed and approved for all required safety features by the Kern County Fire Marshall. All costs for review by all parties shall be borne by the owner/operator.
- D.** The owner/operator shall notify the Kern County Public Health Services Environmental Health Division, the Certified Unified Program Agency (CUPA), surface landowner, and sensitive receptors located within 300 feet, of any hazardous materials/waste release, other than CO₂, immediately upon discovery, and to other applicable agencies as required by other laws. The owner/operator shall immediately contain the leak (e.g., by isolating or shutting down the leaking equipment), clean up contaminated media (e.g., soils), and repair the leak prior to recommencing operations. The owner/operator shall report the status and progress of the leak repair and remediation work to the County and the CUPA on monthly intervals or predetermined intervals until the repair has been completed. Contaminated media shall be analyzed according to 22 C.C.R. §§ 66261.21-66261.24 for determination of hazardous waste disposal subject to the Hazardous Waste Determination procedures provided in 22 C.C.R. §66262.11.

Section 4.9 Hazards and Hazardous Materials, Page 4.9-73

- MM 4.9-18** Prior to commencement of any injection of CO₂, and in addition to the emergency response plan required by the EPA UIC permit, the owner/operator shall prepare an emergency incident response plan that addresses advance leak detection methods and communication with fire responders, emergency medical response, Kern County Fire and Kern County Sheriff notification and protocols for incident management, including, but not limited to, use of the ReadyKern emergency notification system. The plan shall be reviewed and approved by the Kern County

Fire Department in consultation with EPA UIC Program, State of California Fire Marshall, Kern County Sheriff and all other State agencies identified by the California Air Resources Board

Section 4.9 Hazards and Hazardous Materials, Page 4.9-78 (Impact 4.9-9: Contribute to Cumulative Hazards and Hazardous Materials Impacts)

A complete analysis and evidence for the record of the cumulative impacts on air quality of the various activities from oil and gas are provided 4.8, Hazards and Hazardous Materials/Public Health Risks of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to sensitive receptors. However, construction and operation of these facilities nonetheless has the potential to require the transport or use of hazardous materials. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review. The handling of hazardous materials is required to comply with all applicable federal, state, and local laws. Additionally, potential CO₂ source projects are anticipated to be subject to siting controls applicable to similar scale industrial uses that will limit exposure hazards.

Section 4.10 Hydrology and Water Quality, Page 4.10-48 (Impact 4.10-6: Contribute to Cumulative Hydrologic Resources Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to hydrologic resources. However, construction and operation of these facilities nonetheless has the potential to be located in varying drainage and other hydrological conditions, potentially resulting in hydrologic resource impacts. The specific design, location, drainage, and other conditions for potential future CO₂ source projects are not known at this time and would be analyzed on a site-specific basis at the project level. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.11 Land Use and Planning, Page 4.11-52

MM 4.11-4 No Lot Line Adjustment may be made that adds land to any parcels included in the CCS Surface Land Area without a formal modification of the CUP at a hearing and review under CEQA. Any recorded Lot Line Adjustment to reduce the size of the CCS Surface Land Area to conform to the approved EPA Carbon Dioxide Plume storage area ~~Area of Review~~ or reduce the parcel used for

monitoring or seismic wells may be done administratively by submitting a CUP site plan map with the reduced CCS Surface Land Area shown and notation of the new parcels that are included in the CUP boundary but

Section 4.11 Land Use and Planning, Page 4.11-52-53

MM 4.11-5 Prior to any grading or building or construction, the following notifications shall be made.

- A. A deed restriction notification document shall be recorded by the applicant with language as approved by the Kern County Planning and Natural Resources Department that gives constructive notice that the CCS Surface Land Area, described by both APNs and legal description, is an approved CCS project subject to a CUP and related Environmental Impact Report (EIR). The document shall be recordable and provide information for access to the following information that shall be updated quarterly, or as applicable: Names of operator of CCS facility and physical address of headquarters and email, dates of injection, quantity of injections, and specific injection zone or zones.
- B. Sixty (60) days before commencing the first injection of CO₂, the applicant shall provide written notice to all owners (surface and mineral) within the CUP boundary and all ~~adjacent~~ property owners (surface and mineral) for legal parcels within 2,200 feet of the approved CUP boundary by certified mail. The notice shall include a description of the project, location map of the CUP boundary, estimated date for first injection of CO₂ contact information for the owner/operator and instructions on access and registration for the Kern County Fire Department ReadyKern emergency notification system. The notice shall be reviewed and approved, before mailing by the applicant, by the Kern County Planning and Natural Resources Department. Copies of the certified receipts, map of the parcel locations and mailing list shall be provided as compliance.

Section 4.11 Land Use and Planning, Page 4.11-52

MM 4.11-4 No Lot Line Adjustment may be made that adds land to any parcels included in the CCS Surface Land Area without a formal modification of the CUP at a hearing and review under CEQA. Any recorded Lot Line Adjustment to reduce the size of the CCS Surface Land Area to conform to the approved EPA Carbon Dioxide Plume storage area ~~Area of Review~~ or reduce the parcel used for monitoring or seismic wells may be done administratively by submitting a CUP site plan map with the reduced CCS Surface Land Area shown and notation of the new parcels that are included in the CUP boundary but will be outside the CCS Surface Land Area.

Section 4.11 Land Use and Planning, Page 4.11-53

MM 4.11-6 The following APNs are provisionally included in the Aera CarbonFrontier CCS Project Draft EIR for analysis based on pore space characteristics:

- a. APN 068-200-41 Section 22/T27S/R 20E (66.84 acres)
- b. APN 068-220-39 Section 36/T27S/R20E (26.17 acres)
 1. Written authorization from the legal property owners for both pore space and surface land to be included in the Aera CarbonFrontier CCS Project CUPs must be provided to the Kern County Planning and Natural Resources Department. With written concurrence from the EPA the parcels may be excluded from the project and no authorization is required.
 2. If the EPA reports, based on the monitoring evidence, that the approved EPA Carbon Dioxide Plume storage area ~~Area of Review~~ for the underground CCS storage has expanded outside the boundaries of the CCS Surface Land Area, a formal modification of the CUP boundary shall be made at a noticed public hearing at the Kern County Board of Supervisors and all applicable mitigation measures implemented.

Section 4.11 Land Use and Planning, Page 4.11-56 (Impact 4.11-3: Contribute to Cumulative Land Use and Planning Resource Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, but the specific design and location for potential future CO₂ source projects are not known at this time and would be analyzed on a site-specific basis at the project level. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.12 Mineral Resources, Page 4.12-10 (Impact 4.12-3: Contribute to Cumulative Mineral Resources Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Depending on siting, these facilities have the potential to adversely impact mineral resources. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.13 Noise, Page 4.13-31 (Impact 4.13-4: Contribute to Cumulative Noise Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting noise impacts. However, these projects have the potential to result in increases in noise typical of construction and operation associated with similarly scaled land uses. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review. Both construction and operation would be required to comply with applicable noise regulations.

Section 4.14 Population and Housing, Page 4.14-11 (Impact 4.14-4: Contribute to Cumulative Population and Housing Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. Construction typically generates short-term demand for a relatively small workforces that is unlikely to require additional housing or generate changes in land uses. Operations of similarly scaled land uses typically do not generate large scale workforces. However, the extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.15 Public Services, Page 4.15-18-19

MM 4.15-4 The following payments shall be made to the Kern County Fire Department (KCFD)

- A. An annual payment of \$250,000 shall be made to the Kern County Planning and Natural Resources Department for transfer to the KCFD for equipment and training specific to the detection and control of emergency situations caused by CO₂ or related to CO₂.
- B. An annual payment of \$ 30,000 shall be made to the Kern County Planning and Natural Resources Department for transfer to the KCFD for operations and maintenance of the ReadyKern Emergency Notification system
- C. Both required amounts shall be made as one payment. The first total payment of \$280,000 is due 60 days after the issuance by the U.S. Environmental Protection Agency (EPA) Class VI Underground Injection

Control (UIC) permit for construction of any well. Annual payments are due every year on the date of the first-year payment.

Section 4.15 Public Services, Page 4.15-21 (Impact 4.5-4: Contribute to Cumulative Public Services Impacts)

A complete analysis and evidence for the record of the cumulative impacts on public services of the various activities from oil and gas are provided 4.14, Public Services of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. Construction typically generates short-term demand for a relatively small workforces that is unlikely to require additional public services. Operations of similarly scaled industrial uses typically do not generate large scale workforces. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.16 Recreation, Page 4.16-9 (Impact 4.16-3: Contribute to Cumulative Impact on Recreational Facilities)

A complete analysis and evidence for the record of the cumulative impacts on public services of the various activities from oil and gas are provided 4.15, Recreation of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to recreational activities. Construction typically generates short-term demand for a relatively small workforces that is unlikely to generate additional demand for or use of existing parks and recreational facilities such that these resources would become deteriorated. Similarly, operations of similarly scaled industrial uses typically do not generate large scale workforces. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.17 Transportation, Page 4.17-18 (Impact 4.17-5: Contribute to Cumulative Transportation Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to transportation. Construction could result in short term increases in commuter and truck trips that would depend on the particular construction activity. Operations would also involve vehicle trips

typical of similarly scaled industrial uses. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.18 Tribal Cultural Resources, Page 4.18-10 (Impact 4.18-2: Contribute to Cumulative Tribal Cultural Resource Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to tribal cultural resources. However, construction and operation of these facilities nonetheless has the potential to result in ground disturbing activities that could adversely impact properties important to tribal communities. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.19 Utilities and Service Systems, Page 4.19-30 (Impact 4.19-6: Contribute to Cumulative Impacts on Utilities and Service Systems)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. New or modified facilities could generate increases in demand for public utilities such as water supply, wastewater treatment, or solid waste disposal consistent with similarly scaled industrial uses. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

Section 4.20 Wildfire, Page 4.20-11 (Impact 4.20-5: Contribute to Cumulative Wildfire Impacts)

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting cumulative wildfire impacts. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

7.2 Response to Comments

7.2.1 Global Responses

1: Source Identification

Commenters assert that potential projects that may contribute CO₂ for storage in the proposed project reservoirs at a future date (see DEIR, Vol. 1, pp. 3-32 – 35- and DEIR, Vol. 2, Appendix K-4) are part of the “whole of the action” which must be included in the DEIR Project Description and in analysis of impacts, mitigation measures and alternatives. This Global Response 1 responds to such issues, generally referred to as “piecemealing.” In addition, commenters claim that the DEIR fails to provide additional information on potential future CO₂ sources that would be needed to analyze those sources as part of the “whole of the action.” This comment is derivative of the assertion that such analysis is required to avoid piecemealing, which is incorrect for the reasons discussed below. DEIR, Vol. 1, pp. 3-32 – 35 and Vol. 2, Appendix K-4 provide general information on the characteristics of the potential future CO₂ source categories.

An EIR project description must be accurate, stable and finite, as the basis for analysis of environmental impacts. *Southwest Regional Council of Carpenters v. City of Los Angeles* (2022) 76 Cal.App.5th 1154. Commenters claim that the DEIR does not provide an accurate, stable and finite project description because the U.S. EPA has not yet completed and released draft Class VI Underground Injection Control (UIC) permits for the proposed project. As a result of the EPA permitting process, commenters contend, the project may be modified in ways that result in impacts not addressed in the DEIR. EPA’s consideration of the Class VI permit application for purposes of compliance with the Safe Drinking Water Act (SDWA) is a separate, independent proceeding from the County’s broader review of the proposed project for purposes of compliance with CEQA before issuing a Conditional Use Permit (CUP). If, as a result of EPA’s permitting process, the applicant later modifies its plans in significant ways from the project covered in the County’s CUP, such as changing the number or location of injection wells, the changes would need to be reviewed by the County. New or substantially more severe impacts, if any, as a result of project changes would require supplemental CEQA review prior to County approval. CEQA Guidelines § 15162.

A project consists of the “the whole of an action.” CEQA Guidelines § 15378. A proposed project’s full environmental effects must not evade CEQA review by splitting the whole of the action into smaller “piecemeal” projects, each with minimal environmental impacts. *Planning & Conservation League v. Castaic Lake Water Agency* [2009] 180 Cal.App.4th 210. In general, illegal piecemealing occurs when the proposed project is the first step in planned development, a future project constitutes a “crucial element” or “integral part” of the first project, or completion of one project “legally compels” or “practically presumes” completing the other. See *Laurel Heights Improvement Association of San Francisco, Inc. v. Regents of the University of California* (1988) 47 Cal.3d 376 (“first step” of school relocation to part of an existing building improperly piecemealed from future expansion to the rest of the building, when future expansion was reasonably foreseeable and would change the scale of the initial project and impacts); *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713 (EIR improperly

excluded sewer expansion that was a “crucial element” of residential development project); *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214 (improper piecemealing of shopping center and road realignment, when shopping center could not be legally completed without road realignment).

On the other hand, as discussed in *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209, 1223-1224, even in cases where the *Laurel Heights* “reasonably foreseeable” test is met, courts have found no piecemealing when an EIR project description is limited to a proposed project that has “independent utility” whether or not another project proceeds, and the two projects have different proponents and serve different purposes. In *Banning Ranch*, the court rejected piecemealing claims when a development project and adjacent park project had different proponents, served different purposes and were “independently justified.” Even though in that case there were specific, non-speculative pending plans for both projects, the city planned to build the park to provide recreation for existing residents, regardless of whether or not the private project to provide new residential and commercial development went forward. Similarly, in *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 99-100, the court rejected arguments that the EIR for a refinery upgrade project should have included another company’s proposed hydrogen pipeline, concluding that these were “independently justified separate projects with different project proponents—not ‘piecemealed’ components of the same project”, with “entirely different, unrelated functions.” The upgrade project would improve oil processing within the refinery, while the hydrogen pipeline would separately provide a connection for transporting excess hydrogen to other consumers. The refinery upgrade did not depend on the hydrogen pipeline and would serve its function with or without the latter. See also *Paulek v. Department of Water Resources* (2014) 231 Cal.App.4th 35, 47: separate CEQA review of dam improvements and emergency outlet extension was not piecemealing, because the projects served distinct purposes, respectively, improving seismic resilience of the dam itself and transporting water downstream from the dam in the event of emergency. The outlet extension was not a “consequence” of the dam improvement project, which did not “legally or practically compel” the extension. In addition, there is no piecemealing when potential future projects are too speculative and indefinitely defined for meaningful environmental review. See, e.g., *Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2001) 91 Cal. App. 4th 1344, 1361 (no piecemealing when potential future “runway projects existed only as concepts in long-range plans that were subject to constant revision” and the proposed project “would be built whether or not runway capacity is ever expanded.”)

The initial source of CO₂ for storage at the proposed project reservoirs is the precombustion produced gas streams and post-combustion flue gas from within the Belridge oilfields. Due to the large size of the existing reservoir which the proposed project will utilize, the project has the capacity to store up to 40 million metric tons of CO₂ (see, e.g., EIR pp. 3-8, 4.8-20, 4.8-26, 6-9. Therefore, CO₂ captured from oilfield operations would not fill the maximum available storage capacity. The DEIR section on “Future Sources-Identification” (DEIR Vol. 1, pp. 3-32 - 35) and the technical memorandum in DEIR Vol. 1, Appendix K-4, discuss categories of potential future projects that may be developed and approved at a later date, which could take advantage of the proposed project’s available CO₂ storage capacity. Mitigation Measure 4.11-7 limits potential future CO₂ sources to projects in the same categories, within Kern County: hydrogen (green and

blue), biomass carbon removal and storage, cement production, green steel production, oilfield field gas streams, power plants, direct air capture and alternative fuel production. In addition, DEIR, Vol. 1, p. 3-34 identifies six projects in Kern County that are currently in the process of exploratory planning and preliminary development by companies that have publicly indicated their interest in sending CO₂ for storage to a different proposed project, the CarbonTerravault 1 (CVT 1) project. As commenters note, Aera Energy LLC, the applicant for the CarbonFrontier project, merged with California Resources Corporation, the applicant for the CTV 1 project, subsequent to the submittal of their respective CUP applications to the County. Nevertheless, the proposed CarbonFrontier project evaluated in this EIR and the CTV1 project, which is undergoing separate CEQA review, remain independent projects. Neither project is connected to or relies on the other, and either project can proceed whether or not the other is approved and permitted by the County or obtains all necessary permits and approvals from EPA and other regulatory agencies.

Because some potential future CO₂ source projects are reasonably foreseeable (including potential future projects that may provide CO₂ for storage at the CarbonFrontier project), they are included in the DEIR's cumulative impact analysis. DEIR, Vol. 1, Table 3-10, Cumulative Projects, pp. 3-76 – 77; see also Global Response 7, Cumulative Impacts. Instead of being included in cumulative impact analysis, commenters assert that potential future CO₂ sources must be included as part of the proposed project itself. On the contrary, as the *Banning Ranch* case explains, even reasonably foreseeable future projects need not be included in the same EIR if the proposed project has independent utility whether or not the other projects proceed.

Commenters claim that the proposed project depends on utilizing the full capacity of its reservoir, which necessarily includes potential future CO₂ sources since the initial CO₂ source would not fill them. Moreover, as the DEIR (Vol. 1, p. 4.8-26) acknowledges, state policy phasing out fossil fuels could result in unavailability of the initial CO₂ source by 2045 or sooner. Therefore, commenters assert, implementation of additional CO₂ source projects must be considered part of the “whole of the project.” The comments are not correct. The County is not obligated to approve any CO₂ source projects for injection into the proposed project, no applications are pending before the County, and there is insufficient information available to allow for meaningful environmental review of such projects. If and when any future CO₂ sources projects are proposed, a separate CEQA review and Conditional Use Permit (CUP) would be required for each project, including consideration of its transportation of CO₂ by pipeline or truck to the proposed project for storage. Moreover, as noted above, EPA's review and issuance of a Class VI UIC permit is a separate procedure under the federal SDWA, independent of the County's review under CEQA, which does not legally or practically compel the County to take any action. EPA's permitting process under its SDWA authority over underground injection and confinement of stored CO₂ is distinct from the County's broader land use authority.

The proposed project does include the full capacity of the reservoir, and therefore the DEIR analyzed maximum storage in Section 4.8 evaluating potentially significant GHG impacts. Nevertheless, as the DEIR explains, the applicant is responsible for obtaining CO₂ sources for injection. Since projects to fill the reservoirs to capacity have not been reviewed or permitted, the amount of GHG emissions they would produce, capture, store or release is unknown. DEIR Vol. 1, p. 4.8-26. While the DEIR appropriately disclosed this information, the realization of any

potential future projects that have indicated interest in pursuing the opportunity for CO₂ storage is speculative and uncertain. The County is not responsible for ensuring that future CO₂ sources sufficient to fill the reservoir capacity are developed and approved. The applicant bears the risk if this does not occur.

As stated on DEIR p. 4.8-26, in the analysis of operational GHG emissions, Table 4.8-4 (DEIR Vol. 1, p. 4.8-25) shows *only* CO₂ captured and injected from the initial CO₂ source, precombustion produced gas streams and post-combustion flue gas from within the Belridge oilfields. Total GHG reductions over 19 years from injection of 40,000,000 MT CO₂e from the initial source only result in a net emissions reduction of 33,327,307 MT CO₂e, compared to the baseline emissions from the existing sources associated with Belridge oilfield gas operations. Accordingly, the proposed project has “independent utility,” and the potential future CO₂ sources are not “crucial elements” or “integral parts” of the project, without which it cannot proceed.

Incorporating potential future CO₂ sources into the proposed project description is also inappropriate and infeasible because the potential future CO₂ source projects are speculative. There is both a high level of uncertainty as to whether any of the potential source projects will ever be implemented, and a lack of information to support CEQA analysis of potential projects that have not yet been planned, designed and developed to the point of concrete proposals. See *Berkeley Keep Jets Over the Bay*, 91 Cal. App. 4th at 1361 (no piecemealing when potential future projects “existed only as concepts”). At this time, the categories of potential source projects described in DEIR Vol. 1, p. 3-33 and Vol. 2, Appendix K-4 exist only as concepts, not specific proposed projects. Were the DEIR revised as commenters request, to incorporate the speculative and indefinite future potential for additional CO₂ source projects into the Project Description as components of the proposed project, the DEIR would fail to satisfy the CEQA requirement for an accurate, stable and finite project description.

DEIR Vol. 1, pp. 3-34 - 35, also identifies six specific potential CO₂ source projects that may in the future utilize the CTV 1 project for storage and are currently in the process of exploratory planning and development. As with the general categories of projects, implementation of any of the six projects is speculative and uncertain. None of them has completed CEQA review or obtained conditional use permits, there is no commitment by the County to approve these projects, and in any case, there is no evidence to suggest that they would utilize the CarbonFrontier project for CO₂ storage.

In addition, the purposes and proponents of potential future CO₂ source projects are different those of the proposed project; see DEIR pp. 3-32 - 35. All but one of the potential future CO₂ source projects have independent production purposes which generate CO₂ as a byproduct, such as hydrogen production, oilfield production, alternative fuel production, biomass conversion, energy generation, cement and steel production. Although these projects may (and for “blue hydrogen” production, must) utilize underground CO₂ storage, the projects do not themselves have a carbon capture and storage (CCS) purpose. (The exception is the Avnos Direct Air Capture Project, which does have a CCS purpose.) Moreover, all of the potential future CO₂ source projects are under development by companies other than the proposed project applicant.

For clarification, the following text on DEIR p. 4.8-26 is revised to read:

Additional sources will need to be identified by the applicant and permitted by the ~~applicant and project proponents~~ for those sources and must be legally permitted and disclosed as required by Mitigation Measure (MM) 4.9-11 (Hazards and Hazardous Materials).

For the above reasons, the proposed project satisfies the “independent utility” and related criteria of the piecemealing cases, i.e., the potential future CO₂ sources are not “crucial elements” or “integral parts” of the proposed project, completion of which would be “legally compelled” or “practically presumed” by completion of the proposed project. If future projects eventually advance to non-speculative proposals, undergo CEQA review, are permitted and constructed, they could then contribute to CO₂ storage in the proposed project reservoirs. However, the uncertain and contingent possibility of CO₂ contributions from future projects does not deprive the proposed project of independent utility.

Excluding such projects from the DEIR Project Description for the reasons discussed above does not mean they evade CEQA review. Mitigation Measure 4.11-7 provides for CEQA review and mitigation of impacts for any future project permitted to contribute CO₂ to the proposed project reservoirs:

Each CO₂ source project located in unincorporated Kern County requires a zoning evaluation, its own EIR and its own Conditional Use Permit (CUP) from the County.

Each CO₂ source project located in an incorporated city in Kern County requires preparation of a CEQA document with the County as a responsible agency. Mitigation Measure 4.11-7 prohibits reliance on a CEQA exemption by source projects as a condition of injecting into the proposed project’s reservoirs.

CO₂ pipelines from offsite sources that traverse unincorporated Kern County land require an EIR and CUP from the County.

CO₂ pipelines permitted by the California Public Utilities Commission (CPUC) require either an EIR and CUP from the County or the County’s participation in the CPUC process, which must provide reasonable and feasible mitigation to protect Kern County communities.

All CO₂ source projects must be located in Kern County and are limited to specified industry categories: hydrogen (green and blue), biomass carbon removal and storage, cement production, green steel production, oilfield field gas streams, power plants, direct air capture and alternative fuel production. See also Mitigation Measure 4.8-6, which requires all sources of CO₂ for injection into the proposed project reservoirs must certify to the County, prior to injection, that any additional CO₂ generated from the source facility has been mitigated to “no net increase”; and Mitigation Measure 4.9-11 which requires all sources that provide CO₂ for injection to the proposed project to be disclosed to the Kern County Planning and Natural Resources Department and EPA in writing and be legally permitted to operate by the county or city where they are located.

Relatedly, commenters claim that the applicant's project objectives must be expanded to include potential future CO₂ sources as part of the project. For the reasons discussed above, potential future CO₂ sources are not part of the proposed project. In any case, the applicant's project objectives are accurately characterized in the DEIR and include "Generate environmental, social, and economic benefits for Kern County and the State of California by implementing low carbon technologies, developing CCS infrastructure, and providing living-wage jobs in the region." DEIR Vol. 1, p. 1-5.

If, as commenters claim, a CCS project must incorporate all CO₂ sources it will ever utilize into its Project Description, in order to avoid piecemealing, each CCS project would be required to wait to commence CEQA review until it could assemble enough CO₂ source projects, sufficiently developed for review in the same EIR, to fill its maximum storage capacity. This would severely limit the ability of lead agencies to approve CCS projects utilizing large reservoirs that can efficiently store CO₂ from many sources, including future unknown sources, contributing for many years. Instead, to achieve the same statewide storage capacity, a larger number of short-term, small-reservoir projects would be required, each with maximum capacity limited to match CO₂ from existing sources plus a few future sources that may be ready for immediate CEQA review. Such a piecemeal approach to developing CCS projects in California would be logistically inefficient at best, and economically unworkable at worst, and would hinder the state's CCS goals as incorporated in the California Air Resources Board (CARB) 2022 Scoping Plan for Achieving Carbon Neutrality.

2: Extending the Life of Fossil Fuel Facilities

Commenters claim that availability of CO₂ storage at the proposed project will serve to extend the duration of Belridge oilfield activities. Commenters assert that, by "keeping... fossil fuels alive", the proposed project will conflict with state carbon neutrality goals and result in new energy impacts that would not have occurred but for the proposed project, and the County should instead phase out fossil fuel development. Please see Global Response 6, Alternatives, regarding the Drilling Ban Alternative.

Under CEQA, the environmental impacts of a proposed project are determined by comparing pre-existing baseline conditions to post-project conditions. Existing conditions constitute the environmental baseline in the absence of the proposed project. CEQA Guidelines § 15125. In the absence of physical changes or expanded operations, ongoing operation of existing facilities is a continuation of existing baseline conditions, not a part of the proposed project or a probable future project. As such, operation and maintenance of existing facilities with negligible or no expansion of the existing use is categorically exempt from CEQA. CEQA Guidelines § 15301. See *World Business Academy v. California State Lands Commission* (2018) 24 Cal.App.5th 476, in which the court held that extending the duration of the Diablo Canyon nuclear power plant's lease qualified for the categorical exemption for existing facilities and rejected the claim that "impacts that could arise from an additional seven years of plant operations" were not properly part of the baseline. Ongoing operation with no physical or functional changes to the existing facility, the court found, constituted continuation of baseline conditions. "[A]ll of the purported environmental effects to which appellant points are incident to and part of the plant's current baseline operations." *World Business Academy* at 501; see also *Citizens for East Shore Parks v. State Lands Commission* (2011)

202 Cal.App.4th 549 (EIR for wharf lease extension properly treated continuance of existing wharf operations as baseline conditions; rejecting plaintiff's argument that ongoing operations must be excluded from the baseline because they would cease without the lease extension).

In addition, the proposed project cannot extend the lifetime of the oilfield by enabling enhanced oil recovery (EOR), because injection of CO₂ captured by CCS facilities for purposes of EOR is prohibited by state law. Public Resources Code § 3132(b) (SB 905). California has also adopted a number of policies, programs and targets to address climate change and greenhouse gases by, among other things, reducing reliance on fossil fuels, as discussed in DEIR Vol. 1, pp. 4.8-7 – 14. However, no current or pending proposed regulatory requirements would mandate that the Belridge oilfields be shut down in the absence of the proposed project. Although oil extraction in California has declined since 1986 from 402 million barrels per year to 6 million barrels per year in 2020, there is still demand for finished fossil fuels (gasoline diesel, and jet fuel), primarily for transportation. The California Air Resources Board's (CARB) 2022 Scoping Plan recognizes that California is a net exporter of finished fossil fuels and further provides that a phasedown of fossil fuel extraction should be managed with consideration of exports. If in-state extraction were to be phased out fully, the future petroleum demand by in-state refineries would be met through increased crude imports. This could lead to "leakage" as defined by AB 32: "a reduction in emissions in GHGs within the state that is offset by an increase in emissions of GHGs outside the state." See DEIR, Vol. 2, Appendix K-4.

3: Environmental Justice and Public Participation

GR – 3a, Public Participation and Translation

Commenters noted that a significant percentage of Kern County households are Spanish speaking with limited English proficiency and requested that the County provide Spanish translations of CEQA notices, documents or parts of documents, and public meeting presentations. Commenters also request translation into Punjabi and any other language translation requested by County residents.

Neither CEQA nor the CEQA Guidelines contain a requirement for California lead agencies to translate notices or all or part of environmental review documents into non-English languages. However, despite not being required to do so under CEQA, the County will make Spanish translation services available at the public hearings at both the Planning Commission and Board of Supervisors which are required for consideration of the Project and will provide opportunities for public comment. Spanish translation services will be available for the presentations at the Planning Commission and Board of Supervisors hearings, as well as for Spanish-speakers who request to provide public comment. The County provides these services beyond what is required by law in order to facilitate participation by the County's Spanish-speaking residents in the public workshops and hearings on the EIR.

There is no express requirement in CEQA for interpreters or translation of CEQA notices and documents, and a mandatory requirement cannot be implied, because CEQA cannot be interpreted "in a manner which imposes procedural or substantive requirements beyond those explicitly stated"

therein. CEQA § 21083.1. The California Legislature has recognized that statutory changes would be necessary to add a translation mandate to CEQA, as reflected in several unsuccessful bills that would have required translation of CEQA documents. The Governor vetoed Assembly Bill 543 (2013-2014 Reg. Sess.), which would have required the Office of Planning and Research (OPR) to develop guidelines for determining when a lead agency must translate CEQA notices into non-English languages, and Assembly Bill 2447 (2017-2018 Reg. Sess.), which would have required translation of certain CEQA notices into languages prevalent in the area in which a project is located. Senate Bill 950 (2019-2020 Reg. Sess.), which would have required OPR to develop requirements for translation of certain CEQA “notices and other documents” into non-English languages spoken by a “substantial number of people” served by the lead agency, failed passage in the Senate Environmental Quality Committee in May 2020.

A senate committee report discussed the problems with adding a translation requirement as proposed in SB 950. Senate Committee on Environmental Quality, Committee Report re: “California Environmental Quality Act: housing and land use” (May 27, 2020) (included in Oil and Gas SREIR AR 264089-264112) The committee report raised multiple concerns including the risk of inaccurately translating terms of art and technical scientific terms in factual statements and analysis; the cost to public agencies of up to \$300 per page translated; logistic issues including the need to hire or contract with translators proficient both in the relevant languages and in CEQA and the environmental factors analyzed under CEQA; and the risk of creating new civil liabilities against lead agencies for inaccurately translated documents. These concerns are applicable here, where a \$300 per page cost would be exorbitant for the 1,063-page DEIR Volume 1, with or without the 4,726 pages of appendices in DEIR Volume 2, and where the DEIR contains highly technical discussions of carbon capture and storage technology and environmental impacts, raising the risk of (and potential liability for) mistranslation.

In addition, in two rulings on the EIR for the Kern County Oil and Gas Ordinance, the Court of Appeal confirmed that the County was not required to translate public notices or all or part of an EIR into Spanish, or to provide Spanish-language interpreters at public meetings related to an EIR. *King & Gardiner Farms, LLC v. County of Kern* (2020) Case No. F077656, Slip Opinion at 122-126 (Cal. Ct. App. 5th Dist. Feb. 25, 2020), and *V Lions Farming LLC v. County of Kern* (2024) Case Nos. F084763, F085102, F085220, Slip Opinion at 97-105 (Cal. Ct. App. 5th Dist. March 7, 2024). In the latter ruling, the Court of Appeal reiterated that translation was not legally mandatory and also determined that the evidence discussed above was sufficient to determine that the County’s decision to provide translation services at meetings and workshops, but not to translate notices or portions of the EIR, was not an abuse of discretion.

Recently, the Little Hoover Commission on CEQA reform discussed the problems with proposals to add a translation requirement to CEQA. Little Hoover Commission Report #279, “CEQA: Targeted Reforms for California’s Core Environmental Law” (May 2024) (available at <https://lhc.ca.gov/wp-content/uploads/Report279.pdf>). As the Commission Report explained (p. 19):

Currently there is no requirement for the translation of CEQA documents. . . . [W]e recognize the substantial financial cost of translating CEQA documents, some of which stretch for hundreds or

even thousands of pages, often with dense scientific language and concepts. Indeed, translation of entire documents may in some cases serve little purpose in achieving broader public awareness, since the complexity of CEQA cases can render the documents indecipherable to even the most educated lay reader, regardless of language. Additionally, opponents of past proposals for translation requirements have expressed a concern that claims of inaccurate translation would raise a new avenue of legal action against a project. Last, any requirement for translation would have to address detailed questions such as how many languages a document should be translated into, and what standard of translation is acceptable.

While the Little Hoover Commission recommended further study of the issue, to date there remains no requirement for translation into Spanish or other non-English languages. The concerns identified by the senate committee report and the Little Hoover Commission also support the County's reasonable determination not to voluntarily adopt a policy of translating CEQA notices and documents or parts of documents.

GR – 3b, Environmental Justice

Commenters assert that project impacts contribute to cumulative impacts disproportionately affecting already burdened environmental justice communities. Commenters assert that Kern County as a whole and communities near the project area have an elevated percentage of Hispanic, linguistically isolated and pollution burdened populations; and that the project is located within a census tract with high pollution burdens as reported by the CalEnviroScreen 4.0 screening tool, developed by the Office of Environmental Health Hazard Assessment (OEHHA). In addition, commenters assert that mitigation and alternatives analyses should specifically address ways to reduce or eliminate impacts to burdened communities.

Environmental Justice is a land use policy issue not an issue for analysis under CEQA. A specific analysis of environmental justice is not required by CEQA. See *Friends of Davis v. City of Davis* (2000) 83 Cal.App.4th at 1004, 1019 (under CEQA, the question is not whether a project will affect particular persons, but whether it will affect the environment of persons in general), CEQA Guidelines § 15064(e) (economic and social changes resulting from a project shall not be treated as significant effects on the environment). Economic or social factors may contribute to the environmental impacts of a project or may contribute to determinations of the significance of impacts; however, they do not constitute impacts in themselves. CEQA Guidelines §§ 15064(e), 15131(b), 15382. Although a specific environmental justice analysis is not required under CEQA, many issues commonly associated with environmental justice generally are addressed in the CEQA analysis of impacts to sensitive and vulnerable populations in all communities, of all races, cultures, and income levels. Accordingly, the DEIR evaluated impacts on the physical environment, including project and cumulative impacts affecting human beings and human health for all communities – for example, evaluating air quality impacts to sensitive receptors such as residences and schools. Where relevant, consideration of mitigation measures and alternatives took into account potential impacts to sensitive and vulnerable populations, e.g. MM 4.3-6 which provides: “No Class VI or Class II injection well for use in this CCS project shall be located within 4000 feet of any sensitive receptor.”

The project site, within the Belridge oilfields, is located in census tract 33.04, with a total population of 2,683 spread over 618 square miles. The population in census tract 33.04 is 57% white and 36% Hispanic (compared to 30% white and 57% Hispanic for Kern County as a whole), with a mean household income of \$70,357 (compared to \$63,883 for Kern County as a whole). See <https://censusreporter.org/profiles/14000US06029003304-census-tract-3304-kern-ca/>. The project site is not within one of the disadvantaged communities identified in the Kern County General Plan Housing Element 2024-2031 (Fig. 99), submitted to the California Department of Housing and Community Development on June 28, 2024. Accordingly, the project is unlikely to disproportionately focus potential environmental impacts on disadvantaged, Hispanic or low-income populations.

As OEHHA and CalEPA have previously indicated, the information provided by the CalEnviroScreen tool is not a substitute for CEQA analysis. See OEHHA and CalEPA, California Communities Environmental Health Screening Tool, Version 2.0 (CalEnviroScreen 2.0) – Guidance and Screening Tool (October 2014), pp. iii-iv:

[T]he CalEnviroScreen scoring results are not directly applicable to the cumulative impacts analysis required under the California Environmental Quality Act (CEQA). The statutory definition of "cumulative impacts" contained in CEQA is substantially different than the working definition of "cumulative impacts" used to guide the development of CalEnviroScreen. Therefore, the information provided by this tool cannot substitute for analyzing a specific project's cumulative impacts as required in a CEQA environmental review.

Moreover, CalEnviroScreen assesses environmental factors and effects on a regional or community-wide basis and cannot be used in lieu of performing an analysis of the potentially significant impacts of any specific project. Accordingly, a lead agency must determine independently whether a proposed project's impacts may be significant under CEQA based on the evidence before it, using its own discretion and judgment. The tool's results are not a substitute for this required analysis. Also, this tool considers some social, health and economic factors that may not be relevant when doing an analysis under CEQA.

Thus, the overall CalEnviroScreen scores, combining pollution burden scores with population characteristics and socioeconomic factors, do not correspond to impacts on the physical environment under CEQA. In addition, the pollution burden score cited by commenters is a composite score that includes disparate factors such as children's exposure to lead risk from housing, pesticide use, traffic volumes, and presence of cleanup sites (including those already remediated and posing no ongoing risk), as well as exposure to pollutants such as ozone and PM_{2.5}. Each of these datasets includes existing conditions which, under CEQA, are considered part of the environmental baseline or setting, not potential environmental impacts. As a result, census tracts may receive high pollution burden scores based on factors that would not constitute project or cumulative impacts under CEQA. Please see also Global Responses GR-5, Mitigation Effectiveness, and GR-7, Cumulative Impacts.

4: Geological and Seismicity Risk

GR-4a, Geology and Soils Impacts Analysis in General

Commenter assert that, due to site geological conditions and the presence of legacy wellbores from past oil and gas operations, there is a risk of geological storage failure and CO₂ release, including but not limited to seismicity impacts, which is inadequately addressed in the DEIR. As part of comments on this proposed project, commenters have attached and rely on a technical report prepared by Dominic DiGiulio, consultant for the Environmental Integrity Project (DiGiulio Report), for a different project, the CarbonTerravault 1 (CTV1) carbon capture and sequestration project. This information does not indicate any new or substantially more severe impacts than those described in the DEIR.

In evaluating Geology and Soils impacts including Impacts 4.7-1 (related to earthquake fault rupture) and 4.7-2 (related to strong seismic shaking), the DEIR considered the potential for CO₂ leakage from underground storage and determined that these impacts would be less than significant with mitigation, including measure requiring compliance with federal and state requirements to suspend CO₂ injection if seismic damage occurs. DEIR, Vol. 1, pp. 4.7-16 – 18. The DEIR also determined that cumulative Geology and Soils impacts were less than significant with mitigation (except for potential induced seismicity associated with CO₂ injection from multiple regional CCS projects, which was significant and unavoidable). DEIR, Vol. 1, pp. 4.7-25 – 29 (Impact 4.7-10). Comments relating to seismicity impacts are addressed in this Global Response 4.

Commenters contend that the County should delay consideration of the DEIR until the U.S. EPA issues a draft Class VI Underground Injection Control (UIC) permit for the proposed project, in case additional information relating to Geology and Soils impacts is developed during EPA's ongoing technical review. While the DEIR incorporates technical information submitted by the applicant developed from many sources, including information included its application for a Class VI permit, the County and its technical consultants have independently reviewed information submitted by the applicant. EPA's consideration of the Class VI permit application for purposes of compliance with the Safe Drinking Water Act (SDWA) is a separate, independent proceeding from the County's broader review of the proposed project for purposes of compliance with CEQA before issuing a Conditional Use Permit (CUP). If, as a result of EPA's permitting process, the applicant later modifies its plans in significant ways from the project covered in the County's CUP, such as changing the number or location of injection wells, the changes would need to be reviewed by the County. New or substantially more severe impacts, if any, as a result of project changes, changed circumstances or new information would require supplemental CEQA review prior to County approval. CEQA Guidelines § 15162.

GR-7b, CO₂ Confinement in Geologic Storage

Commenters claim that the DEIR provides little evidence that injected CO₂ will remain in the reservoir. Although responses to specific comment is being presented in this Chapter 7 – Response to comments, the project is the permitting of land use for the CCS project and the EIR is not required to provide evidence for determinations by CARB or the EPA. Neither of those permits are

subject to CEQA and specific evidence for the issuance of their permits will or will not be provided by the applicant at the time of the issuance of their permits before construction begins.

Evidence that injected CO₂ will remain in the Approved Storage Area is discussed in the DEIR, Vol. 1, pp. 3-38 – 39, 4.7-4 – 5, 4.10 – 53 – 57, supported by extensive geological evaluation, seismic history and analysis, geomechanical modeling and risk assessment contained in DEIR Vol. 2, Appendix E-1, Desktop Geohazards and Geotechnical Assessment, Appendix E-2, U.S. Environmental Protection Agency Class VI Underground Injection Control (UIC) Permit Application, and Appendix F-2, Quantitative Risk Assessment (including CO₂ Dispersion Modeling). The storage reservoir is approximately 8,500 feet below ground surface, in a formation that has been effective to confine oil and gas deposits for millions of years. In information submitted in support of the EPA Class VI UIC permit application, the storage reservoir suitability was demonstrated using well logs, a static three-dimensional geologic model and dynamic data, and production, injection, and pressure data over 90 years of oil and gas operations. The proposed injection zone is the “64 Zone” Sandstones of the Lower Temblor Formation. A 90-year record of production and injection data along with reservoir pressure measurements throughout this time provide evidence that the 64 Zone within North Belridge oilfield is an isolated compartment, bounded by sealing faults. The nearest active fault is the San Andreas fault, approximately 10 miles west of the project site. The project site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone, no active faults have been identified in the project area, and stability analysis demonstrates that identified inactive faults are stable and not susceptible to movement. See Appendix E-1, Desktop Geohazards and Geotechnical Assessment and Appendix E-2, U.S. Environmental Protection Agency Class VI Underground Injection Control (UIC) Permit Application. See DEIR, Vol. 1, p. 4.7-5 and Vol. 2, Appendix E-1. Additional supporting detail on site geologic conditions is provided in the CarbonFrontier Class VI Permit Application Narrative (CarbonFrontier Narrative), submitted by the applicant as part of the EPA permit application and available at <https://www.epa.gov/uic/r9-uic-permits>. See CarbonFrontier Narrative, Section 2, Site Characterization. In the event of that a CO₂ leak does occur resulting from a seismic event or otherwise, the proposed project includes ground-based sensors to monitor and detect elevated surface CO₂ concentrations and monitoring equipment to monitor the flow of CO₂ and enable the project to shut down operations. DEIR, Vol. 1, pp. 3-55, 4.9-67 – 68.

GR-4c, Health and Safety Risk from CO₂ Releases

Commenters claim that the DEIR does not adequately consider health and safety hazards from potential CO₂ releases from pipelines or geological storage. DEIR Vol. 1, pp. 4.9-8 -15, reviews past CO₂ release incidents and discusses localized impacts on human health and safety from large releases. See DEIR, pp. 4.9-8 – 15, 4.9-51 – 54, 4.9-62 - 66 and DEIR Vol. 2, Appendix F-2. Based on the project-specific dispersion modeling of a range of hazard and failure scenarios, the worst-case event would be catastrophic failure of the 12 inch main pipeline, which could release a CO₂ to a downwind distance of up to 1,200 feet (0.23 mile) at a concentration of 7%. DEIR Vol. 2, Appendix F-2, Tables 5.6 and 7.1. The sensitive receptor closest to the proposed project site is a small housing tract on Lost Hills Road, north of Lerdo Highway, roughly 3 miles east of the proposed project site. The community of Lost Hills is located 7 miles northeast of the proposed

project site. DEIR, p. 4.5-4. See also Response to Comment 04-002 regarding risks to solar panel area workers.

Commenters claim that the DEIR understates health risk as indicated by past incidents including the CO₂ pipeline rupture that occurred in Satartia, Mississippi in February 2020. The DEIR provides detailed discussion of past incidents involving CO₂ releases, as well as an analysis of CO₂ releases associated with a variety of failure scenarios. DEIR, Vol. 1, pp. 4.9-9 – 16; Vol. 2, Appendix F-2, pp. 25-32. Regarding the Satartia incident, DEIR Vol. 1, pp. 4.9-8 – 9, discusses key points from the findings of the Failure Investigation Report – Denbury Gulf Coast Pipelines LLC (Denbury Failure Report) prepared by PHMSA’s Office of Pipeline Safety. The full report is included in the DEIR as Appendix B-3, Failure Investigation Report – Denbury Gulf Coast Pipelines, LLC. The Denbury Failure Report states that there were no injuries or fatalities; see also DEIR Vol. 1, p. 4.9-15 (noting that the Satartia pipeline rupture resulted in a total of 200 residents being evacuated and 45 residents taken to the hospital, with no residents admitted due to hazardous material exposure). As explained in the Denbury Failure Report (pp. 1-3), the rupture was caused by excessive strain on the pipeline due to a landslide following heavy rains:

The weather conditions and unique topography of the accident site prevented the CO₂ vapor from rapidly dispersing and allowing a plume to form that migrated toward Satartia. . . . When CO₂ in a super-critical phase (which is common for CO₂ pipelines) releases into open air, it naturally vaporizes into a heavier than air gas and dissipates. During the February 22 event, atmospheric conditions and unique topographical features of the accident site significantly delayed dissipation of the heavier-than-air vapor cloud. . . . Local emergency responders were not informed by Denbury of the rupture and the nature of the unique safety risks of the CO₂ pipeline. . . .

The Denbury Failure Report found several risk factors attributed to the operator: failure to adequately address the risk of geohazards, underestimating the affected area in its dispersion model, and not notifying local responders of the incident. For the CarbonFrontier Project, these issues have been addressed. “Due to the existing topography and the proposed grading, landslides are not considered a potential hazard for the project site” and geotechnical studies conducted during final siting of project infrastructure will further evaluate site-specific geologic conditions, to be considered in infrastructure siting. DEIR, Vol. 1, p. 4.7-19. To mitigate potentially significant impacts associated with landslides (Impacts 4.7-4 and 4.7-6), Mitigation Measure 4.7-2 prohibits wells or accessory equipment and facilities on slopes greater than 30%, and Mitigation Measure 4.7-3 requires the owner/operator to implement all requirements of a site-specific geotechnical report. In addition, Mitigation Measure 4.9-18 ensures that local responders as well as appropriate agencies are notified to advise them of a potential failure.

GR-7d, Seismicity Risk

Commenters claim that the DEIR does not adequately address the risk of seismicity, particularly in relation to the presence of many legacy well bores from past oil and gas operations. Commenters point to the DEIR’s acknowledgment that “the level of seismic activity in the region potentially could result in CO₂ leakage from underground storage.” DEIR, Vol. 1, p. 4.7-16.

The DEIR environmental setting and impact analysis for Geology and Soil Impact areas based on a site-specific expert evaluation of regional and project area seismicity, presented in DEIR, Vol. 2, Appendix E-1, Desktop Geohazards and Geotechnical Assessment. The seismic risk factors referred to by the DiGiulio Report generally apply to structures and other surface improvements and/or to populated areas, which are not applicable to the proposed project. For legacy well bores, in particular, lateral forces are far less than at ground surface due to the stabilizing nature of surrounding soils. Therefore, for legacy well bores, seismic risk is associated with the possibility for fault movement. The Geohazard and Geotechnical Assessment prepared for the proposed project by Stantec Consulting Services Inc. concludes that “it is Stantec’s opinion that the Project Site has a low likelihood of surface fault rupture due to the distance from active faults.”

The DEIR, Vol. 1, pp. 4.7-2, 4-5, describes the geological setting of regional and local faults and seismic history. The setting description notes that the project site is located within an area where earthquakes have occurred in historic times. The San Andreas Fault Zone is located approximately 10 miles to the west, and the Poso Creek Fault 25 miles to the east, of the proposed project site. In 1857, a magnitude (M) 7.9 earthquake was recorded approximately 30 miles northwest of the project site. In 1937, a M 6.0 earthquake was recorded approximately 35 miles northwest of the project site. Smaller magnitude events are well documented within the project vicinity and surrounding region. DEIR Vol. 2, Appendix E-2, p. 23. However, though the Belridge oilfields are in a seismically active region, only minor or inactive faults have been mapped in the Belridge oilfields. DEIR, Vol. 1, p. 4.7-17.

The DiGiulio Report asserts that the project’s seismic evaluation should have followed guidelines proposed by Templeton et al. (2021, 2023). These recommendations apply to projects in populated areas vulnerable to social and economic impacts from damage to public infrastructure and business operations, with a baseline hazard of natural tectonic seismicity and vulnerability to induced seismicity. The site-specific evaluations prepared for the proposed project (RDEIR, Vol. 2, Appendixes E-1, E-2 and F-2) consider appropriate factors for the project setting and operating conditions. See also CarbonFrontier Narrative, Section 2. The evidence presented in the DEIR supports the conclusion that Impact 4.7-1 is less than significant with feasible mitigation by comprehensive seismic monitoring and effective response to detected incidents, and the risk of wellbore damage does not raise seismicity impacts to a significant and unavoidable level. See below for responses to comments on wellbores, seismic monitoring and mitigation.

GR-7e, Geological Storage Effectiveness Metric

Citing the DiGiulio Report, commenters assert that the EPA Class VI UIC regulations do not provide a criterion or metric for determining the effectiveness of geological CO₂ storage. The DiGiulio Report recommends that storage “permanence” be determined by a two-part metric: a 95% probability that 99% of CO₂ will be retained in the reservoir for 100 years, and a 95% probability that 99% of CO₂ will be retained subsurface for 1,000 years. The DiGiulio report also notes that different metrics, of varying stringency, have been proposed in scientific publications.

For CEQA purposes, it is not necessary to demonstrate that the proposed project will achieve the applicant’s effectiveness metric, or any other metric drawn from the scientific literature. As

discussed above, the DEIR identified the risk of CO₂ loss contributing to atmospheric GHG levels due to unforeseen circumstances or equipment failure and determined that the resulting project and cumulative impacts remain significant and unavoidable. DEIR, Vol. 1, pp. 4.8-23 – 29 and 4.8-32 – 34 (Impacts 4.8-1 and 4.8-3).

Nevertheless, the proposed project does have an effectiveness metric, and DEIR Vol. 2, Appendix F provides substantial evidence indicating that it will be met. The applicant has selected the effectiveness metric from the California Air Resources Board (CARB) Low Carbon Fuel Standard (LCFS) Protocol, Section C.2.2(f): a 90% probability that 99% of injected CO₂ will remain stored within the 26R and A1A2 reservoirs for 100 years after the end of CO₂ injection. See DEIR, Vol. 2, Appendix F, Hazards and Hazardous Materials Documentation, Low Carbon Fuel Standard (LCFS) Report #1 - Site Based Risk Assessment. As explained in the DEIR Vol. 1, pp. 4.6-6, 4.6-17, —, 4.8-9 – 10 and 4.9-37, a Carbon Capture and Sequestration Protocol was added to the LCFS in 2018 for the purpose of enabling CCS projects to become certified to generate LCFS credits. The LCFS CCCS Protocol establishes methodology for quantifying geological CO₂ sequestration and permanence requirements related to site characteristics, plume extent evaluation, testing and monitoring, well operation, post-injection site care, and more. Although more stringent metrics have been proposed in the scientific literature, CARB has determined that its protocol is sufficient to qualify CCS projects for “Permanence Certification.” The applicant has applied for Permanence Certification under the LCFS which, following CARB’s protocol, requires applicant to demonstrate with modeling analysis that the permanence criteria of Section C.2.2(f) will be met. Long-term monitoring of the CO₂ storage complex is also required by the LCFS CCS Protocol, Section C.4.1.9, to ensure that the criteria are met. In addition, EPA’s Class VI UIC regulations, while focused on groundwater protection, directly address the suitability of the site to store CO₂ within the injection zone (40 CFR 146.83) and require monitoring to ensure that CO₂ is permanently retained (40 CFR 146.90). Mitigation Measure 4.10-4 requires the project to comply with all EPA permit requirements.

GR-4f, Risk of CO₂ Leakage from Legacy Well Bores.

As the DEIR discloses, there are 71 plugged and abandoned oil and gas wells penetrating the CO₂ storage area, up to 40 of which must be re-abandoned prior to injection. DEIR, Vol. 1, p. 3-41. Citing these numbers and the DiGiulio Report, comments claim that the DEIR fails to provide an adequate evaluation of wellbore integrity or to sufficiently address the risk of CO₂ leaks through legacy wells. These comments are incorrect. The proposed project includes the evaluation of existing unplugged and previously plugged wellbores and requires proper plugging and abandonment, and where necessary reabandonment, to ensure that the wellbores do not act as a conduit to allow CO₂ leakage out of the sequestration zone. DEIR pp. 3-55 - 56. Supporting details are provided in the Area of Review and Corrective Action Plan, Attachment B to the CarbonFrontier Narrative. These corrective actions are required to be performed prior to injection, then reevaluated throughout the life of the project, under EPA’s Class VI permit regulations, 40 CFR § 146.86(c), and the LCFS CCS Protocol, Section C.2.4.3.

Oil and gas wellbore integrity is regulated by the CalGEM under the California Public Resources Code and implementing regulations, and Class VI injection wellbore design is regulated by EPA under the Safe Drinking Water Act and its UIC program. These agencies have developed standards to prevent fluid from migrating between underground rock layers in the setting of California's geology and seismic regime. The proposed project must comply with federal and state regulations which ensure that the well bores are designed and constructed so as to retain integrity given the project's geologic setting.

In California, plugging and abandonment of post-production oil and gas wells is regulated by CalGEM, which imposes detailed requirements (14 Cal. Code Regs. § 1723 et seq.) and reviews and approves abandonments by issuing final abandonment letters. Pursuant to these requirements, wellbore integrity at the Belridge oilfields has been monitored for decades of oilfield operations. CalGEM makes information for individual wells publicly available on its website at <https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx> and https://www.conservation.ca.gov/calgem/for_operators/Pages/WellSTAR.aspx. The applicant identified wells needing reabandonment through searches of CalGEM's WellSTAR database and Aera Energy's drilling records and internal database DEIR, Vol. 1, p. 3-41.

For the proposed project, wells were identified for plugging and abandonment which will be carried out consistent with CalGEM requirements. Of the 71 abandoned wells within the Area of Review that penetrate the confining zone, 28 will need to be re-abandoned because well records show these wells do not have cement plugs placed across the geologic sequestration zone and primary confining layer either inside of casing, outside of casing, or both. In addition, there are 41 operational wells penetrating the confining zone, 10 of which will be repurposed for CO₂ injection or monitoring wells, while the remaining 31 will need to be abandoned. Three wells that will be repurposed also need corrective action to isolate prior wellbores (sidetracks) from the sequestration zone prior to repurposing the wells. See CarbonFrontier Narrative, pp. 28-29. In compliance with EPA requirements, the proposed project will implement the General Active Well Abandonment Procedure (Area of Review and Corrective Action Plan, Attachment B to CarbonFrontier Narrative pp. 29-32) provides well-plugging plans for each category, designed to ensure that the requirement that wells "will not be a potential conduit for fluid migration outside the approved injection zone" (14 Cal. Code Regs. § 1724.8) is satisfied.

The DiGiulio Report asserts that evaluation of wellbore risk is uncertain and lacks performance standards for ensuring wellbore integrity. The multi-step wellbore evaluation process is established and enforced by CalGEM. These requirements "apply, at minimum and subject to augmentation by [CalGEM] on a project-specific basis, to ensure that wells within the area of review will not be a potential conduit for fluid migration outside the approved injection zone" – which constitutes a performance standard for CalGEM's determinations at each step of the process. See 14 Cal. Code Regs. § 1724.8(a): CalGEM's "evaluation for the potential for a well to allow fluid migration will include evaluation of the cementing records. Where cementing records are inadequate or unreliable, [CalGEM] may require a cement evaluation log. The operator should identify, and [CalGEM] confirm, wells which may require integrity testing, well logging, or monitoring in order to provide the requisite assurances that such wells will not act as conduits for fluid migration. [CalGEM] may require wells be examined, remediated, plugged and abandoned, or monitored... if

[CalGEM] is concerned that the well has the potential to allow fluid to migrate outside of the approved injection zone.” The DiGiulio Report’s claim that mechanical integrity testing is necessary for every well is not correct; see 14 Cal. Code Regs. §§ 1724.8(a)(1), 1772 and 1774.

Regarding monitoring to detect potential leakage through legacy oil and gas wells, please see below.

GR-4g, Mitigation for Geologic and Seismic Impacts

Commenters contend that the mitigation measures are inadequate to ensure that injected CO₂ will stay in the reservoir. This response addresses the risk of CO₂ releases from geological storage, including but not limited to releases due to seismicity. However, it should be noted that RDEIR’s determination mitigation measures are effective to reduce Geological and Soils Impacts 4.7-1, 4.7-2 and 4.7-10 (other than cumulative induced seismicity) to less than significant are, in fact, specific to these geological impacts, evaluated in DEIR Section 4.7. DEIR Section 4.8, Greenhouse Gas Emissions, considers impacts associated with GHG emissions including potential CO₂ releases from geologic storage. Although implementation of Mitigation Measures 4.8-1 through 4.8-6 would reduce the likelihood of such releases, the impact would be significant and unavoidable. DEIR, Vol. 1, pp. 4.8-23 – 29 and 4.8-32 – 34 (Impacts 4.8-1 and 4.8-3). Though the likelihood of CO₂ release from geological storage is low, it is not zero, and the resulting impact would be significant in the context of background GHG concentrations on a state-wide level. Accordingly, the DEIR finds Geology and Soils Impacts to be less than significant with mitigation, given the low likelihood of CO₂ releases from geological storage due to seismic events; but if a release does occur, Greenhouse Gas Impacts would be significant and unavoidable based on the contribution of GHG to climate consequences. Under CEQA, an EIR must provide mitigation measures that are effective to reduce potentially significant impacts to less than significant levels or, for significant and unavoidable impacts, all feasible mitigation. The DiGiulio Report asserts that mitigation measures requiring compliance with other agencies’ regulations – such as EPA Class VI permit regulations, CARB CCS standards, and CalGEM well integrity requirements – provide inadequate mitigation for purposes of CEQA. However, “requiring compliance with regulations is a common and reasonable mitigation measure” for CEQA purposes. *Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 906. Lead agencies may presume that impacts mitigated by compliance with regulatory agency requirements “normally will be determined to be less than significant.” *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099. Commenters objecting to reliance on regulatory requirements of expert agencies such as EPA, CARB and CalGEM must present substantial evidence that, notwithstanding compliance with the regulations, the impact will be significant. *See, e.g., Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners of the City of Oakland* (2001) 91 Cal. App. 4th 1344 (notwithstanding compliance with federal aviation noise requirements, commenters provided substantial evidence of significant noise impacts from nighttime airplane flights).

In total, there are 21 mitigation measures in the DEIR that directly or indirectly mitigate impacts from the risk of CO₂ releases from geological storage, including but not limited to releases due to seismicity. DEIR Geology and Soils Impacts 4.7-1, 4.7-2 and 4.7-10 involving seismicity are directly mitigated by Mitigation Measure 4.7-1, which provides:

The owner/operator shall prepare a comprehensive seismic activity monitoring plan that includes, but is not limited to, connection to the Statewide seismic monitoring program of California Seismic Network (CISN). The draft plan shall be submitted concurrently to all the following agencies: Environmental Protection Agency, Region 9, California Seismic Network, California Air Resources Board and Kern County Public Works and Kern County Planning and Natural Resources. The final plan shall be approved by the California Air Resources Board and include all requirements of State law including but not limited to: Appropriate subsurface monitoring to ensure geologic sequestration of injected carbon dioxide; Identification of hazards and conditions that may require the suspension of carbon dioxide injections; notification protocols for all applicable agencies and emergency procedures. All requirements for seismic monitoring adopted by the California Air Resources Board – “Carbon Capture, Removal, Utilization and Storage Program” shall be implemented.

Relatedly, Mitigation Measure 4.8-1 provides:

Prior to any injection of CO₂ the owner/operator shall submit a monitoring plan that complies with all requirements of the EPA UIC permit issued for the project to demonstrate the retention of CO₂ in the injection/hydrocarbon reservoir zone. The plan shall be submitted to the Kern County Planning and Natural Resources Department concurrent with submittal to the EPA for review. A copy of the final approved plan from the EPA shall be provided to the Kern County Planning and Natural Resources Department.

For commitment to compliance with EPA requirements, including but not limited to those addressing seismic risk, Mitigation Measure 4.9-9 provides:

Prior to commencement of any construction or grading, the owner/operator is required to provide written evidence of all of the following requirements: 1. Issuance of an EPA UIC Program Construction permit. . . .

and Mitigation Measure 4.9-10 provides:

Prior to commencement of any testing or full operation to inject CO₂, the owner/operator is required to provide written evidence of all of the following requirements: 1. Written correspondence from the Environmental Protection Agency (Region 9) UIC program to the Kern County Planning and Natural Resources Department that the owner/operator has fully complied with all requirements of the EPA issued UIC CCS Program permit and EPA is authorizing commencement of injection, for testing or commencement of injection for full operations. . . .

For commitment to compliance with CalGEM requirements, including but not limited to those addressing releases from oil and gas wellbores, Mitigation Measure 4.9-14 provides:

The owner/operator shall comply with the California Geologic Energy Management Division requirements for assuring safe drilling and drill casing practices, well design, construction and well management requirements, blowout requirements, and all other provisions of 14 California Code of Regulations 1744 and other applicable Geologic Energy Management Division regulations to any wells being abandoned as a result of the CCS project. The Owner/operator shall also reduce the incidence of well control loss by following the practices described in the American Petroleum Institute's Recommended Practice for Well Control Operations.

In addition to EPA requirements to monitor for CO₂ releases from geologic storage, fenceline monitoring for CO₂, among other air pollutants, is required by Mitigation Measure 4.3-8:

Prior to issuance of any construction or grading permits, the Owner/operator shall consult with the San Joaquin Valley Air Pollution Control District and develop a draft Air Monitoring program for fence line monitoring of all air constituents generated by the CCS project including but not limited to: criteria pollutants, CO₂, and H₂S. The plan shall be reviewed and approved by both the San Joaquin Valley Air District and the California Air Resources Board, with a draft copy to the EPA UIC Program and Kern County Planning and Natural Resources and implemented before any construction on the CCS facilities can occur. The final approved plan shall be provided to the EPA UIC Program and Kern County Planning and Natural Resources.

To protect public health and safety in the event of CO₂ release from geologic storage, including but not limited to those caused by seismic events, Mitigation Measure 4.3-6 provides:

No Class VI or Class II injection well for use in this CCS project shall be located within 4000 feet of any sensitive receptor.

and Mitigation Measure 4.9-18 provides:

Prior to commencement of any injection of CO₂, and in addition to the emergency response plan required by the EPA UIC permit, the owner/operator shall prepare an emergency incident response plan that addresses, advance leak detection methods and communication with fire responders, emergency medical response, Kern County Fire and Kern County Sheriff notification and protocols for incident management. The plan shall be reviewed and approved by the Kern County Fire Department in consultation with EPA UIC Program, State of California Fire Marshall, Kern County Sheriff and all other State agencies identified by the California Air Resources Board.

The DEIR contains numerous additional relevant mitigation measures:

Mitigation Measure 4.7-2 prohibits wells or accessory equipment and facilities on slopes greater than 30%; Mitigation Measure 4.7-3 requires the owner/operator to implement all requirements of a site-specific geotechnical report; Mitigation Measure 4.7-4 prohibits

infrastructure construction on expansive soil; Mitigation Measure 4.9-4 requires compliance with federal and state requirements for CO₂ pipeline safety (see Global Response 4, CO₂ Pipelines); Mitigation Measure 4.10-4 prohibits injection into groundwater with current or future beneficial use, including drinking water, and requires compliance with EPA Class VI UIC permit conditions; Mitigation Measure 4.9-12 requires communication of emergencies or releases immediately on discovery to the Kern County Fire Marshall and Public Health, and within 24 hours to the Kern County Planning and Natural Resources Department; Measures 4.11-1 through 4.11-6 prevent conflicting land uses from encroaching on the storage area; and Mitigation Measure 4.15-4 requires an annual payment of \$250,000 for the Kern County Fire Department to purchase equipment and provide training specific to the detection and control of emergency situations caused by CO₂.

Collectively these mitigation measures are sufficient to address impacts associated with CO₂ releases from geological storage. For clarification, DEIR p. 4.7-17 - 18 is revised to read as follows:

Mitigation Measures

MM 4.7 1 The owner/operator shall prepare a comprehensive seismic activity monitoring plan that includes, . . .

In addition, implement MMs 4.3-6, 4.3-8, 4.7-2 through 4.7-4, 4.8-1, 4.9-4, 4.9-9, 4.9-10, 4.9-12, 4.9-14, 4.9-18, 4.10-4, 4.11-1 through 6, and 4.15-4.

DEIR p. 4. 7- 18 is revised to read as follows:

Mitigation Measures

Implement MM 4.7-1, as described above, and MMs 4.3-6, 4.3-8, 4.7-2 through 4.7-4, 4.8-1, 4.9-4, 4.9-9, 4.9-10, 4.9-12, 4.9-14, 4.9-18, 4.10-4, 4.11-1 through 6, and 4.15-4.

DEIR p. 4. 7- 27 is revised to read as follows:

Mitigation Measures

Implement MM 4.7-1 to MM 4.7-6, as described above, and MMs 4.3-6, 4.3-8, 4.8-1, 4.9-4, 4.9-9, 4.9-10, 4.9-12, 4.9-14, 4.9-18, 4.10-4, 4.11-1 through 6, and 4.15-4.

Commenters assert that Mitigation Measure 4.9-18, requiring the owner/operator to prepare an “emergency incident response plan” constitutes improperly deferred mitigation. The comment misunderstands the purpose of this mitigation measure, which requires expressly preparation of this plan *in addition to* the Emergency Response Plan required by EPA’s Class VI UIC permit regulations. The “emergency incident response plan” is intended to ensure that local fire and emergency medical responders are notified and have protocols for emergency incident management. In addition to providing mitigation for potentially significant hazard impacts from emergency incidents as required by CEQA, this plan provides for local responder notification which PHMSA found to be a risk factor contributing to the Satartia incident as discussed above. Commenters further assert that the plan should be reviewed by first responders. As provided in

Mitigation Measure 4.9-18, the plan must be reviewed and approved by the Kern County Fire Department in consultation with EPA UIC Program, State of California Fire Marshall, Kern County Sheriff and all other State agencies identified by the California Air Resources Board, thus ensuring coordination with first responders and other agencies.

Separate from the emergency incident response plan in Mitigation Measure 4.9-18, Mitigation Measure 4.9-10 requires the owner/operator to provide, prior to commencement of any testing or full operation to inject CO₂, “[w]ritten correspondence from the Environmental Protection Agency (Region 9) UIC program to the Kern County Planning and Natural Resources Department that the owner/operator has fully complied with all requirements of the EPA issued UIC CCS Program permit and EPA is authorizing commencement of injection, for testing or commencement of injection for full operations” – including EPA’s emergency planning requirements. The applicant’s proposed Emergency and Remedial Response is provided in attachment I to the CarbonFrontier Narrative. Mitigation Measure 4.9-10, 4.9-18 and the other measures listed above will be included in the Mitigation Monitoring and Reporting Program for the proposed project which, upon adoption by the Board of Supervisors, will commit the County to oversight and enforcement. See also Global Response 5, Mitigation Effectiveness.

Regarding mitigation for seismic impacts, the DiGiulio Report asserts that Mitigation Measure 4.7-1 cannot reduce impacts from seismicity to less than significant because seismic monitoring is not mitigation; monitoring can detect seismic events but does not avoid or reduce them. Mitigation measures under CEQA often provide monitoring requirements, and CEQA requires a Mitigation Monitoring and Reporting Program for adopted mitigation measures. Although Mitigation Measure 4.7-1 refers to a seismic monitoring plan, it and the other mitigation measures listed above also include required actions in response to seismic events, including compliance with the requirements of EPA Class VI permit’s Emergency and Remedial Response Plan, that would avoid, reduce, correct or compensate for impacts associated with seismicity per the definition of mitigation in CEQA Guidelines § 15370.

In addition, the DiGiulio Report claims that seismic monitoring under Mitigation Measure 4.7-1 is inadequately described and unenforceable due to the use of terms such as “appropriate” subsurface monitoring which lack specificity. Mitigation Measure 4.7-1 properly relies on compliance with comprehensive seismic activity monitoring plans and construction standards to mitigate potentially significant risks associated with seismic events and CO₂ release. Performance standards for seismic and related monitoring and for construction are incorporated into the EPA regulations that specify terms and compliance requirements applicable to Class VI permits. Class VI permits are subject to oversight and enforcement by EPA, and compliance with Class VI permit requirements is required by Mitigation Measures 4.7-1, 4.8-1, 4.9-4, 4.9-9, 4.9-10 and 4.10-4. Class VI permit conditions require seismic activity monitoring via a seismic monitoring network that covers the area of review, establishing a baseline and performing continuous seismic monitoring to detect for seismic activity. Seismic monitoring must be performed continuously throughout CO₂ injection as required by 40 C.F.R. § 146.90(g). These EPA requirements provide the specific performance standards which Mitigation Measure 4.7-1 must accomplish to mitigate seismic impacts, e.g., what specific forms of monitoring are “appropriate to ensure geologic sequestration of injected carbon dioxide.”

In addition, MM 4.7-1 requires the project to connect to the California Integrated Network (CISN), in compliance with both Class VI permit conditions and state law (SB 905), as well as with all requirements for seismic monitoring adopted by CARB's Carbon Capture, Removal, Utilization and Storage Program. See DEIR 4.7-26 discussing the CISN statewide seismic monitoring program. Connection to the monitoring data from existing broadband seismometers and strong motion accelerometers in the network would detect even small seismic events that cannot be felt by surrounding communities.

5: Mitigation Effectiveness

GR-5a, Mitigation Measures Generally

Commenters question the adequacy and enforceability of the DEIR mitigation measures. An EIR must propose feasible mitigation measure that will avoid or substantially lessen significant environmental effects. Pub. Res. Code § 21002; CEQA Guidelines 15126.4(a)(1). Mitigation is defined as an action that minimizes, reduces, or avoids a significant environmental impact or that rectifies or compensates for the impact. CEQA Guidelines § 15370 (definition of mitigation). The mitigation measures discussed in the EIR must be feasible. CEQA Guidelines §§ 15126.4(a), 15364 (definition of feasible). CEQA imposes several requirements on mitigation measures.

Section 21081.6, subdivision (b) provides: “A public agency shall provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures” Similarly, Guidelines section 15126.4, subdivision (a)(2) states: “Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments.” Where substantial evidence supports the approving agency’s conclusion that mitigation measures will be effective, courts will uphold such measures against attacks based on their alleged inadequacy. *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d, 376, 407.

Mitigation measures must provide enough detail and specificity to assure that they will be properly enforced. See CEQA Guidelines § 15126.4(a)(1)(B) (mitigation measures “may specify performance standards which would mitigate the significant effect of the project, and which may be accomplished in more than one specified way”). The specifics of a mitigation measure may be deferred “where the local entity commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly incorporated in the mitigation plan.” *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 779. The deferral of the formulation of mitigation measures requires the agency to commit itself to specific performance criteria for evaluating the efficacy of the measures implemented.

Commenters assert that the DEIR’s analysis of mitigation measures was generally flawed due to claimed errors regarding the project description, project objectives, impact analysis (including GHG, air quality and seismic impacts), and other issues (e.g., commenters claim that the project will extend the life of oil and gas facilities). These comments do not raise separate issues. Rather,

the comments are derivative of other comments, which are addressed elsewhere in these responses to comments.

GR-5b, Mitigation Measures Are Enforceable

Commenters state that mitigation measures in the DEIR must include adequate enforcement mechanisms. The County has broad authority to enforce its regulations pursuant to Article XI, Section 7 of the California Constitution, which provides that the County may “make and enforce within its limits all local police, sanitary and other ordinances and regulations not in conflict with the general laws.” The County implements its enforcement powers through revocation actions, administrative penalties, nuisance abatement actions, criminal sanctions and injunctive relief authorized by the County Code. In addition, the County may enforce mitigation requirements pursuant to CEQA.

The Zoning Ordinance (Title 19 of the Kern County Ordinance Code) provides for general and specific provisions for enforcement and penalties. The General Provisions Chapter 19.02 of the Zoning Ordinance, Section 19.02.070 Violation-Penalty, provides that any person, firm or corporation using any building, structure or parcel of land in violation of any provision of this title is guilty of a misdemeanor and may be prosecuted to the fullest extent of the law under Chapter 19.114 of this title. Unauthorized activities would be subject to the provisions in Chapter 19.114 Enforcement and Penalties, which provides for the process and authority for inspection, complaints, noticing requirements, administrative penalties, injunctive relief, abatement proceedings and the collection of costs for the abatement proceedings. Kern County Code § 8.54.040 provides that any person who violates any provision of the County zoning regulations may be issued an administrative citation for each day such violation is allowed to continue. Administrative penalties for a violation of the County zoning regulations are assessed as a fine not to exceed \$250 for the first violation, \$500 for the second violation, and \$1,000 for each additional violation thereafter within one year from the date of the first violation. Any County public official may also petition the Board of Supervisors to increase the fine amount, which the Board may approve in its discretion. Failure to pay an administrative penalty is subject to a civil action initiated by the County to collect the unpaid fines with interest, as well as to seek reimbursement of the County’s costs to enforce, investigate, establish, and collect such fines. Pursuant to Kern County Code § 19.114.060, any person who causes or permits a violation of any County zoning regulation commits a misdemeanor that, upon conviction, is punishable by a maximum fine of \$1,000 or by imprisonment for up to six months, or both. Each day the violation continues constitutes a separate offense. Accordingly, per the County Code, cumulative punishments may be stacked for each day a zoning violation is continued, a practice upheld by the courts in *People v. Djekich* (1991) 229 Cal.App.3d 1214, 1224. Because the conditions of approval will require compliance with the mitigation measures of the DEIR, any failure to maintain compliance would constitute a continuing misdemeanor violation subject to criminal prosecution for each day such a violation continues to occur. The mitigation measures are thus enforceable by the County.

GR-5b, Mitigation measures are not impermissibly deferred

Commenters assert that mitigation measures that refer to plans that will be prepared post-project approval constitute improperly deferred mitigation. CEQA allows deferred mitigation when “practical considerations prohibit devising such measures early in the planning process” so long as the agency commits itself to meeting an achievable performance standard. *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 94. The lead agency must commit to the mitigation, adopt specific performance standards, and identify the project actions to achieve the standards. CEQA Guidelines § 15126.4(a)(1)(B). “Compliance with a regulatory permit or other similar process may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards.” *Id.* Deferral may be appropriate “where another regulatory agency will issue a permit for the project and is expected to impose mitigation requirements independent of the CEQA process so long as the EIR included performance criteria and the lead agency committed itself to mitigation.” *Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App.4th 200, 237; *see also Oakland Heritage Alliance*, 195 Cal.App.4th 884.

GR-5c, Lead Agency May Rely on Regulatory Programs

“[R]equiring compliance with regulations is a common and reasonable mitigation measure” for CEQA purposes. *Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 906; *see also Rominger v. Colusa* (2014) 229 Cal. App. 4th 690, 728 (challengers offered “no evidence to suggest that it would be unreasonable to expect” compliance with statewide regulations); Cal. Evidence Code § 664 (“It is presumed that official duty has been regularly performed”). Lead agencies may thus presume that impacts mitigated by compliance with regulatory agency requirements “normally will be determined to be less than significant.” *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099. This is also consistent with the numerous provisions of the CEQA Guidelines that direct lead agencies to rely on the requirements of previously approved plans or programs to reduce project impacts. *See, e.g.*, CEQA Guidelines §§ 15064, 15130, 15152, 15183. Consistent with the Guidelines, the courts have repeatedly upheld reliance on existing plans and programs, as well as other regulatory programs that avoid or reduce significant environmental impacts. Commenters objecting to reliance on regulatory requirements of expert agencies such as EPA, CARB and CalGEM must present substantial evidence that, notwithstanding compliance with the regulations, the impact will be significant. *See, e.g., Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners of the City of Oakland* (2001) 91 Cal.App.4th 1344 (notwithstanding compliance with federal aviation noise requirements, commenters provided substantial evidence of significant noise impacts from nighttime airplane flights). *See also* CEQA Guidelines § 15064.7(d) (lead agencies may utilize environmental standards of regulatory agencies as CEQA thresholds of significance).

GR-5d, Emergency Incident Response Plan Is Not Impermissibly Deferred

EPA's Class VI UIC regulations require that the applicant prepare an Emergency and Remedial Response Plan for EPA to review and approve, prior to issuance of a Class VI injection permit. Some of the key emergency response provisions that reduce risk include, but are not limited to, facility shutdown plans, situation evaluation and site isolation, communication plans, situation monitoring and causal investigations, and remediation. The applicant's proposed Emergency and Remedial Response Plan is provided in attachment I to the CarbonFrontier Class VI Permit Application Narrative, submitted by the applicant as part of the EPA permit application and available at <https://www.epa.gov/uic/r9-uic-permits>.

Mitigation Measure 4.9-18 requires the owner/operator to not only prepare an emergency response plan required by the EPA UIC permit, but to also prepare an "emergency incident response plan" to address specific narrative objectives: (1) advance leak detection methods (2) communication with fire responders, emergency medical response, (3) Kern County Fire and Kern County Sheriff notification and (4) protocols for incident management. The DEIR mitigation measures, such as MM 4.9-18 permissibly require the owner/operator to comply with regulations. Mitigation Measure 4.9-18 then supplements federal requirements with more specificity in the form of narrative performance standards. The DEIR can rely on a plan meeting EPA's standard for a UIC permit. *See Save Our Capitol! v. Department of General Services* (2023) 87 Cal.App.5th 655, 687-88 (lead agency relied on a tree protection plan to be prepared according to specific ANSI standards). Mitigation measures may also permissibly rely on narrative performance standards. *See Eureka Citizens v. City of Eureka* (2007) 147 Cal.App.4th 357, 375-76.

Commenters also state that the plan described in MM 4.9-18 should be subject to public review. First, the emergency response plan required for the EPA UIC permit is subject to public review and comment pursuant to EPA's permit issuance process. Second, MM 4.9-18 provides that the supplemental emergency incident response plan must be reviewed and approved by local and state authorities, including first responder agencies such as the Kern County Fire Department, Kern County Fire Marshall, and Kern County Sheriff. Review and approval of the plan by the Kern County Fire Department in coordination with a host of other first responder and regulatory agencies to ensure that the plan meets the four qualitative objectives identified in MM 4.9-18. When a mitigation measure requires that a plan for mitigation of an impact be developed in consultation with a responsible agency, it can be assumed that the agency is competent to determine the actions needed to implement a performance standard relating to matters within its area of expertise. *Tiburon Open Space Comm. v. County of Marin* (2022) 78 Cal.App.5th 700, 774. Further, additional work required by a mitigation plan may be completed by the project proponent, subject to review by the lead agency. *See Citizens for a Sustainable Treasure Island v. City & County of San Francisco* (2014) 227 Cal.App.4th 1036, 1059. The precise details of such an emergency incident response plan could not be developed prior to the issuance of the DEIR because the precise details of CO₂ injection to be permitted by EPA have not been finalized. Thus, a detailed site-level emergency response plan would not be effective at this stage. Nevertheless, MM 4.9-18 further requires that both the EPA UIC plan and the more specific emergency incident response plan be in place "[p]rior to the commencement of any injection of CO₂." Commenters stating that MM 4.9-18 would defer

mitigation until after “an activity will have a significant adverse effect on the environment” are thus incorrect.

GR-5e, Mitigation for Greenhouse Gases Is Effective

Commenters contend that there are no mitigation measures associated with increases in GHG emissions from the construction and operation of the project. The comment is incorrect. First, the DEIR demonstrates that there would be a net reduction of GHG emissions associated with operation of the Project. Second, the DEIR contains a suite of mitigation measures designed to work together to ensure that the Project does not result in a significant increase of GHG emissions. MM 4.8-1 requires the preparation of a monitoring plan to demonstrate retention of injected CO₂. MM 4.8-2 requires quarterly accounting of the CO₂ injected at the project and its source(s). MM 4.8-3 requires that all new permitted stationary sources associated with the project comply with the Cap-and-Trade regulation and implement applicable best performance standards. MM 4.8-4 requires the project to recover for reuse or destroy methane in associated gas and casinghead gas. MM 4.8-5 requires the project to comply with all regulations related to methane. MM 4.8-6 requires the project “offset all greenhouse gas emissions” associated with the facility that are not covered by Cap-and-Trade or other mandatory GHG reduction measures through owner/operator reductions verified by the San Joaquin Valley Air Pollution Control District (SJVAPCD) through purchase of offset credits from verified third party registries such that there is “no net increase” in GHG emissions from either project construction or operation. Commenters are thus incorrect that there is no mitigation for the GHG emissions associated with the project.

The commenter, in purported support of its assertion that the Project’s GHG emissions are significant, uses the EPA GHG Equivalencies Calculator, available at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>. However, the use of this calculator is flawed for several reasons. Foremost, the EPA calculator provides unreliable, informal results. On the EPA’s webpage for the calculator, it warns that the estimates provided “should not be used for emission inventories or formal carbon emissions analysis.” Here, a formal emissions analysis was performed by an expert consultant, per the EPA’s recommendation, that demonstrates the net-negative effect of the Project. Additionally, the data that appear to have been input into the EPA calculator are incorrect. It fails to account for net reductions in emissions and fails to consider mitigation measures that will further reduce GHG emissions to a less-than-significant level. Substantial evidence supports the conclusions reached in the DEIR.

The commenter then asserts that the DEIR “must acknowledge” that carbon sequestration projects “have historically over-promised and under-delivered on their carbon capture promises,” and sites two sources for supposed support (e.g., footnotes 51 and 52 in commenter’s submission). The assessments cited by commenters analyze “lifetime under-performance” for projects that are not near the end of their life but instead are, in large part, at the beginning of their life. Further, the assessments did not screen out delays in project startup due to technical problems where projects were inoperable, sometimes for as long as three years, and instead misleadingly counted these years toward underperformance. Also, the projects cited as underperforming are older, some more than 30 years older, and are therefore assumed to be using older, outdated, technology. Importantly, none of these projects are located in California (more than half are located outside the United States)

and therefore did not undergo the rigorous environmental review required under CEQA, nor have they been subject to CEQA's mitigation requirements, as occurs here. The Project will comply with all EPA permit requirements to demonstrate carbon retention, with additional oversight by the Kern County Planning and Natural Resources Department (see MM 4.8-1). Notably, the expected capture rate for Project operation, both Pre-Combustion and Post-Combustion facilities, is 90%; however, project operations would still be carbon net-negative even if the capture rate were much less than the 90% rate. Thus, the commenter's demand to shut down Project operations at an arbitrary capture rate does not have a logical basis and would result in an unnecessary cessation of the project's reduction of baseline GHG emissions.

Commenters state that the mitigation measures associated with GHG emissions will be ineffective in ensuring that CO₂ will remain in the reservoir and criticize reliance on EPA's Class VI UIC permitting regulations. As described above, lead agencies may appropriately rely on other regulatory programs as mitigation. Moreover, while EPA's Class VI regulations focus on groundwater protection, these regulations directly address the suitability of the site to store CO₂ within the injection zone (40 CFR 146.83) and require monitoring to ensure that CO₂ is permanently retained (40 CFR 146.90). In addition to an application for a Class VI permit from EPA, the project would be subject to the California Air Resource Board's (CARB) Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standards (LCFS). DEIR, Vol. 1, at 4.6-17. The CCS Protocol for qualifying for Permanence Certification requires that the applicant demonstrate that there is a very high likelihood (greater than 90% probability of occurrence) that more than 99% of injected CO₂ remain within the storage complex for the 100-year post-injection period [C.2.2(f)]. Long-term monitoring of the CO₂ storage complex will also be required by the CCS Protocol C.4.1.9 to ensure that these criteria are met.

GR-5f, Mitigation for Energy Consumption Is Effective

Commenters cite MM 4.6-1 as ineffective to address the project's contribution to cumulative energy impacts. MM 4.6-1 requires the operator to provide an annual report of electricity consumed and further provides that the applicant's annual energy report to include "a discussion of modifications that are being considered by each source to reduce electricity use." Neither the County or commenters have identified additional feasible mitigation measures that would reduce the energy consumption of the project. However, MM 4.6-1 will require the operator to provide regular information regarding measures to reduce energy consumption as they develop and could provide the basis of for the imposition of new mitigation measures in the event subsequent discretionary review is required.

GR-5g, Biological Resources Mitigation Is Not Impermissibly Deferred and Is Effective

Commenters state that MM 4.4-17 is inadequate. Mitigation Measure 4.4-17 requires preparation and implementation of a Worker Environmental Awareness Program (WEAP) by the owner/operator. The measure includes sufficient detail on the requirements of the program, procedures to be followed, including the need to avoid contact with wildlife and implement buffers and other protection measures, and includes requirements that will allow for monitoring and verification that the training has been completed. It requires training on the "specific protection and

avoidance measures that are applicable to the site,” inclusive of the full suite of mitigation measures intended to protect and reduce impacts to biological resources. Mitigation Measure 4.9-1 requires the owner/operator to provide a WEAP to Kern County with its first CCS project-related permit application in each calendar year. The WEAP must include a presentation “that will describe the locations and types of sensitive plant, wildlife, and sensitive natural communities (collectively, ‘Biological Resources’) on and near the site, an overview of the laws and regulations governing the protection of Biological Resources, the reasons for protecting the Biological Resources, the specific protection and avoidance measures that are applicable to the site, and the identity of designated points of contact should questions or issues arise.” DEIR, Vol. 1, at 1-43. Thus, comments requesting that the WEAP include species-specific information have already been addressed, although the need to identify specific species present in and around the project site will depend on the result of surveys. Further, the WEAP has to be provided to the surface owner “at the time of the application pathway process so the surface owner may educate employees as well.” The precise details of the WEAP could not be developed prior to the issuance of the DEIR because the precise details of CO₂ injection to be permitted by EPA have not been finalized. The appropriate time to prepare the program will be following the completion of permitting phase when all agency requirements have been finalized.

Commenters state that the WEAP should include MM 4.4-18. Mitigation Measure 4.4-17 requires that the WEAP inform workers of “the specific protection and avoidance measures that are applicable to the site,” which include applicable mitigation measures such as MM 4.4-18. Further, MM 4.4-17 requires that the WEAP identify designated points of contact, including the qualified biologist, who would be able to assist in the identification of wildlife suffering from CO₂ exposure.

Commenters also state that MM 4.4-15(c)(1) is impermissibly deferred. Mitigation Measure 4.4-15 addresses potential impacts to the blunt-nosed leopard lizard (BNLL). Specifically, the measure provides that if BNLL are detected during focused surveys, an avoidance plan shall be prepared to prevent all unauthorized take. Mitigation Measure 4.4-15(c) thus contains a qualitative performance standard for the avoidance plan: it must result in no unauthorized incidental take. It also provides a minimum list of the components of such a plan in order to meet the performance standard. The measure does not constitute impermissibly deferred mitigation. See GR-5b. Mitigation Measure 4.4-15(c)(1), requiring incorporation of the BNLL provisions into the WEAP, works in tandem with MM 4.4-17 which requires the WEAP to meet detailed provisions tailored to the site, project, and permit conditions. As described above, the appropriate to prepare the program will be following the completion of permitting phase when all agency requirements have been finalized.

6: Alternatives

GR – 6a, Comments on Alternatives Derived From Other Comments

Commenters assert that the DEIR’s analysis of alternatives in comparison to the proposed project was generally flawed due to claimed errors regarding the project description, project objectives, impact analysis, and other issues (e.g., commenters claim that the project will extend the life of oil and gas facilities). These comments do not raise separate issues. Rather, the comments are

derivative of other comments, which are addressed elsewhere in these responses to comments. Please see, e.g., Global Responses 1, 2, and 4-7.

GR – 6b, Alternatives Analysis and Feasibility

Commenters claim that the DEIR failed to consider a reasonable range of alternatives that would substantially lessen environmental impacts and would satisfy project objectives. CEQA does not require an EIR to consider alternatives that are infeasible, even if they would lessen environmental impacts and satisfy project objectives. CEQA Guidelines § 15126.6(a) (EIR “must consider a reasonable range of potentially feasible alternatives. . . . An EIR is not required to consider alternatives which are infeasible”). Commenters assert that the County’s conception of “feasibility” is improperly constrained and not objective, but do not explain why this is allegedly the case. The DEIR applied the definition of “feasibility” in CEQA Guidelines § 15364: the term “feasible” means “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” In an initial screening step, the DEIR considered a number of alternatives that were eliminated from further consideration due to infeasibility and/or inability to meet project objectives. See DEIR Section 6.7, pp. 6-10 – 6-11. Next, the DEIR evaluated the no project alternative (Alternative 1), as required by CEQA, and two project alternatives: Alternative 2 - Direct Air Capture Alternative and Alternative 3- Nature-Based Carbon Storage Alternative. DEIR Section 6.8, pp. 6-12 - 20. Alternatives 2 and 3, having been found feasible at the screening stage, were evaluated for capacity to substantially lessen environmental impacts and to satisfy project objectives.

GR – 6c, Drilling Ban Alternative

Commenters oppose carbon capture and storage (CCS) as a policy matter, contending that CCS should not play a role in the state’s strategy for reducing GHG emissions to address climate change. This comment is noted and will be considered by County decision-makers.

Commenters assert that, instead of approving CCS, the County should phase out fossil fuel development. The DEIR did consider a “Drilling Ban on All Lands ‘Leave It In The Ground’ Alternative”; see DEIR Section 6.7.1, pp. 6-10 – 6-11. This alternative was eliminated from further consideration due to infeasibility as well as inability to meet project objectives. As the DEIR explained, in addition to failing to meet three out of the five project objectives, the Drilling Ban alternative would require a policy decision by the County to undertake its own project to amend its Oil and Gas Zoning Ordinance, which is outside the scope of the CarbonFrontier project proposed by a private applicant that is seeking a permit from the County. The Drilling Ban Alternative would be legally infeasible, conflicting with applicable legal limitations on the County’s authority to prohibit access to subsurface mineral interests and exposing the County to unreasonable liability. In addition, the Drilling Ban Alternative assumes that, where oil and gas activities were halted, the land would be remediated and restored to pre-oilfield conditions which would have its own environmental impacts, exceeding those of the proposed project if extended to the entire 596,199 acres of Kern County’s administrative oilfields.

The Drilling Ban Alternative is beyond the scope of the private project and because existing legal restrictions would subject the County to unreasonable liability for prohibiting access to privately owned minerals. The County's police power to adopt land use restrictions is limited by the Fifth Amendment to the U.S. Constitution (applicable to the states through the Fourteenth Amendment) and Article I, Section 19 of the California Constitution. Zoning and land use regulations may not be so oppressive that they effect a taking of private property without just compensation. As held in the leading U.S. Supreme Court case, *Pennsylvania Coal Co. v. Mahon* (1922) 260 U.S. 393, 415, a land use regulation prohibiting extraction of privately owned subsurface minerals goes "too far" and effects an unconstitutional taking without just compensation. Since *Pennsylvania Coal*, both the United States Supreme Court and the California Supreme Court have established that a regulation that deprives "all economically beneficial or productive use" of private property effects a per se taking of such property. See *Kavanau v. Santa Monica Rent Control Bd.* (1997) 16 Cal.4th 761, at 774, citing *Lucas v. South Carolina Coastal Council* (1992) 505 U.S. 1003, 1015. A regulation that stops short of destroying all economically beneficial use of private property may also affect a taking depending on the economic impact of the regulation, the extent to which the regulation interferes with distinct investment-backed expectations, and the character of the governmental action. See *Kavanau* at 775-776, citing *Penn Cent. Transp. Co. v. N.Y.* (1978) 438 U.S. 104, 124. "[T]he property owner may bring an inverse condemnation action, and if it prevails, the regulatory agency must either withdraw the regulation or pay just compensation. Even if the agency withdraws the regulation, the property owner may have the right to just compensation for the temporary taking while the regulation was in effect." *Kavanau* at 773.

As recognized by the California Supreme Court, the owner of a mineral interest "has a property right in oil and gas beneath the surface" that includes "the exclusive right to drill[.] ... This is a right which is as much entitled to protection as the property itself, and an undue restriction of the use thereof is as much a taking for constitutional purposes as appropriating or destroying it." *Bernstein v. Bush* (1947) 29 Cal.2d 773, 778 (internal citations omitted.) Thus, California courts have held that land use regulations that provide "no adequate means of protection or substitute for their right to extract oil" effects a compensable taking of private property. See, e.g., *Braly v. Board of Fire Com'rs. of City of Los Angeles* (1958) 157 Cal.App.2d 608, 616; *Bernstein v. Bush* at 780. Similarly, federal courts recognize that owners of oil and gas interests "have the right to reduce to possession the oil and gas beneath the surface, and that they could not be absolutely deprived of that right without a taking of private property." *Ohio Oil Co. v. Indiana* (1900) 177 U.S. 190, 209.

The Drilling Ban Alternative as described in the DEIR would deprive the affected mineral owners the right to extract oil and gas beneath the surface, exposing the County to potentially large legal liability for takings. As of 2020, the oil and gas industry accounted for roughly \$15 billion of the County's property tax valuations, almost 15% of the Countywide total for all property. (Kern Economic Development Foundation, *The Economic Contribution of the Oil and Gas Industry in Kern County*, January 2021 (Kern EDC).

In addition to takings liability, a Drilling Ban Alternative would result in substantial losses of jobs and tax revenue to the County. The oil and gas industry in Kern County generates significant regional economic activity and has the highest gross domestic product and tax contribution level in the County. The industry produces high revenues, creates high wage jobs, and contributes

significant tax revenue to all levels of government. Direct activity includes the materials purchased and the employees hired by the industry itself. Indirect effects are those which stem from the employment and business revenues motivated by the purchases made by the industry and any of its suppliers. Increased output generates money in the community, resulting in increased spending on new homes, durable goods such as cars and appliances, plus additional spending on restaurants and entertainment options. Taxes paid by the oil and gas industry play a major role in the support of local infrastructure, including schools, public safety, streets and roads, and parks. As described in the Kern EDC report (presenting economic data prior to and unaffected by the COVID pandemic), economic activity associated with the oil and gas industry in Kern County generated an estimated \$925 million in state and local tax revenues in 2017 including \$392 million from sales taxes; \$331 million from property taxes paid by households and businesses; \$68 million from personal and corporate income taxes; and \$134 million from other categories. In FY 2018-2019, the industry contributed over \$80 million in property taxes to the County of Kern; over \$103 million for local school districts; and over \$12 million for local special districts for a total of almost \$200 million per year. Banning drilling in County oil fields or in the Belridge oilfields would have a substantial economic effect on the County and its residents.

For these reasons, the Drilling Ban Alternative is considered economically and legally infeasible and does not require further evaluation.

GR – 6d, Reasonable Range of Alternatives and Project Objectives

Commenters assert that the DEIR's alternatives analysis fails because the project objectives are limited to capturing CO₂ from Aera's onsite oil and gas operations. The comment is misplaced. Onsite oil and gas operations constitute the initial source of CO₂ for storage at the proposed project. See DEIR, pp. 3-26 - 32. As such, the initial CO₂ source is part of the "general description of the project's technical, economic and environmental characteristics, considering the principal engineering proposals" (CEQA Guidelines § 15125(c)), not part of the "statement of the objectives sought by the proposed project" which describe "the underlying purpose of the project." CEQA Guidelines § 15125(b). The project objectives are broader and include, but extend beyond, capturing CO₂ from Aera's operations, as follows:

- Construct and operate facilities and infrastructure to capture, transport, inject, and permanently store up to 40 MMT of CO₂ in a safe, secure, and economically feasible manner for storage, not enhanced recovery.
- Minimize new disturbance by siting and designing project facilities and infrastructure within the existing developed oilfield footprint, consistent with current Kern County and California guidelines.
- Reduce the carbon intensity of Aera Energy's produced oil and gas by capturing CO₂ from produced gas (pre-combustion) and stationary sources (post-combustion).
- Generate environmental, social, and economic benefits for Kern County and the State of California by implementing low carbon technologies, developing CCS infrastructure, and providing living-wage jobs in the region.

- Contribute to California’s goal to achieve carbon neutrality by 2045 (Executive Order B-55-18) by integrating carbon capture in existing operations as well as ending oil and gas production from select reservoirs and repurposing them for the permanent storage of CO₂

DEIR pp. 3-8 – 9. Regarding potential future CO₂ source projects, please see Global Response 1.

Commenters further assert that, in order to inform the identification of a reasonable range of alternatives, project objectives must be identified by the lead agency rather than by a private project applicant to provide a public purpose and need independent of the applicant. As authority for this requirement, commenters cite CEQA Guidelines 15124(b), *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 666, 668 and *Preservation Action v. San Jose* (2006) 141 Cal.App.4th 1336, 1351-51.

CEQA Guidelines §15124(b) states that an EIR must include a “statement of the objectives sought by the proposed project” which “will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations if necessary.” On its face, Section 15124(b) makes the lead agency responsible for developing the alternatives but not for identifying objectives which are “sought by the proposed project.” (See also CEQA Guidelines §15126.6(a): “The lead agency is responsible for selecting a range of project alternatives for examination....”) The Guideline language refers to “objectives sought by the proposed project”, not to “objectives determined by the lead agency.” By referring generally to “objectives sought by the proposed project”, CEQA Guidelines §15124(b) allows both for applicants to identify objectives for the private projects they propose, and for lead agencies to develop objectives for their own public projects.

Notwithstanding a perfunctory reference to “establishment of project objectives by the lead agency” in *North Coast* (243 Cal.App.4th at 666), quoting *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1163, neither case holds that a public agency, not the applicant, is responsible for setting project objectives for a private project and do not adopt objectives in an EIR that were identified by a private applicant. In *North Coast*, the project objectives were necessarily established by the lead agency because there was no one else to establish them. The case concerned objectives and alternatives in the EIR for a pest control program proposed by the California Department of Food and Agriculture, i.e., a public agency’s public project. Similarly, the California Supreme Court’s decision in *Bay-Delta* concerned the EIR for the multi-agency CALFED water management program administered by the state Natural Resources Agency. *Bay-Delta* and *North Coast* did not rule on, and cannot stand for, the proposition that an EIR’s objectives for a private project cannot be developed by the private applicant, because there were no private applicants and no applicant-developed project objectives in those cases. Nor does the *Preservation Action* case establish such a rule, as that case held that the lead agency, not the applicant, must determine whether alternatives are feasible, for purposes of determining whether to include them in the reasonable range of alternatives considered in an EIR. This is consistent with the language of CEQA Guidelines §15124(b): the lead agency must “develop a reasonable range of alternatives.” But that does not prevent the applicant from identifying objectives which are “sought by the proposed project” when it is a private project.

This project is proposed by a private applicant and has no county funding or other involvement. Therefore, no objectives from the county are required.

GR –6e, Alternative 1, the No Project Alternative

Commenters claim that the DEIR discussion of the No Project Alternative is cursory and fails to incorporate changes that “would reasonably be 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(e)(2), (e)(3)(C)).

Where an alternative has significant effects in addition to those of the proposed project, the alternative’s effects “shall be discussed, but in less detail” than those of the proposed project. CEQA Guidelines §15126.6(d). As characterized in the DEIR, under the No Project Alternative, the proposed project facility would not be approved or constructed, and its CO₂ storage capacity would not become available. The existing site zoning and land use primarily for existing oil and gas activities would continue, and wells scheduled for abandonment would be abandoned on the existing regulatory schedule rather than abandoned early for purposes of the project. DEIR Section 6.8.1, pp. 6-12 – 17. The DEIR’s discussion of the No Project Alternative is consistent with the CEQA Guidelines which recognize that “[i]n certain situations, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained.” CEQA Guidelines §15126.6(e)(3)(B). Under these circumstances, the No Project Alternative analysis properly compared “the environmental effects of the property remaining in its existing state against environmental effect which would occur if the project is approved” (*id.*) and concluded that the No Project Alternative would “create less environmental impacts overall.” DEIR, p. 6-17. Nevertheless, for the specific topic of GHG emission impacts, the DEIR concluded that “impacts from implementation of this alternative would be greater than those of the project as it would not result in the capture of GHG emissions attributed to the project.” DEIR, p. 6-14.

Commenters claim that the DEIR is inconsistent in determining that, although the project will have significant and unavoidable impacts on GHG emissions, the No Project Alternative will have less-than-significant impacts on GHG emissions, and the No Project Alternative will have greater GHG impacts than the proposed project. There is no inconsistency. The proposed project would capture GHG emissions through the operation of a CCS facility and mitigate its own operational GHG emissions to net zero. The No Project Alternative would not capture and store any GHG emissions (DEIR, p. 6-14), resulting in no change to the existing GHG emissions baseline, a less than significant impact. While the GHG impact analysis concluded that the “contribution to greenhouse emission due to unknown release of emissions or stops to injection for monitoring failures remains significant and unavoidable” (DEIR, p. 4.8-28), the No Project Alternative analysis compares the unchanged GHG baseline with no project to the expected “environmental effects which would occur if the project is approved” (CEQA Guidelines §15126.6(e)(3)(B)), where the project is operating to capture and store CO₂. In that comparison, where the DEIR states “impacts from implementation of this alternative would be greater” under the No Project Alternative (DEIR, p. 6-17), the statement is intended to convey that the No Project Alternative will have a poorer GHG outcome (with no change from baseline conditions) than the proposed project operating a carbon capture and storage facility.

Commenters also claim that the DEIR alternatives analysis fails to take air pollutant emissions into account. This is incorrect. See DEIR pp. 6-13 (Alternative 1, with “no new construction activities or new operational activities that would generate new air emissions”, the No Project Alternative “would not contribute to a cumulative net increase of criteria pollutant in the project’s region beyond what presently is attributed to existing operations”), 6-18 - 19 (Alternative 2, direct air capture facilities “are expected to produce zero or-near zero emissions onsite that could be hazardous to the environment or human health” but “result in short-term construction impacts related to air quality” because the “footprint of the required renewable energy, specifically commercial-scale solar, would significantly increase the impacts on... air quality during construction”) and p. 6-20 (Alternative 3, soil remediation activities under nature-based carbon storage alternative “would result in short-term impacts to air quality”). The comparisons in Table 6-1 disclose that air quality impacts of Alternatives 1, 2 and 3 would be “less than project” except for Alternative 2, direct air capture, which is expected to have greater construction emissions than the proposed project.

The commenters’ opinion that the proposed project should not be approved due to significant and unavoidable air quality impacts is noted and will be considered by County decision-makers. CEQA allows lead agencies to approve projects with significant and unavoidable impacts based on overriding considerations, balancing the economic, legal, social, technological or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks. CEQA Guidelines § 15093.

7: Cumulative Impact

GR-7a Cumulative Impact Analysis Generally

The DEIR adequately assesses the project’s potential to contribute to cumulative impacts. Cumulative impacts under CEQA are defined as two or more individual environmental effects “which, when considered together, are considerable or which compound or increase other environmental impacts.” CEQA Guidelines § 15355. CEQA requires an EIR to discuss cumulative impacts when two conditions are present: (1) the combined impact of the project and other projects is significant, and (2) the project’s incremental contribution to the combined impact is “cumulatively considerable.” CEQA Guidelines § 15130(a).

An EIR may evaluate cumulative impacts using a “list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency[.]” CEQA Guidelines § 15130(b)(1)(A). “[F]actors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type.” CEQA Guidelines § 15130 (b)(2). A future project that is undergoing environmental review qualifies as a “probable future project” requiring cumulative impacts review in an EIR only to the extent that the particular environmental review at issue provides evidence that the proposed project is both probable and sufficiently certain to allow for meaningful cumulative impacts analysis. *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 399. “[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.” *Id.* at 397-98.

The description and analysis of cumulative impacts should reflect the severity of the cumulative impacts and the likelihood of their occurrence. CEQA Guidelines §15130(b); *City of Long Beach v. Los Angeles Unified Sch. Dist.* (2009) 176 Cal.App.4th 889, 906. The discussion need not provide detail as extensive as that required for effects attributable solely to the project. The discussion of cumulative impacts should be guided by standards of practicality and reasonableness. CEQA Guidelines §15130(b). When specific information on the impacts of potential future cumulative development is not available, an EIR is not required to speculate about the cumulative impacts that might occur. *Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 277.

GR-7b Potential Future CO₂ Source Projects

Commenters claim that the DEIR’s must include assessment of impacts from probable future sources of CO₂ injected into the proposed project reservoirs. Commenters primarily contend that these sources should be considered as part of the project. This is incorrect. Please see Global Response GR-1 regarding source identification. To the extent these comments imply that potential future CO₂ source projects should be included in the cumulative analysis, this is also incorrect. The scope of a cumulative analysis is guided by standards of practicality and reasonableness. CEQA Guidelines § 15130(b); *City of Long Beach v. Los Angeles Unified Sch. Dist.* (2009) 176 Cal.App.4th 889. Mere awareness of proposed expansion plans or other proposed development does not necessarily require the inclusion of those proposed projects in the EIR. Rather, these projects must become “probable future projects” in order to require considered in cumulative impact analysis. CEQA Guidelines § 15130(b); *Gray v. Madera* (2008) 167 Cal.App.4th 1099, 1127. Projects actively undergoing environmental review or in which an applicant has devoted significant time and financial resources in anticipation of such review are considered sufficiently “probable.” *Gray*, 167 Cal.App.4th at 1127-28.

The DEIR identifies the initial source of CO₂ for the project storage as pre-combustion South Belridge field gas, which is evaluated as part of the proposed project. DEIR, Vol. 1, p. 3-1. In addition, the DEIR identifies categories of potential future sources of CO₂ that could contribute to CO₂ stored in the proposed project reservoirs together with CO₂ from the existing Belridge oilfields gas streams. DEIR, Vol. 1, p. 3-32-33 and Vol. 2, Appendix K-4. These include other oil and gas operations, power plants, hydrogen production, direct air capture of CO₂, biomass carbon removal and storage, alternative fuels production, and cement and steel production.

Where environmental review or investment of time and financial resources in anticipation of such review has progressed to the point that a project is considered a “reasonably probable” future project, that project was included in the cumulative projects list in DEIR Vol. 1, Table 3-10. Oilfield field gas streams are identified as a potential future CO₂ source (DEIR Vol. 1, p. 3-32 to 3-33) and Table 3-10 includes oil and gas development under the Kern County Oil and Gas Development Zoning Ordinance. While no other potential future CO₂ source project is currently undergoing environmental review, Lone Cypress Energy Services’ hydrogen project, which commenced environmental review but was withdrawn for reassessment by the applicant, is

considered a “reasonably probable” future project and is included in Table 3-8. In addition, Table 3-10 includes potential future CO₂ source projects without pending applications or environmental review that have been announced in the media, including projects listed in DEIR Vol. 1, p. 3-32-33 which have entered into preliminary agreements or discussions with the proposed project applicant to explore the possibility of future CO₂ storage. The County does not have information from the proponents of these projects and It is uncertain whether any of them will be approved and constructed. See Global Response 1, Source Identification. Nevertheless, on the conservative assumption that these projects are under development, with investment of time and financial resources by the project proponents in anticipation of submittal for environmental review, they were added to the DEIR’s cumulative projects list.

For clarification, the DEIR is revised to add express references to additional categories of potential future CO₂ sources beyond oil and gas development. Because these projects were listed in DEIR Vol. 1, Table 3-10, and therefore included in the assessment of cumulative impacts, these revisions do not alter the previous cumulative impact analysis in the DEIR or constitute significant new information demonstrating new or substantially more severe significant cumulative impacts. The DEIR is revised to insert the following text in each “Cumulative Setting” section immediately following the paragraph beginning either “The documents provide...” or “The aforementioned documents provide...”:

Other potential future CO₂ source projects are insufficiently definite for a detailed assessment of their contribution to potentially significant cumulative impacts. In addition, it is not certain what other sources are likely to contribute CO₂ for storage at the Project and there are no currently operational CCS projects in California on which to base a more concrete analysis of CO₂ source impacts. The extent of contributions to cumulative impacts from these projects are dependent on many variables and are not knowable at this time. However, any such project in the County would be accompanied by a separate CUP and associated environmental review process. It is reasonably anticipated that these future projects would be sited consistent with zoning and land use controls, would comply with all applicable federal, state, and local regulations, and would implement mitigation measures to minimize or avoid environmental impacts. As a result, these source projects are anticipated to result in impacts typical of similar scale development projects.

The “Impact 4.1-5: Contribute to Cumulative Aesthetic Impacts” discussion of Section 4.1.5 is modified as follows:

Regarding impacts to aesthetic and visual resources, the project has the potential to contribute to cumulative impacts within the region. A complete analysis and evidence for the record of the cumulative impacts on visual resources of the various ground-disturbing activities from oil and gas are provided 4.1, Aesthetics of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus

limiting impacts to aesthetic resources. However, construction and operation of these facilities nonetheless has the potential to introduce or increase features such as heavy equipment or buildings that could degrade the visual character of their surroundings. The extent of contribution to the visual impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Cumulative Setting” discussion of Section 4.2.5 is modified to insert the following immediately preceding the paragraph beginning, “Population growth...”:

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Depending on siting, these facilities have the potential to result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, Williamson Act conservation contracts, or forest land or timberland, resulting in impacts to these resources. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.3-5: Result in Other Cumulatively Considerable Air Quality Impacts” discussion of Section 4.3.5 is modified to insert the following immediately preceding the first paragraph:

Regarding impacts to air quality, the project has the potential to contribute to cumulative impacts within the region. A complete analysis and evidence for the record of the cumulative impacts on air quality of the various activities from oil and gas are provided 4.3, Air Quality of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to sensitive receptors. However, construction and operation of these facilities nonetheless has the potential to result in increases in criteria air pollutants and toxic air contaminants in the vicinity of such operations, as well as potentially offensive odors near sensitive receptors. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.4-7: Contribute to Cumulative Biological Resource Impacts” discussion of Section 4.4.5 is modified to insert the following immediately preceding the paragraph beginning, “Future activities...”:

Regarding impacts to biological resources, the project has the potential to contribute to cumulative impacts within the region. A complete analysis and evidence for the record of the cumulative impacts on biological resources of the various ground-disturbing activities from oil and gas are provided 4.4, Biological Resources of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to biological resources. However, construction and operation of these facilities nonetheless has the potential to result in disturbance of undeveloped areas or developed areas suitable for certain species, which may adversely affect biological resources potentially present in those areas. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.5-4: Contribute to Cumulative Cultural Resources Impacts” discussion of Section 4.5.5 is modified to insert the following immediately preceding the paragraph beginning, “There is potential for unanticipated...”:

With regard to impacts to significant cultural resources, the project has the potential to contribute significantly to cumulative impacts within the region. A complete analysis of the cumulative impacts of the various ground disturbing activities from oil and gas are provided in Section 4.5, Cultural and Paleontological Resources of the Kern County Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to cultural resources. However, construction and operation of these facilities nonetheless has the potential to result in ground disturbing activities that could adversely impact prehistoric and historical archaeological sites, paleontological resources, historic buildings and structures. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.6-3: Contribute to Cumulative Energy Impacts” discussion of Section 4.6.5 is modified to insert the following immediately preceding the paragraph beginning, “The main contribution of energy...”:

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Construction and operation of these facilities nonetheless has the potential to result in temporary increases in energy demand associated with construction as well as operational demands for gas and electricity. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.7-10: Contribute to Cumulative Geologic and Soils Impacts” discussion of Section 4.7.5 is modified to insert the following immediately preceding the first paragraph:

Regarding impacts associated with geology and soil, the project has the potential to contribute to cumulative impacts within the region. A complete analysis and evidence for the record of the cumulative impacts on air quality of the various activities from oil and gas are provided 4.6, Geology and Soils of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. Construction and operation of these facilities nonetheless has the potential to be located in areas of potentially hazardous geological or soil conditions. The specific design, location, slope, geologic and soil conditions for every CO₂ source project are not known at this time and would be analyzed on a site-specific basis at the project level. Thus, the extent of these impacts from potential source projects are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.8-3: Cumulative Greenhouse Gas Emissions Impacts” discussion of Section 4.8.5 is modified to insert the following immediately preceding the paragraph beginning, “Emissions of GHGs and their contributions...”:

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Construction and operation of these facilities has the potential to result in increases in GHG emissions. The extent of these impacts from potential CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.9-9: Contribute to Cumulative Hazards and Hazardous Materials Impacts” discussion of Section 4.9.5 is modified to insert the following immediately preceding the first paragraph:

A complete analysis and evidence for the record of the cumulative impacts on air quality of the various activities from oil and gas are provided 4.8, Hazards and Hazardous Materials/Public Health Risks of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to sensitive receptors. However, construction and operation of these facilities nonetheless has the potential to require the transport or use of hazardous materials. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review. The handling of hazardous materials is required to comply with all applicable federal, state, and local laws. Additionally, potential CO₂ source projects are anticipated to be subject to siting controls applicable to similar scale industrial uses that will limit exposure hazards.

The “Impact 4.10-6: Contribute to Cumulative Hydrologic Resources Impacts” discussion of Section 4.10.5 is modified to insert the following immediately preceding the paragraph beginning, “As described in Chapter 3...”:

With regard to impacts to significant hydrologic resources, the project has the potential to contribute significantly to cumulative impacts within the region. A complete analysis of the cumulative impacts of the various ground-disturbing activities from oil and gas and the region wide basin groundwater conditions are provided in Section 4.9, Hydrology and Water Quality (Kern County Oil and Gas EIR).

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to hydrologic resources. However, construction and operation of these facilities nonetheless has the potential to be located in varying drainage and other hydrological conditions, potentially resulting in hydrologic resource impacts. The specific design, location, drainage, and other conditions for potential future CO₂ source projects are not known at this time and would be analyzed on a site-specific basis at the project level. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.11-3: Contribute to Cumulative Land Use and Planning Resource Impacts” discussion of Section 4.11.5 is modified as follows:

With regard to impacts to land use and planning resources, the project does not have the potential to contribute significantly to cumulative impacts within the County. A complete analysis of the cumulative impacts to land use and planning resources from oil and gas operations are provided in Section 4.10, Land Use and Planning of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, but the specific design and location for potential future CO₂ source projects are not known at this time and would be analyzed on a site-specific basis at the project level. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.12-3: Contribute to Cumulative Mineral Resources Impacts” discussion of Section 4.12.5 is modified to insert the following immediately preceding the paragraph beginning, “The project could result...”:

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. Depending on siting, these facilities have the potential to adversely impact mineral resources. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.13-4: Contribute to Cumulative Noise Impacts” discussion of Section 4.13.5 is modified to insert the following immediately preceding the paragraph beginning, “Other projects associated with...”:

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting noise impacts. However, these projects have the potential to result in increases in noise typical of construction and operation associated with similarly scaled land uses. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review. Both construction and operation would be required to comply with applicable noise regulations.

The “Impact 4.14-3: Contribute to Cumulative Population and Housing Impacts” discussion of Section 4.14.5 is modified to insert the following immediately preceding the paragraph beginning, “In addition, the County is...”:

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. Construction typically generates short-term demand for a relatively small workforces that is unlikely to require additional housing or generate changes in land uses. Operations of similarly scaled land uses typically do not generate large scale workforces. However, the extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.15-4: Contribute to Cumulative Public Services Impacts” discussion of Section 4.15.5 is modified to insert the following immediately preceding the first paragraph:

A complete analysis and evidence for the record of the cumulative impacts on public services of the various activities from oil and gas are provided 4.14, Public Services of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. Construction typically generates short-term demand for a relatively small workforces that is unlikely to require additional public services. Operations of similarly scaled industrial uses typically do not generate large scale workforces. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.16-3: Cumulative Impact on Recreational Facilities” discussion of Section 4.16.5 is modified to insert the following immediately preceding the first paragraph:

A complete analysis and evidence for the record of the cumulative impacts on public services of the various activities from oil and gas are provided 4.15, Recreation of the Oil and Gas EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to recreational activities. Construction typically generates short-term demand for a relatively small workforces that is unlikely to generate additional demand for or use of

existing parks and recreational facilities such that these resources would become deteriorated. Similarly, operations of similarly scaled industrial uses typically do not generate large scale workforces. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.17-5: Contribute to Cumulative Transportation Impacts” discussion of Section 4.17.5 is modified to insert the following immediately preceding the paragraph beginning, “Cumulative impacts from the project...”:

With regard to impacts to significant transportation resources, the project has the potential to contribute significantly to cumulative impacts within the region. A complete analysis of the cumulative impacts of the various ground disturbing activities from oil and gas are provided in Section 4.16, Transportation and Traffic Resources of the 2015 Final EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to transportation. Construction could result in short term increases in commuter and truck trips that would depend on the particular construction activity. Operations would also involve vehicle trips typical of similarly scaled industrial uses. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.18-2: Contribute to Cumulative Tribal Cultural Resource Impacts” discussion of Section 4.18.5 is modified to insert the following immediately preceding the paragraph beginning, “Potential impacts to tribal...”:

With regard to impacts to significant tribal cultural resources, the project has the potential to contribute significantly to cumulative impacts within the region. A complete analysis of the cumulative impacts of the various ground disturbing activities from oil and gas are provided in Section 4.5, Cultural and Paleontological Resources (2015 Final Oil and Gas EIR).

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting impacts to tribal cultural resources. However, construction and operation of these facilities nonetheless has the potential to result in ground disturbing activities that could adversely impact properties important to tribal communities. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.19-6: Cumulative Impacts on Utilities and Service Systems” discussion of Section 4.19.5 is modified to insert the following immediately preceding the heading “Stormwater Drainage”:

With regard to impacts to utilities and service systems, the project has the potential to contribute significantly to cumulative impacts within the region. A complete analysis of the cumulative impacts of the various ground disturbing activities from oil and gas are provided in Chapter 4.17, Utilities and Service Systems of the Oil and Gas Final EIR.

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses. New or modified facilities could generate increases in demand for public utilities such as water supply, wastewater treatment, or solid waste disposal consistent with similarly scaled industrial uses. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

The “Impact 4.20-5: Contribute to Cumulative Wildfire Impacts” discussion of Section 4.20.5 is modified to insert the following immediately preceding the paragraph beginning, “With regard to impairment...”:

With regard to impacts to wildfire, the project has the potential to contribute significantly to cumulative impacts within the region. A complete analysis of the various ground disturbing activities from oil and gas is provided in Section 4.20, Wildfire (2015 FEIR).

As discussed above, there is uncertainty regarding potential future CO₂ source projects, including the exact location and nature of any such facilities and whether they would be new facilities or utilize existing facilities requiring modification. It is generally anticipated that these facilities would be located within areas of consistent zoning for similarly scaled land uses, thus limiting cumulative wildfire impacts. The extent of contribution to these impacts from potential future CO₂ source projects would depend on many variables that are not knowable at this time. Such CO₂ source projects are expected to be subject to their own permitting and environmental review.

7.2.2 State Agencies

1: California Department of Fish and Wildlife

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State of California – Natural Resources Agency
 DEPARTMENT OF FISH AND WILDLIFE
 Central Region
 1234 East Shaw Avenue
 Fresno, California 93710
 (559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



August 7, 2024

Keith Alvidrez, Planner II
 Kern County Planning and Natural Resources Department
 2700 M Street, Suite 100
 Bakersfield, California 93301
CF-EIRComments@kerncounty.com

Subject: CarbonFrontier Carbon Capture and Storage Project (Project)
Draft Environmental Impact Report (DEIR)
State Clearinghouse No. 2023060293

Dear Keith Alvidrez:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report (DEIR) from Kern County Planning and Natural Resources Department (Lead Agency) for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

01-001

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

CDFW ROLE

01-002

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in take as defined by state law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Fully Protected Species: CDFW has jurisdiction over species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take except as specifically provided for in Fish and Game Code.

Bird Protection: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Other Special Status Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any state or federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines (California Code of Regs tit. 14, Chapter 3, § 15380), CDFW recommends it be fully considered in the environmental analysis for the Project.

PROJECT DESCRIPTION SUMMARY

Proponent: Aera Energy, LLC

Objective: Aera Energy, LLC proposes the construction and operation of a carbon capture and storage (CCS) facility over portions of the existing and contiguous South Belridge and North Belridge oil fields near the community of Lost Hills in western Kern County. In the DEIR, the Lead Agency indicates the CCS facility would involve the construction of appurtenant structures for the capture, transport, and subsurface injection (geologic sequestration) of carbon dioxide (CO₂). Once the Project is implemented, CO₂ would be captured at newly constructed facilities within the South Belridge oil field and transported in newly constructed pipelines to injection wells in the North Belridge oil field, a distance of at most, eleven miles. These injection wells will include newly constructed injection wells as well as abandoned oil production which have been retrofitted to function as injection wells. The nine injection wells will be used to inject the captured CO₂ into a depleted underground oil- and gas-bearing geologic formation where it will be permanently sequestered. The receiving underground formation is estimated to underly approximately 2,290 acres of land owned by Aera Energy, LLC and at capacity will contain as much as 44.1 million tons of

CO₂. In addition to the nine injection wells and 14.7 miles of pipeline, the Project will involve eight monitoring wells.

In response to a Notice of Preparation (NOP) circulated for public comment by the Lead Agency, June 9, 2023, CDFW submitted comments (in a letter dated July 6, 2023) which, in part, recommended the Lead Agency address:

- the need for nightwork during construction or operations/maintenance of the facilities;
- construction of the pipeline (aboveground vs underground, support of aboveground sections);
- the phase of the CO₂ transported through the pipeline (gaseous or liquid); and
- potential catastrophic events (and emergency responses to those events) which could occur along the pipeline, at the capture facilities, and at the injection facilities over the life of the Project.

The DEIR addressed the above listed items reporting that:

- nightwork would be limited to nighttime responses to emergency situations and temporary continuous drilling activities during the construction phase. In the DEIR the Lead Agency imposes limitations on any artificial lighting that would be necessitated by these night work activities;
- the CO₂ conveyance and distribution pipelines (and associated water lines) would be installed above ground over concrete/steel support structures constructed at grade at about 20-foot intervals along the length of the Project, except in those areas where the pipelines intersect roads. In these areas where the pipelines intersect roads, the pipelines would be buried underground employing trenching techniques;
- the CO₂ will be transported in its vapor and dense phase (under pressure) states; and
- the Project proponent has developed an emergency response plan to respond to suspected endangerment of: the underground source of drinking water, human health, or the environment from the non-toxic, non-flammable CO₂ which at standard temperatures and pressure is gaseous and heavier than air. Shutoff valves will be incorporated into the conveyance/injection system which will be used to shut the system down in the event of a leak from the pipeline or the underground storage formation.

Location: The Project Site exists within the administrative boundaries of the existing South Belridge and North Belridge oil fields, which adjoin each other (one immediately north of the other) and are generally west of State Route 33 and north and south of Lerdo Highway. The oil fields containing the Project Site are approximately seven miles southwest of the community of Lost Hills and approximately 30 miles northwest of the city of Bakersfield in Kern County, California.

Timeframe: The CO₂ collection, conveyance, injection, and monitoring systems will require between two and three years to construct and the system is expected to operate for approximately 20 years after construction is complete. Monitoring of the sequestered CO₂ could continue for another 50 years.

COMMENTS AND RECOMMENDATIONS

01-005

Special-Status Species: Special-status species are known to exist in the vicinity of the Project Site and there is the potential for the Project to impact state and federally listed species. Records from the California Natural Diversity Database (CNDDDB) show that the following special-status species, including state and federally listed species (CDFW 2023) could be impacted: the state threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); the state and federally endangered and state fully protected blunt-nosed leopard lizard (*Gamelia sila*); the state and federally endangered and California Rare Plant Ranked (CRPR) 1B.1 California jewelflower (*Caulanthus californicus*); the state and federally endangered giant kangaroo rat (*Dipodomys ingens*), Tipton kangaroo rat (*Dipodomys nitratoide nitratoide*); the state threatened San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), tricolored blackbird (*Agelaius tricolor*), and Swainson’s hawk (*Buteo swainsoni*); the federally endangered and state species of special concern Buena Vista Lake ornate shrew (*Sorex ornatus relictus*); the federally endangered and CRPR 1B.2 San Joaquin woollythreads (*Monolopia congdonii*) and Kern mallow (*Eremalche parrye ssp. kernensis*); the candidates for state listing Temblor legless lizard (*Anniella alexanderae*) and Crotch’s bumble bee (*Bombus crotchii*); the state species of special concern burrowing owl (*Athene cunicularia*), short-nosed kangaroo rat (*Dipodomys nitratoide brevinasus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), western spadefoot (*Spea hammondi*), American badger (*Taxidea taxus*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), and Le Conte’s thrasher (*Toxostoma lecontei*); and the CRPR 1B.1, 1B.2 and 4.2 California alkali grass (*Puccinellia simplex*), Coulter’s goldfields (*Lasthenia glabrata ssp. coulteri*), heartscale (*Atriplex cordulata var. cordulata*), Lost Hills crownscale (*Atriplex coronata var. vallicola*), recurved larkspur (*Delphinium recurvatum*), showy golden madia (*Madia radiata*), and Hoover’s eriastrum (*Eriastrum hooveri*).

In CDFW’s July 2023 letter providing comments on the Lead Agency’s NOP, CDFW recommended that a habitat assessment be conducted at and in the vicinity of the Project Site for the aforementioned **plant** species. In the DEIR, the Lead Agency reports that no individuals of the ten plant species listed above were observed during 2023 botanical surveys, and that they all have a “low” or only “moderate” potential to occur or are “not likely to occur.” Although none of the special status plants were observed during the 2023 botanical survey, the Lead Agency states the Project proponent will conduct additional botanical surveys, implement no-disturbance buffers, obtain take authorization, conduct restoration, and mitigate for Project-related impacts to habitat thereby reducing the Project-related impacts to special status plants at the Project Site to a less than significant level.

01-006

In CDFW’s July 2023 letter providing comments on the Lead Agency’s NOP, CDFW recommended that a habitat assessment be conducted at and in the vicinity of the Project Site for the aforementioned **animal** species. In the DEIR, the Lead Agency reports that during reconnaissance surveys conducted at the Project Site, no individual western spadefoot, tricolored blackbird, burrowing owl, LeConte’s thrasher, Crotch’s bumble bee, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, Tulare grasshopper mouse, San Joaquin kit fox, San Joaquin pocket mouse, Buena Vista Lake ornate shrew, American badger, or Temblor legless lizard were observed. However, individual Swainson’s hawk, horned lark, prairie falcon, loggerhead shrike, San Joaquin antelope squirrel, blunt-

01-007

Kern County Planning and Natural Resources Department
August 7, 2024
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nosed leopard lizard, and San Joaquin coachwhip were observed during reconnaissance surveys of the Project Site. Additionally, CDFW understands that two individual Crotch's bumble bee were incidentally observed at the Project Site by the Project proponent. The Lead Agency has appropriately included requirements for additional focused/protocol surveys, no-disturbance buffers, take authorization (for those species which are state or federally listed), restoration of habitat, which is only temporarily impacted, and mitigation for permanent impacts to habitat thereby reducing the Project-related impacts to plants at the Project Site to a less than significant level.

01-007 con

After reviewing the provided CEQA document, CDFW concurs with the biological resources related analyses and measures proposed in the DEIR and recommends that all such measures in the DEIR be carried forward into the Final EIR. CDFW has determined the biological resource mitigation measures as currently documented in the DEIR are sufficient for mitigation of potential project related impacts to listed species. Please note that implementation of certain mitigation measures such as the relocation of listed species would constitute take of listed species under CESA, and erecting exclusion fencing could also result in take of listed species under CESA. Such take of any species listed under CESA would be unauthorized if an Incidental Take Permit (ITP) pursuant to Fish and Game Code section 2081(b) was not acquired in advance of such actions. It is recommended to consult with CDFW before any ground disturbing activities commence and to obtain an ITP if take (including capture related to salvage and relocation) cannot be avoided.

01-008

If you have any questions, please contact Steven Hulbert, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at (559) 575-6415, or by electronic mail at Steven.Hulbert@wildlife.ca.gov.

Sincerely,

DocuSigned by:

Gerald Hatler

37BF80A1646F41C...

FOR Julie A. Vance
Regional Manager

ec: United States Fish and Wildlife Service
Justin Sloan; Justin_Sloan@fws.gov

California Department of Fish and Wildlife
LSA/1600; R4LSA@wildlife.ca.gov

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REFERENCES CITED

California Department of Fish and Wildlife. 2023. Biogeographic Information and Observation System (BIOS). <https://www.wildlife.ca.gov/Data/BIOS>. Accessed June 27, 2023.

Comment 1

California Department of Fish and Wildlife

1-001

Thank you for your comment and participation in the public process. This comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

1-002

The comment states that CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. The comment does not raise any specific issues related to the adequacy of the REIR and therefore does not require a detailed response.

1-003

The comment states that CDFW is also submitting comments as a Responsible Agency and has legal responsibility for the welfare of fully protected species, birds, their eggs and nests, and other special status plants and animals pursuant to the California Endangered Species Act (CESA). The comment does not raise any specific issues related to the adequacy of the DEIR and therefore does not require a detailed response.

1-004

The comment reviews the description and location of the proposed project. The comment does not raise any specific issues related to the adequacy of the REIR and therefore does not require a detailed response.

1-005

The comment notes that the project area is known to support high densities of several special-status animal species including, but not limited to, the blunt-nosed leopard lizard, giant kangaroo rat, and San Joaquin kit fox. It is noted that the Project Area is also in the range of several special-status plant species including, but not limited to, the California jewelflower. The comment does not raise any specific issues related to the adequacy of the DEIR and therefore does not require a detailed response.

1-006

The comment noted that CDFW previously recommended that a habitat assessment be conducted at and in the vicinity of the Project Site for the aforementioned plant species. It is noted that the DEIR indicates none of the listed plant species were observed during the 2023 biological surveys and habitat assessments stated in the Biological Resources Technical Report (Appendix C-1) and that the Project proponent will conduct additional botanical surveys, implement no-disturbance buffers, obtain take authorization, conduct restoration, and mitigate for Project-related impacts to habitat thereby reducing the Project-related impacts to special status plants at the Project Site to a less than significant level. The comment does not raise any specific issues related to the adequacy of the DEIR and therefore does not require a detailed response.

1-007

The comment noted that CDFW previously recommended that a habitat assessment be conducted at and in the vicinity of the Project Site for the aforementioned animal species. It is noted that the DEIR indicates that several special-status animal species were observed during reconnaissance surveys including, but not limited to, Swainson's hawk, loggerhead shrike, and blunt-nosed leopard lizard. Additionally, two individual Crotch's bumble bee were incidentally observed at the Project Site. It is also noted that appropriate requirements were included in the DEIR for additional focused/protocol surveys, no-disturbance buffers, take authorization, restoration of habitat, which is only temporarily impacted, and mitigation for permanent impacts to habitat thereby reducing the Project-related impacts to plants at the Project Site to a less than significant level. The comment does not raise any specific issues related to the adequacy of the DEIR and therefore does not require a detailed response.

1-008

The comment noted that implementation of certain mitigation measures such as the relocation of listed species would constitute take of listed species under CESA, and erecting exclusion fencing could also result in take of listed species under CESA. Commenter's remarks regarding Incidental Take Permits (ITP) and concluding remarks are noted. Such take of any species listed under CESA would be unauthorized if an Incidental Take Permit (ITP) pursuant to Fish and Game Code section 2081(b) was not acquired in advance of such actions. It is recommended to consult with CDFW before any ground disturbing activities commence and to obtain an ITP if take (including capture related to salvage and relocation) cannot be avoided.

Through implementation of MM 4.4-2, no incidental take of any listed species would occur unless the incidental take is authorized by applicable State and federal wildlife agencies in the form of a permit or other written authorization.

2: Caltrans

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From: [Evans, Marcus B@DOT](mailto:Evans.Marcus.B@DOT)
To: [CF-EIR Comments](#)
Subject: Caltrans has reviewed KER - 33 - 49.378 - draft EIR carbon frontier CCS project by Area Energy LLC
Date: Wednesday, July 10, 2024 3:11:45 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Caltrans has reviewed KER - 33 - 49.378 - draft EIR carbon frontier CCS project by Area Energy LLC, which proposes a draft EIR for the carbon frontier carbon capture and storage (CCS) project - The proposed project would construct and operate a CCS facility for permanent underground storage of up to 40 million metric tons of carbon dioxide (CO2) in the storage space (referred to as the 64 Zone reservoir) on approximately 12,362 surface acres in the North and South Belridge oilfield in unincorporated Kern County and finds this project will have no imp act to Caltrans ROW.

Sincerely
<https://ld-igr-gts.dot.ca.gov/district/6/report/33239?save=true>

02-001

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Comment 2

Caltrans

2-001

Thank you for your comment and participation in the public process. This comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. As detailed in Section 4.17, the DEIR contains a mitigation measure that would minimize impacts to Caltrans facilities from construction traffic. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

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7.2.3 Local Agencies

3: Kern County Public Works

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Office Memorandum

To: Lorelei Oviatt, Director
Planning and Natural Resources Department
Attn: Keith Alvidrez, Planner II

July 26, 2024

From: Cesar Ayon, Engineering Manager *CA*
Public Works Department/Development

Subject: 7-8.3.b Draft Environmental Impact Report - Carbon Frontier CCS Project by Aera Energy, LLC, (PP23402)

Development Review Division

This Division has reviewed the subject project and has no comment.

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Rodd Parke of this Division at (661) 862-8848.

Floodplain Management Division

This Division has reviewed the subject project and has no comment.

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Brian Blaise of this Division at (661) 862-5098.

Sewer and Water Division

This Division has reviewed the subject project and has no comment.

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Kyle Perez of this Division at (661) 862-8852.

CSA Division

This Division has reviewed the subject project and has no comment.

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Miguel Munoz of this Division at (661) 862-8908.

03-001

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Comment 3

Kern County Public Works

3-001

Thank you for your comment and participation in the public process. This comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

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7.2.4 Interested Parties

4: Center for Biological Diversity & Group

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August 12, 2024

Keith Alvidrez

Planner II

Kern County Planning and Natural Resources Department

2700 "M" Street, Suite 100

Bakersfield, CA 93301

Submitted via email to AlvidrezK@kerncounty.com

**Re: Comment on Draft EIR for CarbonFrontier CCS Project by Aera Energy, LLC,
SCH 2023060293**

Dear Mr. Alvidrez,

The Center for Biological Diversity, Central California Environmental Justice Network, and the Central Valley Air Quality Coalition submit the following comments on the Draft Environmental Impact Report (DEIR) for the CarbonFrontier Carbon Capture Sequestration Project by Aera Energy, LLC (PP23402) (hereinafter, the Project). The Project proposes capturing carbon dioxide (CO₂) from oil field (and possibly other outside) sources in the South Belridge oil field and transporting it over 14 miles of CO₂ pipelines to up to nine injection wells in the North Belridge oilfield.

The Project's DEIR suffers from the following deficiencies:

1. The County inexplicably is performing CEQA review out-of-sync with the EPA Region 9's review of the Project's Class VI CO₂ injection permits. Because the draft Class VI permits for this Project are still undergoing iterative technical review, the County's CEQA analysis is incomplete and unstable. The County took a different (and more rational) approach with the Carbon TerraVault I Elk Hills CCS Project. Syncing up review allowed the public to understand the whole of the Project and enabled public hearings with both Kern County and EPA. The same should happen here.
2. The DEIR's project description and objectives fail to match reality. For example, the applicant names as its objective reducing the "carbon intensity of Aera Energy's produced oil and gas by capturing CO₂" from oil field sources. Elsewhere, however, the DEIR notes that oil field sources will not fulfill the Project's CO₂ capture capacity and that outside sources are necessary. The County must revise the DEIR to capture the whole of the project's objectives and foreseeable future activities.

04-001

04-002

3. The DEIR's analysis of alternatives is flawed because of the failed project description and objectives, as noted above. Further, the alternatives analysis, including of the "no project" alternative, is hindered by an inadequate analysis of Project impacts.
4. The DEIR admits that "fatalities" at the nearby Wonderful Nut Farms solar project could result from a CO₂ leak, but the County offers no mitigations to address this. Alarming, the County does not even propose notifying workers at Wonderful Nut Farms should a CO₂ leak occur. The DEIR also unlawfully defers creation of a CO₂ leak emergency response plan, when instead this plan must be offered now for public input.
5. The GHG emissions of the Project are astounding, yet downplayed and largely ignored by the County. The Project's construction emissions alone would be the equivalent to burning 30.8 million pounds of coal, based on EPA's equivalencies calculator. The Project's GHG emissions for operational years 1-7 are *net positive*, even with CCS, and are the same as burning 4.1 million pounds of coal or operating 10 separate natural gas-fired power plants for one year. The County's GHG analysis section is also flawed for other reasons related to information disclosure and enforceable CO₂ capture rates.
6. The Project's energy use will amount to *nearly 3%* of the County's total annual electricity demand. But rather than mitigate this or offer enforceable limits, the County requests only a toothless annual report on energy use and offers the unsupported conclusion that the Project will nonetheless be efficient and necessary.
7. The DEIR's Biological Resources section unlawfully defers mitigations and ignores expert agency recommendations, including the legal requirement that the County must undergo Endangered Species Act consultation with the U.S. Fish and Wildlife Service *before* any ground-disturbing activity takes place.

Finally, as a foundational matter, our organizations disagree with the premise that carbon capture and storage (CCS) should play a role in achieving our state's goal of reaching near-zero emissions by midcentury in order to limit global warming to 1.5°C. CCS regularly over-promises and under-delivers on its carbon capture benefits all while keeping dirty industries like fossil fuels alive, making it a false solution that diverts attention and resources from transitioning to clean, renewable energy. Instead of approving carbon storage, the County should phase out fossil fuel development to prevent catastrophic climate change and environmental injustice. We detail the support for this position in our earlier comment submitted on this Project's Notice of Preparation.

For these reasons, we urge the County to re-do its DEIR for the Project, prepare and circulate a revised DEIR (as well as hold hearings), and ultimately reject the Aera CarbonFrontier Project.

I. The County Must Pause Review of the Project Until EPA Issues the Project's Draft Class VI CO₂ Injection Permits.

EPA Region 9 is conducting technical review of the Project's nine Class VI CO₂ injection well permits.¹ EPA's Class VI permit tracker indicates that the draft permit will be released for public comment sometime in early 2025.² The County must pause review of the Project under CEQA until EPA issues those draft Class VI permits.

The County properly aligned its CEQA review with the release of most of EPA's draft Class VI permits for the Carbon TerraVault Elk Hills CCS project (SCH 2022030180). Doing so enabled the public to review the land use and injection portions of the Elk Hills project together, as well as attend meetings with both County and EPA officials. There is no reason for the County to do anything different here. In fact, proceeding with CEQA review of the Project before EPA preliminarily approves the injection wells not only prevents the public from understanding the whole of the Project, but risks making the CEQA review inaccurate.

First, under CEQA, a "project" is defined as the *whole* of an action that has the potential to cause direct or indirect physical changes to the environment.³ Here, it is impossible for the County to disclose, analyze, and mitigate the impacts of the Class VI wells because they are still in flux. Before EPA releases the draft permits, the Project's Class VI wells may undergo big changes with cascading implications for environmental review. For example, Aera may request additional wells, EPA or Aera may change the wells' locations (thus changing the location and miles of pipeline), etc.

Second, because the Class VI wells may change in any number of ways, proceeding out-of-step with this critical Project component undermines the DEIR's project description. CEQA requires an "accurate, stable, and finite" project description.⁴ An inaccurate or truncated project description is prejudicial error because it fails to "adequately apprise all interested parties of the true scope of the project."⁵ Right now the County cannot provide a truly accurate project description until EPA issues the draft Class VI permits.

Third, the DEIR is plainly misleading in some of its language concerning the status of the injection permits and the County's reliance on the Project's pre-draft Class VI application. For example, the County asserts that "Aera Energy has fully characterized the EPA Area of Review, which will become the EPA-Approved Storage Area."⁶ Modeling the Area of Review (AoR) is part of an applicant's task when seeking a Class VI well, since the

¹ EPA Region 9, UIC Injection Permits, <https://www.epa.gov/uic/r9-uic-permits> (last visited July 30, 2024) (indicating that the "CarbonFrontier/Aera Energy LLC" Class VI application is "in technical review").

² EPA, UIC Class VI Permit Tracker, https://www.epa.gov/system/files/documents/2024-07/class-vi-permit-tracker_7-24-24.pdf (last updated July 19, 2024).

³ CEQA Guidelines § 15378(a); Cal. Pub. Res. Code § 21065.

⁴ *Cnty. of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193.

⁵ *City of Santee v. Cnty. of San Diego* (1989) 214 Cal.App.3d 1438, 1454-55.

⁶ CarbonFrontier DEIR at 1-8.

AoR critically “includes the area where the injected plume and its associated pressure front may impact pore fluids.”⁷ EPA, however, does not unquestioningly accept a permit applicant’s model AoR. EPA’s technical review is an iterative process, whereby the agency goes back-and-forth with the project proponent with questions and answers. For CarbonFrontier, this technical review is ongoing (see above). As recently as April 2024, Aera responded to EPA’s technical review comments for the site characterization and AoR modeling.⁸ Aera’s response to EPA is 17 pages long, and there is no indication whether EPA has accepted Aera’s answers on the AoR as final, or whether there will be follow-up questions. It is therefore inaccurate for the County to assert in the DEIR that Aera has “fully characterized” the AoR.

Similarly, the DEIR admits that its analysis of Geology and Soils is based in part on Aera’s Class VI application.⁹ Since the Class VI permits are undergoing ever-changing technical review, this creates shifting sands upon which the DEIR’s analyses rest. It is irrational to rely on pre-draft permits that change every few months, when instead the County must wait for EPA’s approved draft permits to be released.

Fourth, it will be difficult for the County to keep up with all of the technical review updates to the Class VI permit. This speaks to why the County must sync its CEQA review with that of EPA’s. For example, the DEIR includes a copy of the CarbonFrontier Class VI application from April 2024. Already that is out of date. EPA Region 9’s website updated the pre-draft CarbonFrontier application on July 9, 2024.¹⁰

II. The DEIR’s Project Objectives and Description Do Not Accurately Reflect CarbonFrontier’s Activities.

04-004

As with the section above, the DEIR’s project description concerning Project objectives and sources of CO₂ mislead the public and do not reflect the true scope of Project activities.

The applicant’s objectives in the project description include reducing “the carbon intensity of Aera Energy’s produced oil and gas by capturing CO₂ from produced gas (pre-combustion) and stationary sources (post-combustion).”¹¹ But the DEIR acknowledges that “operations related to oilfield” activities will not provide enough CO₂ to reach the “maximum injection capacity” of 3.3 million metric tons per year and “additional existing

⁷ EPA, Class VI Wells, <https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-carbon-dioxide> (last visited July 30, 2024).

⁸ Letter from Beau Gentry, Aera Energy LLC, to David Albright, EPA Region 9, Re: Request for Additional Information (April 9, 2024), available at EPA Region 9, UIC Injection Permits, <https://www.epa.gov/uic/r9-uic-permits>. For the County’s convenience, we are also attaching a copy of that letter when submitting this comment.

⁹ CarbonFrontier DEIR at 4.7-1 (“The analysis in this section is largely based on . . . the U.S. Environmental Protection Agency Class VI Permit Application Narrative for the Aera CarbonFrontier Project . . .”).

¹⁰ EPA Region 9, UIC Injection Permits, <https://www.epa.gov/uic/r9-uic-permits> (last visited July 30, 2024).

¹¹ CarbonFrontier DEIR at 3-8.

and new CO₂ sources . . . would need to be permitted and conveyed . . . for permanent underground storage.”¹² The DEIR lists “future project sources” such as cement, steel, and direct air capture.¹³ Clearly none of these future sources match the project objective of reducing the carbon intensity of Aera’s oil and gas. Instead, adding future sources *changes* and *enlarges* the Project objectives in a way that is not reflected in the DEIR. This is an error that implicates both the project description and analysis of alternatives.

Further, the DEIR provides nothing more than the name, location, type, and status of potential future sources of CO₂, and concludes with:

[T]hese projects are not required to be analyzed further in either the CTV I EIR or this EIR as approval of either Project does not compel approval, nor presume completion, of any other of the contemplated projects, no applications of these other projects are pending before the county, and there is not otherwise sufficient information available to allow for meaningful environmental review of the other projects at this time.¹⁴

A CEQA project description and analysis must include “future action” that is “a reasonably foreseeable consequence of the initial project” and would “be significant in that it will likely change the scope or nature of the initial project or its environmental effects.”¹⁵ The DEIR’s project description fails in both aspects with regard to sources of CO₂. Because Aera Energy, LLC merged with California Resources Corporation (CRC),¹⁶ we refer the County to Section I, subsection A of the July 18, 2024 comment letter from Earthjustice, et al. to the County on the Recirculated DEIR for CRC’s Carbon TerraVault I project for a description of why the potential future sources for CarbonFrontier are not so speculative as to evade analysis.¹⁷

III. The DEIR Fails to Analyze Adequate Alternatives.

The DEIR fails to properly put forward, describe, and analyze a reasonable range of alternatives. Under CEQA, a proper analysis of alternatives is essential to comply with the Act’s mandate that significant environmental impacts be avoided or substantially lessened where feasible. The analysis of alternatives lies at the “core of an EIR,” and an EIR must “ensure that all reasonable alternatives to proposed projects are thoroughly assessed by the responsible official.”

¹² *Id.* at 3-32. (Note that the text says additional sources would need to be “conveyed to CTV I”, but this is a typographical error, since the County appears to mean “conveyed to CarbonFrontier.”)

¹³ *Id.* at 3-32, 33.

¹⁴ *Id.* at 3-34.

¹⁵ *Laurel Heights, supra*, 47 Cal.3d at 396.

¹⁶ See CarbonFrontier DEIR at 3-33.

¹⁷ Comment from Earthjustice, et al. to Kern County Planning and Natural Resources Department, Re: Comments on the Recirculated Draft Environmental Impact Report for Carbon TerraVault I (July 18, 2024). We have attached that comment letter with our materials submitted for this comment period for the County’s convenience.

The DEIR's alternatives discussion is flawed for at least the following reasons: (1) it relies on an inadequate project description; (2) it relies on an inadequate set of project objectives; (3) it fails to properly or coherently discuss the "no project" alternative and compare it to the Project. The County must revise the DEIR to address these flaws.

04-005 cont

First, the DEIR's alternatives section is flawed because it is not based on a stable, accurate project description, as demonstrated above. Without a proper project description, it is not possible to effectively develop alternatives or compare Project impacts with alternatives in a way that is coherent and supported by substantial evidence.

Second, without a proper description and set of project objectives, it is impossible to adequately assess alternatives to the Project in a way that complies with CEQA. As noted above, the current project objectives artificially convey a purpose of only capturing CO₂ from Aera's onsite oil and gas operations.¹⁸ This is at direct odds with the County's plan to approve the whole of the CO₂ storage reservoir and the foreseeable "need" to add future, outside CO₂ sources.¹⁹ A proper statement of the lead agency's project objectives is essential to the development of an adequate alternatives analysis.²⁰ CEQA Guidelines section 15124(b) notes that a "clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary." That statement of the lead agency's objectives, in informing the lead agency's reasonable range of alternatives to a proposed project, cannot simply be delegated to a project proponent. A range of alternatives that is based exclusively on "the applicant's project objectives,"—as is the case here—does not comply with CEQA.²¹

Third, the DEIR's "no project" alternative discussion is flawed. The CEQA Guidelines require that the no project analysis discuss "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."²² This discussion must provide a "factually based forecast of the environmental impacts of preserving the status quo."²³ Here, the no project discussion is only a few cursory narrative paragraphs, with no supporting evidence or analysis. Also, statements like the following ignore the fact that

04-006

¹⁸ CarbonFrontier DEIR at 3-8.

¹⁹ *Id.* at 3-32.

²⁰ *North Coast Rivers Alliance, supra*, 243 Cal. App.4th at 666 (citing Pub. Resources Code, §21001(g) (internal quotation omitted)); see also CEQA Guidelines, §15124(b) (stating an EIR requires a statement of the objectives sought by the proposed project).

²¹ CEQA Guidelines, § 15124(b); see *Preservation Action v. San Jose* (2006) 141 Cal.App.4th 1336, 1351–52 ("Since CEQA charges the agency, not the applicant, with the task of determining whether alternatives are feasible, the circumstances that led the applicant in the planning stage to select the project for which approval is sought and to reject alternatives cannot be determinative of their feasibility. The lead agency must *independently* participate, review, analyze and discuss the alternatives in good faith." [citing *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 736]).

²² CEQA Guidelines, § 15126.6(e)(2).

²³ *Ctr. for Biological Diversity v. Dept. of Fish & Wildlife* (2015) 234 Cal.App.4th 214, 253.

phasing out oil field operations altogether would meet State climate goals, whereas approving CO₂ storage capacity only perpetuates operations and enables outside, additional sources of emissions:

Moreover, the No Project Alternative would not result in up to 40 million metric tons of concentrated CO₂ storage capacity. The No Project Alternative also would not support California's Executive Order B-55-18 for California to achieve carbon neutrality by 2045 and net-negative emissions thereafter.²⁴

This statement also plainly ignores the DEIR's own finding that the Project would generate 33.3 million tons of CO₂/e through 2045, and have *positive* greenhouse gas (GHG) emissions from anywhere between 108,000-1.1 million metric tons CO₂/e during Project years 1-7.²⁵ Proper analysis of a no project alternative would include this information.

Further, the Project's total emissions will produce significant air emissions and harm County residents. The DEIR says that emissions will "exceed the [Air District] thresholds for NO_x, PM₁₀, and PM_{2.5}, for which the Project region is nonattainment," exposing sensitive receptors to "substantial pollutant concentrations."²⁶ The cumulative air pollution impacts of the Project will also be "significant and unavoidable." The County must not approve a Project that *worsens* air quality when it already suffers some of the worst air quality in the country. The analysis of alternatives does not take air pollution into account, and the County must evaluate how alternatives could improve, rather than degrade, air quality.

IV. The DEIR's Analysis of Impacts and Mitigations Are Insufficient.

Discussion of a proposed project's environmental impacts is an essential component of an EIR.²⁷ The fundamental purpose of CEQA is to "inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made."²⁸ To do so, an EIR must contain facts *and* analysis, not just an agency's bare conclusions.²⁹ CEQA also requires an EIR to describe and adopt all feasible mitigation measures to address a project's significant environmental impacts.³⁰ Mitigation measures must be "fully enforceable through permit conditions, agreements, or other legally binding instruments."³¹

²⁴ CarbonFrontier DEIR at 1-20.

²⁵ *Id.* at 4.8-33.

²⁶ *Id.* at 1-11, 12.

²⁷ CEQA Guidelines, § 15126.2(a) ("An EIR *shall* identify and focus on the significant effects of the proposed project on the environment.") (emphasis added).

²⁸ *Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.*, 6 Cal.4th 1112, 1123.

²⁹ *Citizens of Goleta Valley, supra*, 52 Cal.3d at 568.

³⁰ Pub. Resources Code, § 21002; CEQA Guidelines, § 15126.4(a)(1).

³¹ CEQA Guidelines, § 15126.4(a)(1)(B), (a)(2).

The DEIR's analysis for several issue areas is incomplete or flawed. Further, a number of the County's mitigation measures are either insufficient or unlawfully deferred.

A. Safety, Emergency Response, and CO₂ Hazards

Troublingly and bewilderingly, despite the County acknowledging the immense risks of CO₂ ruptures and leaks—including possible fatalities—the DEIR characterizes the Project's impacts on safety and CO₂ hazards as “less than significant.”³² This appears to be based on flawed and unsupported reliance on various mitigations, including measures that have yet to even be formulated. But potential fatalities of Kern County residents, workers, and others must not be so easily brushed aside and left to chance. The County must amend its analyses and mitigations to fully address the Project's deadly risks.

Fatality risk to workers at Wonderful Nut Farms

The DEIR notes that Wonderful Nut Farms, which operates a solar panel area near the Project,³³ “may be exposed to a concentration of CO₂ greater than 4 percent, which may result in fatalities.”³⁴ Depending on the wind direction, CO₂ concentrations may exceed 7 percent up to 1,200 feet from the release.³⁵ This is alarming. What is also alarming, though, is that there is no mitigation measure to address the proximity of these workers to the Project, nor is there any measure to *even notify* Wonderful Nut Farms about a CO₂ leak.

Mitigation Measure 4.9-4 requires notification to “surface landowner[s] and sensitive receptors located *within 300 feet* of any hazardous materials/waste release, **other than CO₂**, immediately upon discovery.”³⁶ This mitigation measure does nothing to reduce the fatality risk of Wonderful Nut Farm workers: it is an inadequate distance (300 feet, versus the 1,200 feet modeled for a fatal CO₂ cloud), and does not even apply to CO₂. Mitigation measure 4.9-12, requiring that in the case of “emergencies or releases, this information shall be communicated . . . to the Kern County Fire Marshall” and other County officials “within 24 hours”³⁷ also does not address the immediate need for people in the vicinity of the Project to either shelter in place or try to evacuate to escape the harms of a CO₂ leak.

There is no other mitigation that requires notification of nearby receptors when a CO₂ leak occurs. It is imperative that the County require notification to all landowners, residents, and sensitive receptors within *at least* 1200 feet of the Project that there could

³² See CarbonFrontier DEIR at 1-52 to 1-61 (describing direct and cumulative impacts after mitigation).

³³ While the DEIR says that the solar panel area is “to the west” of the Project, it does not disclose the exact distance.

³⁴ CarbonFrontier DEIR at 4.9-54.

³⁵ *Id.*

³⁶ *Id.* at 1-55

³⁷ CarbonFrontier DEIR at 1-57.

be a risk of deadly CO₂ concentrations. Then, the County must require immediate notification to these parties upon discovery of a CO₂ leak. It is unsupported and unconscionable to do otherwise.

Similarly, Mitigation Measure 4.3-6 should be amended. It currently prohibits any Class VI or Class II injection well from being located within 4000 feet of any sensitive receptor.³⁸ But as noted above, CO₂ pipelines can also cause serious harms or fatalities. This measure should prohibit any injection well *as well as CO₂ pipeline* from being within 4000 feet of any sensitive receptor, *as well as* residence or business. Also, given that the Satartia CO₂ leak spread for miles, the County should consider extending the buffer from 4000 feet to a larger distance.

Deferred creation of an emergency response plan

The County improperly deferred creating an emergency response plan to address CO₂ leaks. According to Mitigation Measure 4.9-18:

Prior to commencement of any injection of CO₂, and in addition to the emergency response plan required by the EPA UIC permit, the owner/operator shall prepare an emergency incident response plan that addresses, advance leak detection methods and communication with fire responders, emergency medical response, Kern County Fire and Kern County Sheriff notification and protocols for incident management.³⁹

There is no reason for the County not to create that emergency response plan now, and for that plan to be included in DEIR materials for public review and input. There are expert organizations around the country, such as the Pipeline Safety Trust, that could provide valuable input to that plan if it were released with the DEIR and subject to public comment. Moreover, first responders—such as those in Satartia, MS who endured a CO₂ leak response—could also review and weigh in. Instead, the County imagines a behind-closed-doors process where the *project operator* prepares a plan. It is irrational to let a project developer create an emergency response plan. Doing so and deferring its creation is unsupported, dangerous, and violates CEQA.

The “[f]ormulation of mitigation measures should not be deferred until some future time.”⁴⁰ As an exception, “measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.”⁴¹ Further, even where the deferred formulation of mitigation might be allowable, there is a point beyond which delayed implementation is not allowed: “[o]nce

³⁸ *Id.* at 1-31.

³⁹ *Id.* at 4.0-73.

⁴⁰ CEQA Guidelines, § 15126.4(a)(1)(B).

⁴¹ *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 856.

the project reaches the point where activity will have a significant adverse effect on the environment, the mitigation measures must be in place.”⁴² An emergency response plan is not a set of “performance standards” that may be deferred. Instead, the County must work on a proposed plan and open it up to input as part of the EIR process.

B. Climate Change & GHG Emissions

CEQA requires that EIRs consider a project’s reasonably foreseeable indirect impacts on the environment,⁴³ which includes indirect greenhouse gas (GHG) emission impacts. An environmental review must evaluate these impacts to the extent doing so is feasible and the effects are not speculative.⁴⁴ CEQA Guidelines Appendix G requires lead agencies to evaluate whether “the project [would] generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.”⁴⁵

Significant GHG Emissions

The Aera Project will emit a significant amount of GHGs. This is unacceptable at a time of climate crisis, and when every ton of GHGs puts the goal of keeping warming to the Paris Agreement’s goal of 1.5 degrees Celsius farther out of reach. For this reason alone, the County must deny the Project’s permit application.

The DEIR should give the public context for what the Project’s GHGs mean. For example, EPA has a GHG Equivalencies Calculator that translates what every ton of CO₂/e emissions mean in concrete terms that the public can understand.⁴⁶ For the CarbonFrontier Project, the EPA Calculator shows the following:

CarbonFrontier Emissions Category/Source	Estimated GHG Emissions Per DEIR	EPA Equivalent/Translation
Construction	27,975 MT CO ₂ /e ⁴⁷	30.8 million pounds of coal burned
Mobile and indirect electricity	4 million MT CO ₂ /e ⁴⁸	4.4 billion pounds of coal burned 10.7 natural gas-fired power plants in one year

⁴² *Id.* at 860, quoting *POET, LLC v. Cal. Air Resources Bd.* (2013) 218 Cal.App.4th 681, 738.

⁴³ Cal. Code Regs., tit. 14, § 15064(d).

⁴⁴ *See id.* § 15145.

⁴⁵ CEQA Guidelines, Appendix G.

⁴⁶ EPA, GHG Equivalencies Calculator, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

⁴⁷ CarbonFrontier DEIR at 4.8-24.

⁴⁸ *Id.* at 4.8-25.

CarbonFrontier Emissions Category/Source	Estimated GHG Emissions Per DEIR	EPA Equivalent/Translation
Project operation, years 1-7 (years of “net positive” emissions)	3.8 million MT CO ₂ /e ⁴⁹	4.1 million pounds of coal burned 10.1 natural gas-fired power plants in one year

The total GHG emissions of the Project are astounding and certainly significant. The Project’s construction emissions *alone* are equivalent to burning over 30 million pounds of coal. Nothing in the Project’s capture and injection of CO₂ negates those *actual GHG emissions* that undermine California’s GHG reduction goals and contribute to global climate change. Similarly, the Project’s year 1-7 emissions are *net positive*, even with CCS, and are the same as burning 4.1 million pounds of coal or operating 10 separate natural gas-fired power plants for one year. This is unacceptable. Kern County cannot allow such an increase in GHG emissions. There is no mitigation that reduces these impacts nor is there any overriding concern to justify these emissions in service of keeping oil field operations alive.

Moreover, the Project’s supposed reduction in GHG emissions over time are based on the vague notion that the oil fields will accept outside sources of CO₂. The DEIR is trying to have it both ways: it is saying that future sources of CO₂ are too vague to analyze in the DEIR (see section II, *supra*) while also relying on these future sources to ratchet down the GHG estimates. The DEIR must pick one story of future CO₂ sources—supported by substantial evidence-- and re-do the DEIR in line with this evidence.

Rate of Capture

While we appreciate Table 4.8-5 showing the Projected Injection rates of the Project, the DEIR leaves out key information describing the *rate of capture* estimated for the three on-site sources of CO₂. Showing only projected injection amounts does not provide insight into what is happening at each CO₂ source. This information should be easily obtainable from the project proponent.

The NOP claimed that the Project’s amine absorption processes would “react with and bind with over 90 percent of the incoming CO₂.”⁵⁰ The DEIR makes this claim with the Pre-C capture produced gas stream, but it says nothing of the binding rate for Post-C capture. The DEIR must explain what the binding rate is with the Post-C capture sources. The DEIR must then account for the CO₂ that is not captured in the amine processes.

⁴⁹ *Id.*

⁵⁰ Aera CarbonFrontier Notice of Preparation at 8 (June 2023).

In addition, the DEIR must acknowledge that CCS projects historically have over-promised and under-delivered on their carbon capture promises.⁵¹ For example, Chevron's natural gas-and-CCS project promised 80% capture, but after five years, achieved less than half of that.⁵² A Stanford study found that the energy penalty of CCS can be up to 25% (meaning, whatever the capture promise is must be reduced by the energy penalty to calculate the true capture benefit) and concluded that CCS can increase air pollution and is not efficient at reducing carbon in the atmosphere.⁵³ We recommend that the County add an enforceable mitigation measure holding Aera accountable for meeting a certain capture rate; if that rate is not met, the Project (and associated facilities) must be shut down.

CO₂ Leakage

The DEIR acknowledges, directly and indirectly, that leaks may occur. For example, the DEIR notes that "the level of seismic activity in the region potentially could result in CO₂ leakage from underground storage."⁵⁴ Operational mitigations "may include . . . surface and near surface leak monitoring."⁵⁵ And in the GHG section, the DEIR appropriately notes that "[s]hould any of the injected CO₂ leak . . . , then GHG emissions from the project would be potentially significant."⁵⁶ The DEIR then says that Mitigation Measures 4.8-1 through 4.8-6 "would greatly reduce the likelihood of CO₂ escaping from the reservoir."⁵⁷

But the mitigation measures named do little to provide evidence that injected CO₂ will stay in the reservoir. As explained in the expert report prepared for Earthjustice, et al. on the Carbon TerraVault I CCS project DEIR, "[t]here are no permanence criteria in the Class VI federal regulations," as the EPA standards are aimed at water protection.⁵⁸ To analyze the Project's potential impacts, therefore, the County must define its permanence

⁵¹ IEEFA, The carbon capture crux: Lessons learned (Sept. 2022), <https://ieefa.org/resources/carbon-capture-crux-lessons-learned>.

⁵² Guardian UK, Gas giant Chevron falls further behind on carbon capture targets for Gorgon gasfield (July 15, 2022), <https://www.theguardian.com/environment/2022/jul/16/gas-giant-chevron-falls-further-behind-on-carbon-capture-targets-for-gorgon-gasfield>.

⁵³ Jacobson, Mark Z., The health and climate impacts of carbon capture and direct air capture, *Energy & Env'tl Sci.*, Vol. 12 (2019), <https://pubs.rsc.org/en/content/articlelanding/2019/ee/c9ee02709b/unauth#!divAbstract>; see also Stanford News, Stanford study casts doubt on carbon capture (Oct. 25, 2019), <https://news.stanford.edu/2019/10/25/study-casts-doubt-carbon-capture/>.

⁵⁴ CarbonFrontier DEIR at 4.7-16.

⁵⁵ *Id.* at 3-66; see also *id.* 3-74 (describing post-injection CO₂ leak detection that "would be implemented").

⁵⁶ *Id.* at 4.8-28.

⁵⁷ *Id.*

⁵⁸ DiGiulio, Dom, Ph.D., "Evaluation of the Recirculated Draft Environmental Impact Report – Carbon TerraVault I Facility" (July 16, 2024) [hereinafter, "DiGiulio Report"]. We have attached this report as part of the materials submitted as part of this comment. The report is appended as part of the Earthjustice, et al. comment (2024) on the Carbon TerraVault I DEIR.

criteria--that is, what is the level of retention of CO₂ in the ground that will be considered as “permanent.” Dr. DiGiulio recommends, based on current research, that a criterion for leakage to the atmosphere is specified as a 95% probability of occurrence that 99% of CO₂ will be retained within subsurface media over a period of 1,000 years.⁵⁹

04-11 cont

There are at least 71 abandoned oil and gas wells penetrating the CO₂ injection and storage area; 40 of these must be plugged and before the Project may commence.⁶⁰ As of March 2023, Aera has 2,449 idle wells and 24,830 plugged/abandoned wells across the Belridge oilfields.⁶¹ Dr. DiGiulio’s report explains that leakage of CO₂ from wellbores is widely considered to be one of the most significant leakage pathways for geologic storage of CO₂.⁶² Here, as with the Carbon TerraVault I project, given the large number of well penetrations in the area, a robust evaluation of wellbore integrity of both plugged and unplugged wells prior to injection is required to assess the CO₂ retention.⁶³ However, the DEIR did not conduct this analysis and thus fails to support its conclusions regarding CO₂ retention with evidence.

Other GHG Impacts

The Project’s NOP said that “flue gas would continue to be vented to the atmosphere as allowed under the facilities current permits.”⁶⁴ The DEIR does not contain this statement, but it also does not explain whether or not uncaptured flue gas will be vented. The County should explain whether this will happen or not, and if it will happen, what the emissions impacts will be.

04-012

C. Energy

The DEIR fails to adequately disclose, analyze, and mitigate the Project’s impacts to energy resources.

04-013

First, the DEIR seems to think that its threshold determination should be whether the Project is energy efficient compared to other projects. There is no support for that approach. CEQA Guidelines, Appendix F lays out the following directives for proper discussion of a proposed project’s energy impacts in an EIR:

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- (1) decreasing overall per capita energy consumption,
- (2) decreasing reliance on fossil fuels such as coal, natural gas and oil,
- and

⁵⁹ DiGiulio Report at 11.

⁶⁰ CarbonFrontier DEIR at 3-2; *id.* at 3-41.

⁶¹ *Id.* at 3-23.

⁶² DiGiulio Report at 3.

⁶³ *Id.* at 8.

⁶⁴ Aera CarbonFrontier Notice of Preparation at 9 (June 2023).

(3) increasing reliance on renewable energy sources.⁶⁵

The DEIR's conclusion on construction-related energy impacts states:

Overall, construction activities associated with the proposed project would result in the consumption of petroleum-based fuels. However, there are no unusual project characteristics that would necessitate the use of construction equipment or vehicles that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.⁶⁶

This conclusion erroneously begins by asking whether the Project would be *more* inefficient, wasteful, or unnecessary than at other construction sites in the region. But CEQA instead requires an evaluation of whether this project is energy-efficient, not average. CEQA further requires mitigation of impacts to energy consumption, where feasible. The claim that the Project has no significant impact on energy resources is thus not supported by substantial evidence. The EIR should require, for example, use of electricity-powered construction equipment and vehicles in all feasible applications. Because operations will be powered by the on-side natural gas cogeneration facility,⁶⁷ the County should also consider requiring operations to be powered by true renewables, like on-site wind or solar.

Second, the energy demand for Project operations will be significant, but the DEIR brushes this aside based on an unsupported policy statement. The Project's expected maximum electric load will be approximately 49 MW.⁶⁸ This amounts to *nearly* 3% of the County's total annual electricity demand.⁶⁹ As shown in the DEIR's GHG emissions table, the "energy penalty" of running the capture facilities plus indirect electricity emissions total 4 million tons of CO₂/e.⁷⁰ But rather than call this "inefficient, wasteful, or unnecessary", and thus significant, the County broadly concludes that "the energy would be consumed efficiently and would be typical of industrial carbon capture projects," and anyways, CCS projects "are essential to achieve the state's climate goals."⁷¹ Therefore, "any energy consumed by the project is not considered to be wasteful or unnecessary."⁷²

⁶⁵ CEQA Guidelines, Appendix F, § 2.

⁶⁶ CarbonFrontier DEIR at 4.6-14.

⁶⁷ *Id.* at 1-17.

⁶⁸ *Id.* at 4.1-15.

⁶⁹ *Id.*

⁷⁰ *Id.* at 4.8-25.

⁷¹ *Id.* at 4.1-16.

⁷² *Id.*

There is no evidence to support the County’s conclusion. There are no facts to support that the Project is using energy efficiently. There are no facts to support that the Project’s energy use is typical of other CCS projects (and even still, see above, this type of comparison is not appropriate under the CEQA Guidelines.) There is also no evidence that the Project is “necessary,” given that the Project objectives are to keep oil field operations alive, which will derail California’s climate goals. Instead, the County must revise the DEIR and create enforceable mitigation measures so that the use of energy is shown to be efficient and the consumption is not inefficient, wasteful, or unnecessary.

04-013 cont

Third, though the DEIR concludes that cumulative energy use will be significant,⁷³ Mitigation Measure 4.6-1 addresses this only by requiring an “annual report on the total amount of electricity consumed by the carbon capture facilities”⁷⁴ There is nothing in the mitigation to then require any reduction in energy use or striving for efficiency. This is a toothless mitigation that must be revised so as to meaningfully address and reduce impacts from the Project’s energy use.

Fourth, the DEIR concludes that the Project will meet CEQA Appendix F requirements as the State phases out “oil and gas extraction and replaces gas power plants and fossil fuel industry sources with newer carbon capture facilities and renewable energy sources.”⁷⁵ Similarly, the DEIR claims that implementing the Project will “decrease reliance on fossil fuels, including natural gas.”⁷⁶ This makes no logical sense. The Project’s CO₂ sources are part of running the oil fields’ operations. Constructing the CCS equipment will require fossil fuels, and the CCS equipment will be powered by natural gas.⁷⁷ In other words, the Project is inextricably linked to gas power plants and the fossil fuel industry. The Project in no way *decreases* reliance on fossil fuels; the exact opposite is true. The only way to meet Appendix F requirements is to phase out oil field operations altogether, not add additional emissions sources (CCS construction and operation), as is proposed here.

04-014

D. Biological Resources

Protecting biological resources is a fundamental tenet of CEQA. Under Public Resources Code section 21001(c), it is the policy of the state to “[p]revent the elimination of fish or wildlife species due to man’s activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” The Biological Resources section’s analyses and mitigations fall short on several grounds.

04-015

⁷³ *Id.* at 1-13.

⁷⁴ *Id.* at 1-50.

⁷⁵ *Id.* at 1-17.

⁷⁶ *Id.*

⁷⁷ See, e.g., *id.* at 4.6-18 (“The majority of energy consumption during project operation would be natural gas consumption by operational equipment, operational electrical consumption, and maintenance trips and employee trips.”).

Impacts of CO₂ Leaks on Wildlife, Plants, and Habitats

The DEIR fails to account for the evidence showing that operating CCS projects can be severely detrimental, or even deadly, to wildlife, plants, and habitats.

The Project poses risks to biological resources from leakage and uncontrolled blowouts of compressed CO₂ from pipelines and injection wells. Compressed CO₂ forms a low dense cloud that can spread long distances from the release site and sicken and asphyxiate living things, including plants and animals.⁷⁸ CO₂ injection in oil fields and CO₂ pipeline transport have resulted in leakage and blowouts in several states that have caused wildlife deaths and significant habitat degradation. For example, a CO₂ injection well blowout in the Tinsley field, Mississippi, took 37 days to bring under control and killed deer, birds, fish, and other animals.⁷⁹ The blowout ejected CO₂ along with mud and drilling fluids, requiring the removal of 27,000 tons of drilling mud and contaminated soil and 32,000 barrels of liquids, and causing extensive habitat damage.⁸⁰ Other examples of CO₂ harms to wildlife and plants, and research on this topic, include:

- In 1986, a sudden, catastrophic release of CO₂ from Lake Nyos in Cameroon killed 1,700 people and 3,000 cattle. The CO₂ spread 10 km from the lake. Bird, insect, and small mammal populations in the area were not seen for at least 48 hours after the event.⁸¹
- Experiments with controlled injections of CO₂ into soil showed adverse effects on plants in response to CO₂ exposure. Biomass changes were seen in all plants studied; for example, clover plants decreased by 79% while grass decreased by 42%. The researchers' overarching conclusion was that elevated concentrations of soil CO₂ damages both soil microbiology and growing vegetation.⁸²
- Other research on CO₂ and plants showed reduced plant growth and extensive mortality where CO₂ concentrations were greatest in the soil. For the plants that survived, root and shoot growth was significantly lower than in controls.

⁷⁸ See Pipeline Safety Trust and AccuFacts, *CO₂ Pipelines: Dangerous and Under-Regulated* (March 2022), <https://pstrust.org/wp-content/uploads/2022/03/3-23-22-Final-Accufacts-CO2-Pipeline-Report2.pdf>.

⁷⁹ Zegart, Dan, *The Gassing of Satartia*, Huffington Post (Aug. 26, 2021), https://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f.

⁸⁰ Amy, Jeff, *Oil spills in Mississippi, Alabama lead to \$3.5 million in penalties for the company*, Clarion Ledger (Apr. 30, 2019), <https://www.clarionledger.com/story/news/2019/04/30/oil-spills-penalties-mississippi/3625587002/>.

⁸¹ Kling, G.W. et al., *The 1986 Lake Nyos Gas Disaster in Cameroon, West Africa*, 236 Science 169 (1987).

⁸² Smith, K.L. et al., *Environmental Impacts of CO₂ Leakage: Recent Results from the ASGARF Facility*, UK, 37 Energy Procedia 791 (2013).

Reproductive variables such as number of seeds per plant and seed dry weight per plant were also reduced compared to controls.⁸³

04-016 cont

It is an error for the DEIR not to acknowledge and analyze that a CO₂ leak could be harmful, or even deadly, to wildlife, and harmful to plants and soil ecosystems. Instead, the rundown of direct and indirect impacts fails to mention CO₂ leaks at all.⁸⁴

Even though the DEIR does not find impacts from CO₂, it includes a mitigation measure acknowledging such harms could occur and requiring an immediate shutdown “of all injection operations, compliance with all requirements of the EPA Class VI UIC permit and on-site consultant with California Fish and Game and USFWS.”⁸⁵ This is a useful mitigation but it is irrational and arbitrary for it not to be connected to a disclosure of potential impacts.

Similarly, the DEIR must disclose, analyze, and mitigate impacts of CO₂ leaks to burrowing species. Burrowing animals are particularly vulnerable to death from CO₂ suffocation in the event of CO₂ pipeline or injection well blowout, since released CO₂ could fill nearby burrows where animals are resting or retreating. The DEIR acknowledges that construction could adversely impact “ground-dwelling or fossorial animals (i.e., animals that live in nests, dens, burrows, or substrate below ground).”⁸⁶ The same acknowledgement, followed by mitigation, must be done for the potential of CO₂ leaks on species that use the subsurface.

04-017

Worker Awareness Program

Mitigation Measure 4.4-17 foreseeing a Worker Enviro Awareness Program is a good start, but the County must not defer its creation. The DEIR says that this program “shall be developed.”⁸⁷ As noted earlier in this comment section, CEQA does not allow deferring development of a mitigation measure. CEQA only allows an agency to put off developing a mitigation if it requires further data or inputs from operations to prescribe measures, or if development is impractical or infeasible to devise the specifics of such a program.⁸⁸ None of these extenuating circumstances apply to this mitigation.

04-018

Further, the County should consider and incorporate into the mitigation what the U.S. Fish and Wildlife Service (USFWS) recommends regarding the San Joaquin Kit Fox:

⁸³ Al-Traboulsi et al., *Potential Impact of CO₂ Leakage from Carbon Capture and Storage (CCS) Systems on Growth and Yield in Spring Field Bean*, 80 Environ. Exper. Botany 43 (2012).

⁸⁴ See CarbonFrontier DEIR at 4.4-59 to 61.

⁸⁵ *Id.* at 4.4-85.

⁸⁶ *Id.* at 4.4-61.

⁸⁷ *Id.* at 4.4-84.

⁸⁸ See, e.g., *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275; *Preserve Wild Santee*, *supra*, 210 Cal.App.4th at 281; CEQA Guidelines, § 15126.4(a)(1)(B).

The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.⁸⁹

This type of thorough education is appropriate for all protected species that are or could occur at the Project site. These materials must be developed and shared with the public and decisionmakers prior to finalizing and certifying the DEIR.

Finally, MM 4.4-18 provides that “wildlife found that might have been affected by exposure to CO₂ shall immediately cause a shutdown of all injection operations.” This measure is important and should therefore be incorporated into the Worker Environmental Awareness Program, along with other information about exactly *how* to identify wildlife suffering symptoms of CO₂ exposure.

Consultation with Wildlife Agencies

The Project’s mitigation measures suggest that consultation with the California Department of Fish and Wildlife (CDFW) and federal USFWS could occur *after* ground-disturbing activities commence, rather than before.⁹⁰ This approach is incorrect and must be amended.

The CDFW made clear in its July 6, 2023 comment letter on the Project’s Notice of Preparation (included in the appendix for this DEIR) that consultation is needed based on a finding that protected species are present at the Project site:

[I]f the surveys reveal the aforementioned unlisted species, the EIR should include a commitment by the Project proponent to consult with CDFW, *prior to commencing the Project*, to identify and implement appropriate measures to avoid or minimize impacts to those species.⁹¹

⁸⁹ USFWS, *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* at 6, <https://www.fws.gov/media/standardized-recommendations-protection-endangered-san-joaquin-kit-fox-prior-or-during-ground>.

⁹⁰ See, e.g., 1-4 (“If blunt-nosed leopard lizards are observed at the work site during construction, construction shall cease within a 250-foot radius and the USFWS, and the CDFW shall be consulted to determine what additional measures would be necessary to prevent take of this species.”).

⁹¹ CDFW letter to Kern County re: Aera CarbonFrontier Notice of Preparation (July 6, 2023) at 4.

Table 4.4-1 of the DEIR lists wildlife observed during reconnaissance surveys, including several State Threatened Species and the blunt-nosed leopard lizard (BNLL), a federally endangered and State endangered / CDFW fully protected species.⁹² This is enough to trigger consultation with CDFW prior to construction. The DEIR must therefore be corrected, and the County must consult with this agency.

Similarly, the CDFW explains the following about federal Endangered Species Act obligations that apply *before* ground-disturbing activities:

CDFW recommends consulting with the USFWS on potential impacts to federally listed species including, but not limited to the aforementioned San Joaquin kit fox, blunt-nosed leopard lizard, California jewelflower, giant kangaroo rat, Tipton kangaroo rat, Buena Vista Lake ornate shrew, San Joaquin woollythreads, and Kern mallow. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. *Consultation with the USFWS in order to comply with FESA is advised well in advance of any ground disturbing activities.*⁹³

The Project and County risk running afoul of the Endangered Species Act if federal consultation is not initiated as soon as possible, and certainly before any construction occurs. The DEIR acknowledges that it has not consulted, nor has it obtained a USFWS Incidental Take Permit (ITP).⁹⁴

Blunt-nosed leopard lizard

The BNLL is federally Endangered under the Endangered Species Act and, as CDFW explains, “is State fully protected, therefore, no ‘take’, incidental or otherwise, can be authorized by CDFW; complete avoidance of this species is required to comply with State law.”⁹⁵

First, to avoid take, the County must not unlawfully defer creation of a Worker Environmental Awareness Program. At present, Mitigation Measure 4.4-15(c)(1) merely says that if BNLL are detected during surveys, such a program “shall be implemented.” But 2023 reconnaissance surveys already detected five BNLLs across the Project.⁹⁶ There is no reason for the County to defer creation of this program; as explained earlier, deferring this mitigation is illegal under CEQA.

⁹² CarbonFrontier DEIR at 4.4-1, 2.

⁹³ CDFW letter to Kern County re: Aera CarbonFrontier Notice of Preparation (July 6, 2023) at 7.

⁹⁴ CarbonFrontier DEIR at 1-2.

⁹⁵ CDFW letter to Kern County re: Aera CarbonFrontier Notice of Preparation (July 6, 2023) at 4.

⁹⁶ CarbonFrontier DEIR at 4.4-43.

Second, MM 4.4-15 proposes BNLL buffer areas that fail to match with evidence from CDFW regarding the appropriate buffer size to create a “reasonable chance of preventing take” of the BNLL.⁹⁷ The agency reviewed the best available scientific information on the area which individual BNLL use and the distances that individuals are known to move between points.⁹⁸ They summarized relevant findings and concluded that the buffer area would need to be 164 acres *at a minimum* to avoid take.⁹⁹

The DEIR’s buffers for the BNLL do not follow the CDFW’s recommendations. The buffers are either 50 feet (MM 4.4-15(a) or 250 feet (MM 4.4-15(b), (c)(3) and (c)(8)). A 50-foot buffer is only 2% of the CDFW’s recommendation, whereas a 250-foot buffer only 10% of the CDFW recommendation. The DEIR offers no explanation for running counter to the best available scientific evidence of what buffers might be reasonable to avoid take.

Alternatives

The DEIR ignores the CDFW’s urging “that the information and results obtained from the biological technical surveys, studies, and analysis . . . be used to develop and modify the Project’s alternatives to avoid and minimize impacts to biological resources to the maximum extent possible.”¹⁰⁰ Instead, the alternatives evaluation considers only cumulative Biological Resources impacts,¹⁰¹ rather than consider how project infrastructure and activities could be sited to avoid all direct, indirect, and cumulative impacts. Even if the DEIR concluded that direct and indirect impacts to Biological Resources would be less than significant with mitigations, that does not reach what the CDFW advised the County to do. The County offers no explanation for ignoring this expert agency advice.

⁹⁷ See Carbon TerraVault I Draft EIR, Vol. 2, App’x A.2: Comment Letters at 151 (comment letter from the CDFW on the Elk Hills Project addressing species like the BNLL).

⁹⁸ *Id.*

⁹⁹ *Id.* at 152–53 (going on to explain that there is “a reasonable plan for avoidance is to assume that the lizard might utilize up to 98.8 acres in any direction from where it was observed,” and assuming a circular home range, the diameter would be 2340.8 feet, or a 395-acre circle as a buffer).

¹⁰⁰ CDFW letter to Kern County re: Aera CarbonFrontier Notice of Preparation (July 6, 2023) at 6.

¹⁰¹ CarbonFrontier DEIR at 6-2.

CONCLUSION

For the reasons set forth in this letter, we urge the County to re-do its DEIR for the Project, prepare and circulate a revised DEIR, and ultimately reject the Aera CarbonFrontier Project.

Please note that we have uploaded all of the sources cited herein for the County's convenience. Those are available at this link:
<https://diversity.box.com/s/yg3mq55cmewthmutparyg9n9fdv74ejy>.

Respectfully submitted,

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04-023

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Comment 4

Center for Biological Diversity & Group

4-001

Thank you for your comment and participation in the public process. This comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

4-002

Commenters express concern about the risk of potential fatalities among workers maintaining a solar project owned by the Wonderful Company outside the CUP boundary on orchard land and the absence of additional mitigation to protect and notify them. As a solar project and orchard, workers presence is limited and based on the time of the year for the orchard and necessary maintenance for the solar project. The solar project maintenance presence is estimated to be only 2 workers in the area for 20% of the time during the day. Based on the project-specific dispersion modeling of a range of hazard and failure scenarios, the worst-case event would be catastrophic failure of the 12-inch main pipeline, which would result in the furthest downwind dispersion distance for the CO₂ release. (DEIR Vol. 2, Appendix F-2, Carbon Capture Facility – CO₂ Dispersion Distances). As indicated in Table 5.6 from Appendix F-2, which is shown below, failure of the 12-inch pipeline under worst case conditions could release a CO₂ plume at a concentration of 7% for a downwind distance up to 1,200 feet causing a potential fatality. At 4,400 feet there is a 1% concentration which can cause a slight breathing rate increase and drowsiness and from 2% up to 3% mild to moderate respiratory effects with increased impacts on those with compromised respiratory systems. (Please reference Appendix A EPA Carbon Dioxide Health Hazard Information Sheet).

Table 5.6. Transfer Pipeline to Sequestration - CO₂ Dispersion Distances

Release Source	Release Rate / Quantity	Weather	Downwind Distance to CO ₂ Concentration from Release (ft)					1% CO ₂ Area of Concern (ft ²)
			1%	2%	3%	4%	7%	
12-inch Transfer Pipeline to Sequestration (1,700 psig)								
Pipeline Guillotine Rupture	550,000 lb (250 mt)	D/4	4,100	2,700	2,100	1,700	1,200	7.6 x 10 ⁶
		F/1.5	4,400	2,800	2,100	1,700	1,100	1.4 x 10 ⁷
2-inch hole	8,700 lb/min (66 kg/s)	D/4	980	650	500	410	280	2.1 x 10 ⁵
		F/1.5	1,700	1,100	770	590	350	1.4 x 10 ⁶
6-inch Distribution Line to CO ₂ Injection Wells (1,700 psig)								
Pipeline Guillotine Rupture	130,000 lb (58 mt)	D/4	1,900	1,200	870	700	430	1.8 x 10 ⁶
		F/1.5	2,300	1,400	1,100	860	550	4.0 x 10 ⁶
1-inch hole	2,200 lb/min (17 kg/s)	D/4	500	340	270	220	160	4.1 x 10 ⁴
		F/1.5	920	540	380	300	190	3.0 x 10 ⁵

A 7% CO₂ plume is the minimum concentration that may be immediately life threatening, as indicated by US EPA. See Appendix F-2, Table 5.2. According to Table 7.1 in Appendix F-2, the likelihood of a potential fatality for any workers on this parcel, is extremely low, at 1 in 640,000 years for the worst-case pipeline rupture or large release. However, this is predictive modeling and as such, an event may occur. Based on the independent judgement of the county, the risk exposure even at the very low concentration of 2 % , where adverse responses start, can be mitigated by mandating a 2,200 feet (over ½ mile) setback for the pipeline properties not owned or controlled by private agreement by the owner/operator of the project outside the CUP boundary. While mostly vacant now or with agricultural uses such as orchards or grazing that do not have continuance presence of people, properties are zoned for uses that may not need permits and may increase the presence of people who could be exposed. As the modeled CO₂ plume distance for the 2 % concentration is 2,700 feet, requiring a 2,200 -foot setback is conservatively protective for both a 12 inch and 10 pipeline for CO₂ conveyance. Further This modeling did not include any mandatory protective requirements detailed in MM 4.9.4 such as automatic shut-off valves, infra-red cameras for early detection and other requirements that will reduce the amount of the release and affect the distance any CO₂ will travel.

The comment inaccurately states that no notice will be given to the public. The Kern County Fire Department has a state-of-the-art emergency notification system to alert residents and businesses about natural disasters and other crisis. The ReadyKern system does require downloading a digital application as well as registration for targeted notification. Once the Kern County Fire Department is notified, they will determine the extent and necessity for appropriate actions which include, but are not limited to, notification of appropriate areas. To further ensure that no workers outside the CUP boundary of the CCS project are exposed to the risk of potential CO₂ releases that could result in a fatality, MM 4.9-4, MM 4.9-18, MM 4.11-5 and MM 4.15-4 are revised as follows. These revisions will implement the following mandatory requirements and will not result in a new or substantially more severe impact:

1. MM 4.9-4 (Hazards and Hazardous Materials) Amended language to require relocation on the site plan of all proposed pipelines that carry CO₂ to be within the boundaries of the Conditional Use Permit and 2,200 feet from the property line of any parcel not owned or controlled by private agreement by the owner/operator of the project outside the CUP boundary. The relocation of the pipeline on the site plan to meet this requirement shall be made before any CO₂ injection commences. A relocated pipeline to meet the 2,000-foot setback is estimated to extend the length of the pipeline from the currently applicant proposed 10 miles to an estimated 11 miles. The estimated incremental changes in construction air emissions are shown here in two tables:

Table 1. Short-Term (Construction) Pipeline Emissions

Emissions Source	Pollutant (tons)						GHG (tons)
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂ e
12" CO ₂ Main Pipeline (10-miles) (Construction Years 2025 and 2026 combined)	1.35	11.01	10.45	0.02	0.78	0.59	2,213
Sources: Table 7-1 Draft EIR Appendix B.1; Table 2.2 of AQIA Appendix B – “Construction Emissions by Year, Unmitigated” on page 745 of DEIR, Vol II.							

Table 2. Incremental Short-Term Emissions for Alternative Pipeline Route

Emissions Source	Pollutant (tons)						GHG (tons)
	ROG	NOX	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂ e
<i>12" CO₂ Main Pipeline (additional 0.5 mile)</i>	<i>0.07</i>	<i>0.55</i>	<i>0.52</i>	<i>0.001</i>	<i>0.039</i>	<i>0.030</i>	<i>111</i>
<i>12" CO₂ Main Pipeline (additional 1 mile)</i>	<i>0.14</i>	<i>1.10</i>	<i>1.05</i>	<i>0.002</i>	<i>0.078</i>	<i>0.059</i>	<i>221</i>

This incremental increase in construction emissions, at its highest point, would not change the impact conclusions reached in the Draft EIR. Total project emissions resulting from the construction of new facilities on an annual basis would still exceed the SJVAPCD Criteria Pollutant Emissions Significance Thresholds for NO_x during 2025, 2026, and 2027, and for ROG during 2026 (Draft EIR, p. 4.3-67) with no additional exceedances resulting from any incremental increase. Further MM. 4.3-5 requires mitigation of all criteria pollutant air emissions through the Developer Mitigation Agreement with the SJVAPCD with a modeling study updated at the time of the final agreement. All construction and operational emissions will be mitigated for a relocated pipeline.

2. MM 4.11-5 (Land Use and Planning) Requirements that before the start of any CO₂ injection a letter be sent to all parcels outside of the CUP boundary within 2,200 feet of the boundary that provides notice of the commencement of the project and provides information to encourage the use of the Kern County Fire Department ReadyKern digital app for notification.
3. 4.15-4 (Public Services) Annual payments of \$30,000 for ReadyKern operations
4. 4.9-18 (Hazards and Hazardous Materials) Inclusion in the emergency incident response plan of the use of ReadyKern for appropriate notification

MM 4.9-4 All CCS related CO₂ facility pipelines shall require prior to construction, review and approval of a CUP Compliance Site Plan ~~permit site plan review~~ by the Kern County Planning and Natural Resources Department.

A. All pipelines or distribution lines that transport CO₂ shall be located within the approved CUP boundary and be located a minimum of 2,200 feet from the property line of any parcel not owned or controlled by private agreement of the owner/operator of the project, outside the CUP boundary. With the exception of minor deviations of up to 10 feet on either side, the pipeline shall be constructed in the location shown on the approved CUP Compliance Site Plan and any such deviations shall be shown on a modified CUP Compliance Site Plan after construction, in the construction permit site plan.

B. The site plan shall include the full location of the facility pipeline, width of easement for the pipeline with a maximum of 50 feet, location and spacing of automatic shut off valves, location of infra-red cameras for monitoring, construction and coatings used for the pipeline and all other requirements of federal and State regulations. Safety fencing shall be provided at specific

locations along the pipeline to protect critical components such as valves, controls, and safety devices. General reference to “compliance with regulations” will not be considered sufficient. The site plan package shall concurrently be submitted to the Kern County Planning and Natural Resources Department, Kern County Fire Marshall and California State Fire Marshall for review and approval.

- C. The plan shall include all details and features to show compliance with 49 CFR Part 195. The U.S. Department of Transportation (U.S. DOT) and the Pipeline and Hazardous Materials Safety Administration (PHMSA) has delegated CO₂ pipeline oversight to the State Fire Marshall, who will evaluate pipelines for compliance with PHMSA. All pipeline / distribution line conveyances of CO₂ not under the authority of PHMSA shall be reviewed and approved for all required safety features by the Kern County Fire Marshall. All costs for review by all parties shall be borne by the owner/operator.
- D. The owner/operator shall notify the Kern County Public Health Services Environmental Health Division, the Certified Unified Program Agency (CUPA), surface landowner, and sensitive receptors located within 300 feet, of any hazardous materials/waste release, other than CO₂, immediately upon discovery, and to other applicable agencies as required by other laws. The owner/operator shall immediately contain the leak (e.g., by isolating or shutting down the leaking equipment), clean up contaminated media (e.g., soils), and repair the leak prior to recommencing operations. The owner/operator shall report the status and progress of the leak repair and remediation work to the County and the CUPA on monthly intervals or predetermined intervals until the repair has been completed. Contaminated media shall be analyzed according to 22 C.C.R. §§ 66261.21-66261.24 for determination of hazardous waste disposal subject to the Hazardous Waste Determination procedures provided in 22 C.C.R. §66262.11.

MM 4.9-18 Prior to commencement of any injection of CO₂, and in addition to the emergency response plan required by the EPA UIC permit, the owner/operator shall prepare an emergency incident response plan that addresses advance leak detection methods and communication with fire responders, emergency medical response, Kern County Fire and Kern County Sheriff notification and protocols for incident management, including, but not limited to, use of the ReadyKern emergency notification system. The plan shall be reviewed and approved by the Kern County Fire Department in consultation with EPA UIC Program, State of California Fire Marshall, Kern County Sheriff and all other State agencies identified by the California Air Resources Board.

MM 4.11-5 Prior to any grading or building or construction, the following notifications shall be made.

- A. A deed restriction notification document shall be recorded by the applicant with language as approved by the Kern County Planning and Natural Resources Department that gives constructive notice that the CCS Surface Land Area, described by both APNs and legal description, is an approved CCS project subject to a CUP and related Environmental Impact Report (EIR). The document shall be recordable and provide information for access to the following information that shall be updated quarterly, or as applicable: Names of operator of CCS facility and physical address of headquarters and email, dates of injection, quantity of injections, and specific injection zone or zones.
- B. Sixty (60) days before commencing the first injection of CO₂, the applicant shall provide written notice to all owners (surface and mineral) within the CUP boundary and all ~~adjacent~~ property owners (surface and mineral) for legal parcels within 2,200 feet of the approved CUP boundary by certified mail. The notice shall include a description of the project, location map of the CUP boundary, estimated date for first injection of CO₂ contact information for the owner/operator and instructions on access and registration for the Kern County Fire Department ReadyKern emergency notification system. The notice shall be reviewed and approved, before mailing by the applicant, by the Kern County Planning and Natural Resources Department. Copies of the certified receipts, map of the parcel locations and mailing list shall be provided as compliance.

MM 4.15-4 The following payments shall be made to the Kern County Fire Department (KCFD)

- A. An annual payment of \$250,000 shall be made to the Kern County Planning and Natural Resources Department for transfer to the KCFD for equipment and training specific to the detection and control of emergency situations caused by CO₂ or related to CO₂.
- B. An annual payment of \$ 30,000 shall be made to the Kern County Planning and Natural Resources Department for transfer to the KCFD for operations and maintenance of the ReadyKern Emergency Notification system
- C. Both required amounts shall be made as one payment. The first total payment of \$280,000 is due 60 days after the issuance by the U.S. Environmental Protection Agency (EPA) Class VI Underground Injection Control (UIC) permit for construction of any well. Annual payments are due every year on the date of the first-year payment.

4-003

The comments requests for the CEQA process to be stopped until the US EPA Region 9 releases the draft Class VI permits for consideration on the necessary injection wells for the CCS project. The US EPA has no jurisdiction over the land use in unincorporated Kern County, and therefore, no authority to approve or disapprove the CCS project.

Delaying consideration and processing of this project based on a federal permit process, which does not have to comply with NEPA, is not within the authority of Kern County and is not good public policy. Many related implementations permit from many different State and Federal agencies are needed for many different development projects and CEQA does not require the process be stopped to wait for those related agencies to issue a draft or final permit. Analysis and review of the EPA permitting, and impacts is included in the DEIR and is all that is required by CEQA. US EPA Region 9 is an implementation permit and without the land use decision of the Kern County Board of Supervisors it is moot.

4-004

The commentor indicates the DEIR's Project objectives and description do not reflect the true scope of Project activities, specifically future sources of CO₂.

Please refer to Global Response GR-1 Source Identification.

4-005

The commentor indicates the DEIR does not sufficiently analyze alternatives due to inadequate project description and objectives.

Please refer to Global Response GR-6 Alternatives.

4-006

The commentor states that the DEIR's "no project" alternative discussion is flawed and expresses concerns relating to GHG emissions. Please refer to Global Response GR-2 (Extending the Life of Fossil Fuel Facilities). Furthermore, as shown in Table 4.8-8 in Section 4.8 of the DEIR, the project would result in a net decrease in greenhouse gas emissions, -2,672,692MT CO₂e by 2045. As defined by the CEQA guidelines Section 15126.6(e), a No Project Alternative is reflective of the existing conditions at the time of issuance of the NOP and would not be reflective of an interim future baseline as suggested by the commenter. Finally, air quality impacts of the Project are disclosed in Section 4.3 of the DEIR. Mitigation to reduce those impacts to the extent feasible is disclosed and would be required to be implemented by the applicant. Each of the Alternatives discussed in Chapter 6.0 of the DEIR discussed air quality impacts of the alternative relative to the Project. Section 15093 of the CEQA Guidelines state that CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental

benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered “acceptable.”

Please refer to Global Response 2 - Extending the Life of Fossil Fuel Facilities and GR 7 - Cumulative Impacts

4-007

The comment serves an introduction to the impact analysis comments. Thank you for your comment and participation in the public process. This comment does not specify specific issues or insufficient mitigation measures. Therefore, this comment does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

4-008

The commentor expresses concerns with mitigation measures related to CO₂ leaks and notification.

Section 4.9, Hazards and Hazardous Materials, discusses risks regarding CO₂ leakage (Impact 4.9-1). The analysis is based on findings in Public Impact Quantitative Risk Assessment (Appendix F-2 of the DEIR). The Assessment states: “Dixon Risk Consulting (DRC) conduct a Quantitative Risk Assessment (QRA) to assess the potential for acute hazards to the public and the environment associated with the proposed Project. Potential hazards to the public associated with acute exposure to hazardous materials have been assessed by calculating both the risk to individuals, and the risk to society as a whole. The risks have been determined by combining the potential severity and likelihood for three selected levels of concern. The levels range from minor injury to potential fatality. The overall hazards to the public from all proposed operations are shown in Table 7.1 for levels of concern, potential injury and potential fatality. The combined likelihood of public exposure to a concentration that may cause public concern is 1 in 2,700 years.”

Please refer to GR - 5 Mitigation Effectiveness. The applicant would take measures to prevent unexpected and abnormal conditions that could result in an accidental release of CO₂.

PHMSA regulates the safety of pipelines that transport hazardous liquids, including CO₂, in accordance with the regulations in 49 CFR Part 195. It develops safety regulations and other approaches to risk management to ensure safety for emergency response associated with a leak or rupture of pipeline facilities. As required by PHMSA and noted in Section, the applicant must develop a plan to respond to an accidental release of CO₂ that follows federal guidelines. As stated in Section 3.6.4, Emergency Management, the project would be governed by an Emergency and Remedial Response Plan, which is included in Appendix E-2, Attachment F. The applicant would work with the local police departments, ambulance districts, and local and rural fire departments to develop response plans in case of a rupture included in the emergency response plan, per MM 4.9-18.

Furthermore, the Applicant will implement MM 4.9-7, which would require routine equipment inspections and maintenance to prevent leaks or emissions. MM 4.8-1 requires the submittal of a monitoring plan to demonstrate the retention of CO₂ in the reservoir per requirements of EPA UIC permit.

Per the DEIR Appendix F-2 and project MMs, potential impacts from CO₂ leaks would be mitigated to less than significant. Also, refer to Global Response GR-4 Geological and Seismicity Risk.

4-009

The commentor expresses concerns related to GHG emissions. Refer to the previous response to comment 04-006 along with Global Response 1 - Source Identification.

4-010

The commentor requests information on the rate of carbon capture. The rate can be found in Table 4.8-5 in Section 4.8, GHG Emissions.

4-011

The commentor expresses concerns regarding CO₂ leakage.

Please see Global Response GR-4 Geological and Seismicity Risk.

4-012

The commentor expresses concerns regarding flue gas. As stated in Chapter 3, Project Description, "The flue gas emissions from each Post-C source would be ducted to its own CO₂ capture and processing facility. The remaining flue gas (primarily oxygen, nitrogen, and the remaining uncaptured CO₂), would be vented to the atmosphere." Table 4.8-4 shows only the initial source permitted with this EIR (Pre-C produced gas streams and Post-C flue gas).

4-013

The commentor states that the EIR fails to adequately disclose, analyze, and mitigate the Project's impacts to energy resources.

Section 15126.2 of the CEQA Guidelines state that "If the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, the EIR shall mitigate that energy use.... This analysis is subject to the rule of reason and shall focus on energy use that is caused by the project. This analysis may be included in related analyses of air quality, greenhouse gas emissions, transportation or utilities in the discretion of the lead agency."

Furthermore, as described in CEQA Guidelines, Appendix K-1, environmental impacts related to energy may include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

As described in Section 4.6, Energy, of the DEIR, estimates for energy requirements for the project were determined using the construction and operational estimates generated from the calculation worksheets for energy consumption. Based on the estimates, it was determined that the amount of electricity used during construction would not be excessive, wasteful or inefficient. Additionally, operational energy demand is estimated to increase annual electricity demand by approximately 49 MW/year total. Carbon capture and sequestration projects, such as the proposed project, are essential to achieve the State's climate goals (CARB 2022); as a result, any energy consumed by the project is not considered to be wasteful or unnecessary. Furthermore, the project would not require a new source of electricity to serve the project.

4-014

The commentor expresses concerns regarding fossil fuels.

While reducing the reliance on fossil fuels is a California policy, it is not a Kern County policy; therefore, the project does not have to comply with as such requirement for consideration of the Conditional Use Permit. Please refer to Global Response GR-2 Extending the Life of Fossil Fuel Facilities

4-015

The comment introduces concerns with DEIR's Biological Resources analyses and mitigations. This comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

4-016

The comment states the DEIR fails to account for the evidence showing that operating CCS project can have significant impacts to biological resources, specifically from CO₂ asphyxiation, leaks and blowouts.

Section 4.9, Hazards and Hazardous Materials, discusses risks regarding CO₂ leakage (Impact 4.9-1). The analysis is based on findings in Public Impact Quantitative Risk Assessment (DEIR Appendix F-2). The Assessment states: "Dixon Risk Consulting (DRC) conduct a Quantitative Risk Assessment (QRA) to assess the potential for acute hazards to the public and the environment associated with the proposed Project. Potential hazards to the public associated with acute exposure to hazardous materials have been assessed by calculating both the risk to individuals, and the risk to society as a whole. The risks have been determined by combining the potential severity and likelihood for three selected levels of concern. The levels range from minor injury, to potential fatality. The overall hazards to the public from all proposed operations are shown in Table 7.1 for levels of concern, potential injury and potential fatality. The combined likelihood of public exposure to a concentration that may cause public concern is 1 in 2,700 years."

The applicant would take measures to prevent unexpected and abnormal conditions that could result in an accidental release of CO₂ through the methods discussed below.

PHMSA regulates the safety of pipelines that transport hazardous liquids, including CO₂, in accordance with the regulations in 49 CFR Part 195. It develops safety regulations and other approaches to risk management to ensure safety for emergency response associated with a leak or rupture of pipeline facilities. As required by PHMSA and noted in Section, the applicant must develop a plan to respond to an accidental release of CO₂ that follows federal guidelines. As stated in Section 3.6.4, Emergency Management, the project would be governed by an Emergency and Remedial Response Plan, which is included in Appendix E-2, Attachment F. The applicant would work with the local police departments, ambulance districts, and local and rural fire departments to develop response plans in case of a rupture included in the emergency response plan, per MM 4.9-18.

Furthermore, the Applicant will implement MM 4.9-7, which would require routine equipment inspections and maintenance to prevent leaks or emissions. MM 4.8-1 requires the submittal of a monitoring plan to demonstrate the retention of CO₂ in the reservoir per requirements of EPA UIC permit.

Per the DEIR Appendix F-2 and project MMs, potential impacts from CO₂ leaks would be mitigated to less than significant. Additionally, please refer to Global Response GR-4 Geological and Seismicity Risk.

4-017

The comment expresses specific concern regarding CO₂ leakage impacts.

Please refer to Response 04-016. The applicant would take measures to prevent unexpected and abnormal conditions that could result in an accidental release of CO₂.

4-018

The commenter states the Worker Environmental Awareness Program mitigation measure is being deferred and requests that materials for the Worker Environmental Awareness Program be provided prior to DEIR. The comment also provides additional recommendations for information to be included in the training.

The purpose of the WEAP is to provide sufficient training to construction crews and project members relevant and sufficient information to recognize, avoid and report any biological resources to applicable

qualified biologists. It is standard practice for WEAP training material to include contact information for biological monitors, construction foreman, and County officials responsible for the project. For this reason, the information prepared for the WEAP is not submitted for public review. The recommendations for information to be included in the training will be provided to the Planning Commission and Board of Supervisors for consideration.

4-019

The commentor expresses concern with CDFW/USFWS consultation timeline.

Pursuant to MM 4.4-1, grading and construction activities are contingent upon the completion of protocol surveys done in consultation with the Agencies. MM 4.4-1 states that "...any required focused/protocol surveys shall be conducted by a qualified biologist consistent with protocol study timelines in advance of submittal of the permit application to determine the presence/absence of sensitive species protected by State and federal Endangered Species Acts and potential project impacts to those species."

4-020

The commenter states the Worker Environmental Awareness Program mitigation measure is being deferred and requests that materials for the Worker Environmental Awareness Program be provided prior to DEIR.

Please refer to Response 05-018 and Global Response 5 - Mitigation Effectiveness.

4-021

The commenter states the avoidance buffer for suitable BNLL burrows is inconsistent with CDFW recommendations. Based on the CDFW NOP letter, CDFW recommends using the "Approved Survey Methodology for the Blunt-nosed Leopard Lizard," which is "designed to optimize BNLL detectability," which would reasonably assure CDFW that BNLL would be detected, if present.

CDFW DEIR August 7, 2024 response letter stated that "After reviewing the provided CEQA document, CDFW concurs with the biological resources related analyses and measures proposed in the DEIR and recommends that all such measures in the DEIR be carried forward into the Final EIR. CDFW has determined the biological resource mitigation measures as currently documented in the DEIR are sufficient for mitigation of potential project related impacts to listed species.

The mitigation measures identified in the DEIR are sufficient in avoiding BNLL occupied burrows and potentially occupied burrows. MM 4.4-15(a) states that all potentially occupied burrows will be avoided. Suitable burrows, which are those that are not likely to be occupied, should be avoided by a minimum distance of 50-feet. Protocol surveys are required for all protected species per MM 4.4-1, which are not to be confused with pre-construction or focused surveys for BNLL (MM 4.4-15). MM 4.4-15(b) states that focused surveys shall be conducted in all potential BNLL habitat within the work site and a 250-foot buffer area. Additionally, please see GR 5 - Mitigation Effectiveness

4-022

Information and results included in Appendix C-1 were used to avoid and minimize impacts to biological resources, as discussed in DEIR Section 4.4, Biological Resources. The mitigation measures identified in the DEIR are sufficient to avoid and minimize direct and indirect impacts to biological resources. Please refer to Response 04-008 and Global Response GR-6 Alternatives.

4-023

The commenter states that the County re-do its DEIR for the Project, prepare and circulate a revised DEIR, and ultimately reject the Aera CarbonFrontier Project.

Thank you for your comment and participation in the public process. This comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

5: Center for Biological Diversity

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CENTRAL VALLEY
AIR QUALITY COALITION



CENTER ON
RACE, POVERTY
& THE ENVIRONMENT



July 17, 2024

Keith Alvidrez

Planner II

Kern County Planning and Natural Resources Department

Submitted via email to AlvidrezK@kerncounty.com

Re: Request for Extension on Draft EIR CarbonFrontier CCS Project by Aera Energy, LLC, SCH 2023060293

Dear Mr. Alvidrez,

On behalf of the Center for Biological Diversity, Central Valley Air Quality Coalition, Center on Race, Poverty, & the Environment, Central California Environmental Justice Network, and the Leadership Counsel for Justice & Accountability, we are asking that Kern County (the County) extend the public comment period on the Draft Environmental Impact Report (DEIR) for the CarbonFrontier CCS Project (Project) by an additional 45 days, from August 12, 2024 to September 26, 2024.

We also request that the Planning Department hold an additional two hearings, featuring a virtual attendance option and Spanish-language translation.

Finally, we ask that the County ultimately pause its review of the Project until EPA Region 9 releases its draft Class VI carbon dioxide storage permits for the Project. This would allow the review periods can run concurrently, as the County largely did with the Carbon TerraVault Elk Hills permits.

These requests are warranted for the following reasons:

First, the DEIR and its accompanying appendices total **more than 5,700 pages** of highly technical information, covering a range of complex environmental and public health issues that will impact Kern County residents and the broader San Joaquin Valley for decades to come. The Project Narrative for the pre-draft Class VI permits under review by EPA Region 9 (and available to the public to view, though not yet to comment) spans over 2,000 pages. For the public to review and meaningfully comment on this massive volume of information simply requires more time.

05-001

Second, carbon capture and storage projects, as well as Class VI permits, are fairly new to Californians. There has yet to be a Class VI carbon capture and storage project permitted in the State. The public needs time to sift through the complex materials in order to fully understand what the Project is proposing and how it may impact the environment and public health and safety. This is all the more important because the DEIR notes multiple areas of significant and unavoidable impacts. For example, the Project would exceed air pollution thresholds and expose sensitive receptors to “substantial” pollutant concentrations.

Third, the Project is larger than the Carbon TerraVault Elk Hills carbon capture project, for which the County granted a comment extension and held multiple hearings. The CarbonFrontier Project proposes gathering up to 40 million metric tons of CO₂ from four capture sites and transporting it in over 14 miles of new CO₂ pipelines to up to nine Class VI injection wells. The Carbon TerraVault Elk Hills project proposed injecting 49 million tons of CO₂ in six Class VI wells. In that instance, the County granted a comment extension and held four workshops.

Fourth, an extension would allow the County to take steps to translate materials and hold hearings (ideally with a virtual option) so that County residents and others can fully participate in sharing their questions and concerns. There are high numbers of Spanish-speaking residents in the County and those residents must not be kept in the dark about the Project.

Finally, EPA Region 9 is undergoing Technical Review of the Project’s nine Class VI injection well permits. For the Carbon TerraVault Elk Hills carbon capture and storage project, the County released its DEIR concurrently with most of EPA’s draft Class VI permits.¹ This enabled the public to review the land use and injection portions of the Elk Hills project, as well as attend meetings with both County and EPA officials. There is no reason for the County to do anything different here, and we urge the County to hold off on its review and consideration of the CarbonFrontier Project until Region 9 releases the accompanying draft Class VI permits.

The California Environmental Quality Act is intended to allow the public to gain full information about proposed projects and to participate meaningfully in government decisions. Extending the comment deadline and holding multiple hearings, and taking steps to include Spanish-speaking residents, would better allow the public to understand and consider the DEIR and provide informed comments to the County on this large and impactful Project.

¹ That said, two of the Region 9 permits for the Elk Hills project have yet to be released. We urge the County to wait for *all* draft Class VI permits to be released before releasing CEQA review documents.

Thank you for considering this request. Please reach out to Victoria Bogdan Tejeda at vbogdantejeda@biologicaldiversity.org or 724-317-7029 if you have questions or would like to discuss this matter further.

Thank you,

Victoria Bogdan Tejeda
Staff Attorney, Climate Law Institute
Center for Biological Diversity

Jasmin Martinez
Coalition Coordinator
Central Valley Air Quality Coalition

Nayamin Martinez
Executive Director
Central California Environmental Justice Network

Grecia Orozco
Staff Attorney
Center on Race, Poverty & Environment

Emma De La Rosa
Regional Policy Manager
Leadership Counsel for Justice & Accountability

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Comment 5

Center for Biological Diversity

5-001

The commentor requested an additional 45-day extension to the public comment period from August 12, 2024, to September 26, 2024. Additionally, the commentor requested that two additional hearings be held, featuring a virtual attendance option and Spanish-language translation. Lastly, the commentor requested that the review of the proposed project be paused until the EPA Region 9 releases the Draft Class VI permit.

The comment letter dated July 17, 2024, was received during the public review period and a response letter dated August 5, 2024, was provided from the Kern County Planning and Natural Resources Department addressing the various requests (attached). This comment is noted for the record and will be provided to the Planning Commission and the Board of Supervisors for Consideration.

Please refer to Global Response GR-3 Environmental Justice and Public Participation.

Lorelei H. Oviatt, AICP, Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Phone: (661) 862-8600
Fax: (661) 862-8601 TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
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**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

August 5, 2024

Transmitted by Electronic Mail

Victoria Bogdan Tejeda vbongdantejeda@biologicaldiveristy.org

Re: Draft Environmental Impact Report Extension of Time Request

(SCH# 2023060293) for Carbon Frontier Carbon Capture and Storage (CCS (Project) by Aera Energy LLC (ZCC 4, Map 51; ZCC 3 Map 74; ZCC 4, Map 74, CUP 9 Map 51 CUP 10, Map 51; CUP 7, Map 74; CUP 9, Map 74; CUP 7, Map 75; CUP 11 Map 75, CUP 9, Map 96)

Dear Interested parties,

The Kern County Planning and Community Development Department has received your letter dated July 17, 2024 requesting an extension of time for public review of the above reference environmental impact report. Kern County Planning and Natural Resources declines to extend the comment period.

As specified in CEQA Guidelines §15105(a), "the public review period for a draft EIR should not be less than 30 days nor longer than 60 days except in unusual circumstances. When a draft EIR is submitted to the State Clearinghouse for review by State agencies, the public review period shall not be less than 45 days." Section 15087(e) of the State CEQA Guidelines further specifies that "the public review period shall be at least as long as the review period established by the Clearinghouse."

Circulation of the Carbon Frontier Carbon Capture and Storage (CCS) Project began on June 28, 2024 and ends on August 12, 2024 for the required 45 days public review and comment period.

Please be advised however that while the comment period may close for purposes of meeting the above listed CEQA Guidelines, it is a policy of the Kern County Planning and Community Development Department to accept all comments on the Draft EIR and the proposed project throughout the entire application process. Currently, the project is tentatively scheduled to be considered by the Kern County Planning Commission on September 12, 2024, and then will be considered at a noticed public hearing before the Board of Supervisors. Both hearings will be noticed to the public and Spanish translation opportunities will be provided at both hearings. All comments received will be included in the administrative record for consideration by the decision makers and written replies will be provided through the Final EIR –Response to Comments, staff reports and presentations at the hearings.

The request further asks for the CEQA process to be stopped until the US EPA Region 9 releases the draft permit for consideration on the necessary injection wells for the CCS project. The US EPA has no jurisdiction over the land use in unincorporated Kern County and therefore, no authority to approve or disapprove the CCS project. The Carbon Terra Vault (CTV 1) project happened to have a concurrent process with the release of the EPA draft permit and the coordination was at the request of the US EPA for the workshops

Delaying consideration and processing of this project based on a federal permit process, which does not have to comply with NEPA, is not within the authority of Kern County and is not good public policy. Many related implementations permit from many different State and Federal agencies are needed for many different development projects and CEQA does not require the process be stopped to wait for those related agencies to issue a draft or final permit. Analysis and review of the EPA permitting, and impacts is included in the DEIR and is all that is required by CEQA. US EPA Region 9 is an implementation permit and without the land use decision of the Kern County Board of Supervisors it is moot.

Thank you for your interest in the Carbon Frontier Carbon Capture and Storage (CCS) Project DEIR.

Sincerely,

Lorelei H. Oviatt

Lorelei H. Oviatt A.I.C.P
Director,
Planning and Natural Resources



CENTRAL VALLEY
AIR QUALITY COALITION



CENTER ON
RACE, POVERTY
& THE ENVIRONMENT



LEADERSHIP COUNSEL
FOR
JUSTICE & ACCOUNTABILITY

July 17, 2024

Keith Alvidrez

Planner II

Kern County Planning and Natural Resources Department

Submitted via email to AlvidrezK@kerncounty.com

Re: Request for Extension on Draft EIR CarbonFrontier CCS Project by Aera Energy, LLC, SCH 2023060293

Dear Mr. Alvidrez,

On behalf of the Center for Biological Diversity, Central Valley Air Quality Coalition, Center on Race, Poverty, & the Environment, Central California Environmental Justice Network, and the Leadership Counsel for Justice & Accountability, we are asking that Kern County (the County) extend the public comment period on the Draft Environmental Impact Report (DEIR) for the CarbonFrontier CCS Project (Project) by an additional 45 days, from August 12, 2024 to September 26, 2024.

We also request that the Planning Department hold an additional two hearings, featuring a virtual attendance option and Spanish-language translation.

Finally, we ask that the County ultimately pause its review of the Project until EPA Region 9 releases its draft Class VI carbon dioxide storage permits for the Project. This would allow the review periods can run concurrently, as the County largely did with the Carbon TerraVault Elk Hills permits.

These requests are warranted for the following reasons:

First, the DEIR and its accompanying appendices total **more than 5,700 pages** of highly technical information, covering a range of complex environmental and public health issues that will impact Kern County residents and the broader San Joaquin Valley for decades to come. The Project Narrative for the pre-draft Class VI permits under review by EPA Region 9 (and available to the public to view, though not yet to comment) spans over 2,000 pages. For the public to review and meaningfully comment on this massive volume of information simply requires more time.

Second, carbon capture and storage projects, as well as Class VI permits, are fairly new to Californians. There has yet to be a Class VI carbon capture and storage project permitted in the State. The public needs time to sift through the complex materials in order to fully understand what the Project is proposing and how it may impact the environment and public health and safety. This is all the more important because the DEIR notes multiple areas of significant and unavoidable impacts. For example, the Project would exceed air pollution thresholds and expose sensitive receptors to “substantial” pollutant concentrations.

Third, the Project is larger than the Carbon TerraVault Elk Hills carbon capture project, for which the County granted a comment extension and held multiple hearings. The CarbonFrontier Project proposes gathering up to 40 million metric tons of CO₂ from four capture sites and transporting it in over 14 miles of new CO₂ pipelines to up to nine Class VI injection wells. The Carbon TerraVault Elk Hills project proposed injecting 49 million tons of CO₂ in six Class VI wells. In that instance, the County granted a comment extension and held four workshops.

Fourth, an extension would allow the County to take steps to translate materials and hold hearings (ideally with a virtual option) so that County residents and others can fully participate in sharing their questions and concerns. There are high numbers of Spanish-speaking residents in the County and those residents must not be kept in the dark about the Project.

Finally, EPA Region 9 is undergoing Technical Review of the Project’s nine Class VI injection well permits. For the Carbon TerraVault Elk Hills carbon capture and storage project, the County released its DEIR concurrently with most of EPA’s draft Class VI permits.¹ This enabled the public to review the land use and injection portions of the Elk Hills project, as well as attend meetings with both County and EPA officials. There is no reason for the County to do anything different here, and we urge the County to hold off on its review and consideration of the CarbonFrontier Project until Region 9 releases the accompanying draft Class VI permits.

The California Environmental Quality Act is intended to allow the public to gain full information about proposed projects and to participate meaningfully in government decisions. Extending the comment deadline and holding multiple hearings, and taking steps to include Spanish-speaking residents, would better allow the public to understand and consider the DEIR and provide informed comments to the County on this large and impactful Project.

¹ That said, two of the Region 9 permits for the Elk Hills project have yet to be released. We urge the County to wait for *all* draft Class VI permits to be released before releasing CEQA review documents.

*Extension Request to Kern County re: CarbonFrontier DEIR
July 2024*

Thank you for considering this request. Please reach out to Victoria Bogdan Tejeda at vbogdantejeda@biologicaldiversity.org or 724-317-7029 if you have questions or would like to discuss this matter further.

Thank you,

Victoria Bogdan Tejeda
Staff Attorney, Climate Law Institute
Center for Biological Diversity

Jasmin Martinez
Coalition Coordinator
Central Valley Air Quality Coalition

Nayamin Martinez
Executive Director
Central California Environmental Justice Network

Grecia Orozco
Staff Attorney
Center on Race, Poverty & Environment

Emma De La Rosa
Regional Policy Manager
Leadership Counsel for Justice & Accountability

6: Tom Twisselman

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Our family has had a good relationship with the various owners within Belridge Oil Field for over 100 years. We are their neighbors on the entire Western side of the Belridge Oil Field where we graze our cattle. We live there, it is our home where we raise cattle, horses, kids, grandkids, and great grandkids. We are connected to the land, we protect it. We put out grassfires, we have water and protection for wildlife, we control and deter trespass and criminal activity that would also be problematic for the owners of Belridge Oil Field.

Our entire family supports the oil and gas industry, and we support the pumping of oil and gas, we however cannot support the carbon vault experiment proposed for the Belridge Oil Field.

The Belridge Oil Field is plagued with major problematic subsidence issues from all the years of high-pressure steam injection. This subsidence issue is a historical fact. It has all been witnessed firsthand by our family as well as oil workers within the Belridge Oil Field. Last year there was a massive subsidence opening on 7th Standard Rd. next to the proposed carbon capture facility, resulting in a car crash and 7th Standard Rd. access completely closed for six months.

The subsidence issue is getting progressively worse over the years. The number one reason carbon capture experiments fail is because they are done on unstable ground. People that work in the Belridge Oil Field say because of all the years of high-pressure steam injection, and the resulting subsidence, that the Belridge Oil Field is a ticking time bomb waiting to go off.

Additionally, the Belridge Oil Field is prone to flooding in wet rainfall years. Just last year the entire main access road, 7th Standard, as well as major access roads and huge areas within the field were completely inaccessible for weeks. The proposed carbon capture area was also flooded at times.

We are told by the proponents that all the carbon capture infrastructure, the carbon capture towers, delivering pipelines, and the underground injection system will all be monitored and made safe by human inspectors as well as safety and warning systems or electrical controls. These can very easily fail for the following reason.

ROAD ACCESS

1. Critical key access made completely inaccessible to safety or repair carbon capture personnel by subsidence or roads either flooded or washed out.

INFRASTRUCTURE

2. Critical carbon capture electrical lines or power poles, carbon towers, carbon pipelines, waterlines, communication and safety control systems either damaged, toppled, torn apart, buried, or washed away by subsidence or flooding.

CARBON VAULT STORAGE THEORY

3. Belridge geologist say they know the exact boundary limits of the potential carbon vault. If the formations, zones, and stratus of the Belridge Oil Field are known with such accuracy why have they spent millions of dollars over the years drilling dry oil and gas wells?

CEMENTING OLD WELLS

4. There are thousands of oil wells in the Belridge field. Many of them are not owned or controlled by Aera. Many are in or near subsidence areas and flood zones. Cementing of old wells and zones and formations has been problematic in the Belridge Field. If underground carbon migrates onto someone else's subsurface, are they held liable? How proven and tested is the theory that the carbon vault is safe after 76 years? What if it is not safe for 200 years? Who came up with 76 years? If oil field technology thinks they can take complete control of underground gasses, why has H₂S been coming to the surface for years in the Belridge Field? H₂S exposure has caused human health problems and eventual death in oil workers from long term and short-term exposure.

EARTH QUAKES

5. Earthquake fault activity in the area has been felt by our family and oil workers. You can't rule out the possibility.

TERRORIST ATTACK

6. With the construction of the carbon capture sites, we are making targets for terrorists to deploy our oil and gas production fields and facilities.

WATER SUPPLY

7. Carbon capture experiment is going to contaminate underground water reserves in carbon vault area. It will be unusable for 76 years. Does Aera own all this underground water? People are looking at cleaning up and using non potable underground water. Are we making this unavailable? Brackish water may someday have a value.

SAFE DISTANCE

8. Proponents talk about safe distances from carbon breach. Who determined this, the proponents? If the experiment is safe, why do the proponents tell us about all the safety measures? The truth is, it is only safe if the safety measures work perfectly. If we are constantly told how safe it is, why does it matter how close we are? Is the carbon experiment completely safe, but safer if you are further away? We know how far dust, smoke, and pollution can travel. People in the valley, especially the Westside, have all experienced breathing and heath problems from the smoke of fires from hundreds of miles way.

HIGH PRESSURE CARBON BREECH

9. Aera Energy Carbon Frontier will be injecting nine million nine hundred eighty-nine thousand three hundred and thirty-three pounds per day for twenty-six years. That totals ninety-four trillion seven hundred ninety-eight million seven hundred seventy-two thousand seven hundred and forty four pounds or 43 MM Mt in 26 years.

Underground high-pressure injected carbon can breach all at once or slower over time. It can breach over 76 years through subsidence, above ground carbon pipelines, valves etc.

HUMAN HEALTH FACTOR

10. CO₂ is odorless and colorless. The people exposed to an above ground carbon breach have no clue they are entering a deadly area. Vehicle engines cease to operate from lack of oxygen within the carbon breach area. The people within the carbon breach area pass out and become unconscious due to lack of oxygen. Rescue and emergency vehicles as well as their occupants will also become immobile upon entering the carbon breach area. The carbon breach repair team will also be unable to enter the area to do repairs. Drivers on 7th Standard Rd and Hwy 33 are all subject to these same risks of a carbon breach. There is potential for a major vehicle collision event on Hwy 33 or 7th Standard due to engines suddenly stopping. How long will it take for emergency medical teams to arrive? Will a medivac helicopter crash from engine failure? 7th Standard Rd. is our main and only access road to our home for doctor, groceries, supplies etc. My grandchildren's school bus drives down 7th Standard Rd. twice daily to get to and from school. It drives right by the proposed carbon capture facility. If you have a high-pressure carbon breach, of a potential 43 million metric tons underground, including 13 miles of above ground carbon pipelines filled with high-pressure carbon, nine injection wells, all in a 13,299 acre area, this could create an above ground asphyxiation cloud that could impact peoples health over a huge area.

MAN VS. NATURE

11. Nature almost always wins. Man is never able to control things or nature as much as he thinks he can. Only man with government assistance could take aboveground plant food (CO₂) and turn it into an underground high-pressure asphyxiation bomb capable of harming unsuspecting citizens.

The supporters and influencers of this carbon experiment are being disingenuous when they tell the concerned public or locals that this is safe. They hope it's safe. There has never been a 76 year old carbon capture done in the Belridge Oil Field plagued with subsidence and flooding. The risk of short or long term health risks are

too high. I would be a dismal failure as a father and grandfather to not try and protect my family from this carbon experiment. Don't make us your human guinea pigs for this potentially dangerous experiment.

06-001 cont

Thank you,
Tom Twisselman
17750 7th Standard Rd.
Mckittirck, CA 93251

Comment 6

Tom Twisselman

6-001

Thank you for your comment and participation in the public process. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The commenters raises concerns regarding the proximity of the proposed CCS project in the Belridge Oilfield to their ranches and cattle grazing operations and are opposed to the project.

The Project Description Chapter 3 of the DEIR delineates that the only activities for injection of CO₂ will occur at the well sites with transport by pipeline from the carbon capture facilities. With the exception of those injection well sites the remaining estimated 10,000 acres will have no new CCS facilities on the surface, and it will be required by the pending EPA permit to abandon any active wells that would penetrate the subsurface pore space and new drilling would be prohibited.

The subsidence concern is based on high pressure injection activities that would be prohibited on the 12,268.57 acres of the CCS field. The pore space area is being independently reviewed by the EPA and any operation of the CCS project will require issuance of a final EPA permit along with the land approval by the County. There is no science-based evidence in the record that injection of the CO₂ will cause or accelerate any land subsidence on the 12,268.57 acres within the CUP boundary and area of review or outside the boundary. The status of oilfield operations outside the CUP boundary and current subsidence issues caused by other types of oilfield activities is outside the scope of this DEIR.

The event in Satartia Mississippi failure investigation for the CO₂ pipeline is contained in Appendix B-3 DEIR. The after event failure investigation conducted by PHMSA revealed that failures of slope, inadequate maintenance of the pipeline, inadequate emergency plans, rainy weather conditions and location of the pipeline caused the resultant failure and impacts on the surrounding community. None of the facts of location or construction details from the Denbury Pipeline apply to this specific location in the Belridge Oilfield. MM 4.9-4 provides for pipeline construction and monitoring that exceeds the Federal and State requirements. Any leak will immediately result in automatic shut off of transport and alerts for emergency response, including 24/7 monitoring of infra-red cameras. Appendix F-2 report shows that any leak will only travel at most 1000 feet even with high winds and dissipate within a mile, as CO₂ is not explosive. There is no evidence provided in the record that a CO₂ could travel to impact 7th Standard Road or the 4.48 miles to the Mc Kittrick School.

Based on information on the Twisselman family homes in the vicinity, the closest residence to the Surface Land Area CCS boundary, all in estimated distances, is a 5.7 miles, the pipeline is over 6.0 miles and the closest injection well site is 6.3 miles.

Homeland Security has identified oilfields as essential energy sources and high security terrorist targets. The protocols and monitoring of this category are not available for publication in the public record. However, the addition of a CCS CO₂ capture and injection operation will not add to the potential risk as CO₂ is not explosive and will not travel more than mile from the site.

Please see the following Global Responses – GR 1- Source Identification, GR 2- Extending the Life of Fossil Fuel Facilities, GR 4, Geological and Seismicity Risk.

7: Chisholm Twisselman

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I am writing this in strong opposition of the planned Carbon Frontier CCS project by Aera Energy. I have many concerns in the project and the science behind it.

My name is Chisholm Twisselman, a local rancher on the Westside of Kern County. I am the 6th generation to live and work on the ranch. I am raising my kids, the 7th generation, to do the same. My family has been actively involved in the area for over 100 years and have seen the county implement some very good ideas and some very bad ideas. This is a bad idea.

Public safety should be the greatest concern for our elected officials. If this project is passed and implemented, every person that votes yes or signs off on the project should be held accountable for the next 70 plus years. Yes 70 plus years is supposedly how long this procedure takes to stabilize.

Our property borders the proposed project, and our residence is only 3 miles away, so we will be impacted on a daily basis. All our work with the livestock is performed outside in close contact with the proposed project. My family and my kids will be in a danger zone every day. If passed you will be putting many families like mine in risk. Also, the public who drive Hwy 33 will have no idea the project is there and what kind of risk it proposes.

The science has not been established to deem this project safe. This looks like only the second one proposed in the nation and the other plant isn't even up and running. The proposed plan will be built in an oilfield that has over 11,000 active wells. Since it has started it has abandoned over 20,000 wells. Most issues that half arose with any carbon injection project have been from old, abandoned wells and unstable ground. Aera checks both of these boxes. They have more subsidence issues than they can keep track of. Last year a ¼ mile phisher opened up, shutting down 7th Standard Rd. for six months.

In 2020 there was a leak in a carbon capture facility in Satartia Mississippi that hospitalized 50 residents. The biggest disaster was in Lake Nyos in Cameroon. Please look this up!

https://en.wikipedia.org/wiki/Lake_Nyos_disaster

It released 100,000-300,000 tons of carbon dioxide. The gas cloud initially rose traveling 62 mph and then, being heavier than air, descended onto nearby villages suffocating people and livestock within 15 miles. It killed 1,746 people and 3,500 livestock. That much loss of life from 100,000-300,000 tons of carbon. If the gas bubble were to breach in the Aera Belridge plan, it would be 40 million times greater than the Cameroon disaster.

The other concern for our elected officials is protecting the taxpayer's dollar. This project is solely funded on the back of the taxpayers. The subsidies given to the value of the disposal is based on which administration is in office. If the subsidies leave, the project cannot be feasible, and then sits idle having to be monitored for 70 plus years.

I would again strongly urge you to vote no on the project and let's not make Kern County a toxic landfill for the state on the taxpayers back.

07-001 cont

Thank you,

Chisholm Twisselman

17750 7th Standard Rd.

Mkcittrick, CA 93251

Comment 7

Chisholm Twisselman

7-001

Thank you for your comment and participation in the public process. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The commenters raise concerns regarding the proximity of the proposed CCS project in the Belridge Oilfield to their ranches and cattle grazing operations and are opposed to the project. Please see response to Letter 6-001.

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8: Ashley Twisselman

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My name is Ashley Twisselman. My husband Chisholm and I and our three children live and work on our family cattle ranch, along with the rest of our family, right by Aera Belridge where the proposed Carbon Frontier CCS Project is supposed to be. We are three miles from the proposed area. We are fully against the carbon capture project that you are planning on starting at Aera Belridge. We work outside daily near this proposed area. Our children's bus stop and bus route are right on 7th Standard Rd., right next to where you are planning to put the carbon capture pipelines.

The ground in Aera Belridge is unstable. There are many sinkholes and subsidence's there. The place where you are planning for these carbon capture pipelines to go should be on very stable ground that is not likely to move so as not to disturb or move the ground so that the pipelines do not break. This is not the place for these pipelines. There have been multiple sink holes and subsidence's just alone from rain. 7th Standard Rd. was closed for six months from January 2023 until June 2023 due to a sink hole that ran all the way across the entire road. There are multiple sinkholes and subsidence's all around in the area where you are wanting these pipelines to go.

When the ground is unstable and these carbon capture pipelines break, people will be hurt or even killed. That gas is invisible to the eyes and to the nose. It is colorless and odorless. Carbon sucks all of the oxygen out of the air. It is a silent and invisible killer. People, animals, and even vehicles need oxygen to live and operate.

Like what happened in Satartia Mississippi in 2020, when after heavy rainfall, the unstable ground where these carbon capture pipelines were running had subsidence. This subsidence caused a rupture in the pipes, causing a mass poisoning of civilians. These civilians had no idea what was happening and that they were being poisoned. The people driving on the road next to the rupture had no idea what was happening when their cars all of a sudden quit working. Unbeknownst to them the carbon had sucked all of the oxygen out of the air causing the vehicle to quit working. These people then passed out because they themselves had no oxygen to breath. People and vehicles need oxygen to operate. When the oxygen is depleted neither can operate or function. When vehicles can't operate how are people supposed to safely evacuate? How are emergency vehicles supposed to come to help the people who are dying from lack of oxygen? Many people were injured and at least 45 people were hospitalized all because of a break in a carbon capture rupture that was located on unstable ground. The civilians who lived through the nightmare had long lasting health effects. Extreme exposures to carbon can lead to death by asphyxiation. Lack of oxygen causes serves problems to the brain and to the lungs. If you brain doesn't have enough oxygen it will start to die, depending on what parts of the brain are affected there will be different symptoms and effects on the cognitive function.

My family and I are fully against this Carbon Frontier CCS project. If this is passed our lives will be put at risk every single day. Having these carbon capture pipelines right next to our family cattle ranch is a huge safety risk that my family and I are not willing to

have. I do not think that the ground in this area is a safe place to implement a carbon capture project. My children's lives are the most precious and important thing to me. Lives of innocent people should not be a cost to capture carbon.

Thank you,

Ashley Twisselman

17750 7th Standard Rd.

Mckittrick, CA 93251

Comment 8

Ashley Twisselman

8-001

Thank you for your comment and participation in the public process. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The commenters raise concerns regarding the proximity of the proposed CCS project in the Belridge Oilfield to their ranches and cattle grazing operations and are opposed to the project. Please see response to Letter 6-001.

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9: Sage Twisselman

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My name is Sage Twisselman, my brother Chisholm and I are the sixth generation on our cattle ranch and are raising the seventh generation as we speak. I am writing this letter concerning the Carbon Capture Project that will affect my family in many ways. I think it is very unsafe with all the unstable ground and sink holes that everyone is aware of after all the rain last year with road damages and all the subsidence/sink hole damages that had to be repaired off 7th standard rd. There was a Carbon Capture disaster in Satartia Mississippi 2020, 45 people were hospitalized some reported long term affects, the reason of the failed pipeline was due to heavy rains causing soil subsidence which is ironic seeing all the subsidence on 7th standard road. The Carbon has no smell so you would not know of leaks. I strongly feel that there are no pros to this project and is very unsafe for everyone working around it as well as our family who has been ranching here for over 100 years. The proposed area for the carbon capture site is three miles from where we live and operate our ranch. This is our livelihood and we plan for our children to carry on the legacy.

Thanks

Sage Twisselman

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Comment 9

Sage Twisselman

9-001

Thank you for your comment and participation in the public process. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The commenters raise concerns regarding the proximity of the proposed CCS project in the Belridge Oilfield to their ranches and cattle grazing operations and are opposed to the project. Please see response to Letter 6-001.

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10: Rose Twisselman

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Keith Alvidrez

From: Chisholm Twisselman <chisholmtwiss@gmail.com>
Sent: Monday, August 12, 2024 7:13 AM
To: Keith Alvidrez
Subject: Belridge Aera

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

I am writing this in protest to the planned carbon capture project in Belridge. I am an adjacent land owner to Belridge and oppose this project. I still run cattle with my sons, grandkids and great grandchildren on the west side and this projected plan would not be sustainable for us.

10-001

Thanks

Rose Twisselman

Sent from my iPhone

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Comment 10

Rose Twisselman

10-001

Thank you for your comment and participation in the public process. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The commenters raise concerns regarding the proximity of the proposed CCS project in the Belridge Oilfield to their ranches and cattle grazing operations and are opposed to the project. Please see response to Letter 6-001.

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11: Susie Snedden

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Susie Snedden
P.O. Box 129
Maricopa, CA 93252

Kern County Planning and Natural Resources Department
ATTN: Keith Alvidrez, Planner II
2700 "M" Street, Suite 100, Bakersfield, CA 93301

August 10, 2024

RE: COMMENTS IN OPPOSITION TO CARBONFRONTIER CARBON CAPTURE & STORAGE PROJECT

Dear Mr. Alvidrez,

I support the local oil and gas production industry. My family and I operate cattle ranches and own land in Kern County's oil development area and we have traditionally enjoyed a mutually beneficial business relationship. The CarbonFrontier CCS carbon capture project proposed by Aera Energy, LLC. presents a serious cause for alarm to those in the project area. I am commenting as a direct stakeholder because my family owns land and businesses in the project area and has children that attend the McKittrick School.

11-001

The state government's plan to clean up the air by a mandate to oil companies to capture carbon is an illogical, untested and unproven scheme, with potential to place human lives at great risk. The known risks to humans of storing carbon in pipelines and underground vaults are obvious: explosions, fire, asphyxiation, subsidence and groundwater contamination, among others. The unknown component of the carbon capture scheme is the lack of proof that carbon capture improves air quality.

We recognize that when dealing with top-down idealistic and unproven environmental proposals and mandates, Kern County local government has had to seek creative ways to support local businesses and to keep the economy moving, and has a vested interest in keeping county revenues strong. But this proposal would establish the vast area of the Belridge oil fields as a test lab - with humans as the lab rats. I respectfully request that local government and businesses withdraw this project and seek ways to mitigate air pollution that will not endanger humans in the process.

Thank you for your consideration.

Sincerely,

Susie Snedden

Susie Snedden

This page intentionally left blank.

Comment 11

Susie Snedden

11-001

Thank you for your comment and participation in the public process. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The commenters raise concerns regarding the proximity of the proposed CCS project in the Belridge Oilfield to their ranches and cattle grazing operations and are opposed to the project. Please see response to Letter 6-001.

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12: Richard Garcia

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Keith Alvidrez

From: rickgarcia@westkern.net
Sent: Monday, August 5, 2024 2:09 PM
To: CF-EIR Comments
Subject: Comments Carbon Frontier Project

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Kern County Planning and Natural Resources Department
Attention: Keith Alvidrez
Planner II

Dear Sir:

As President of the Kern County LULAC, Council 3272, our organization stands in support of the proposed Carbon Frontier Project and the many benefits it stands to achieve for our local communities. LULAC Council 3272 continues to be committed to our Mission of advancing opportunities that benefit our community through jobs, economic conditions, health, and education. This project aligns perfectly with our Mission. LULAC Kern County Council 3272 and its One Hundred and ten (110) members stand in full support of the Carbon Frontier Project which not only will benefit the environment, but will also create local technical high paying jobs that will benefit disadvantaged communities in Kern County.

Richard F. Garcia
President LULAC Council 3272
167 Dunford Street , Buttonwillow Ca. 93206

12-001

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Comment 12

Richard Garcia

12-001

Thank you for your comment and participation in the public review of this environmental document. The comment letter submitted indicates support of the proposed project.

The comment does not state a specific concern related to the adequacy of the Draft EIR or otherwise comment on the contents of the Draft EIR. Therefore, a response is not required. This comment has been noted for the record and has been provided to the Kern County Planning Commission and the Kern County Board of Supervisors for consideration.

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13: Torrance Valley Pipeline Company

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Keith Alvidrez

From: ROW, TOR <TOR.ROW@pbfenergy.com>
Sent: Thursday, August 1, 2024 1:46 PM
To: CF-EIR Comments
Cc: Mooney, Anthony J; Scott, Jeremy C; Acuna, Joseph; Brossman, Rachel; Boss, Michael
Subject: 24-8375 - Utility Research Request - EIR for the Carbonfrontier Carbon Capture and Storage (CCS) Project
Attachments: 24-8375.pdf; 4-A-450V.pdf; 4-A-451.pdf; 4-A-451A.pdf; 4-A-451V.pdf; 4-A-740.pdf; 4-A-741.pdf; D4A-3053.PDF; D4A-3204.pdf; D4A-3205.pdf

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Dear Mr. Alvidrez,

Pursuant to the request of dated June 28, 2024, pertaining to the above referenced project, please see the attached for Torrance Valley Pipeline Company LLC's response.

Best regards,

Eleanor Marx
Contract Right of Way Agent

Torrance Logistics Company LLC
12851 E. 166th Street
Cerritos, CA 90703
310 212 2914 Tel
310 977 9193 Mobile
310 212 1788 Fax
eleanor.marx@pbfenergy.com

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**Torrance Valley Pipeline
Company LLC**
12851 East 166th Street
Cerritos, CA 90703
(310) 212-1771 Telephone
(310) 212-1788 Facsimile
www.pbenergy.com

July 26, 2024

Attn: Mr. Keith Alvidrez, Planner II
Kern County Public Works
Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301

Re: Utility Research Request - EIR for the Carbonfrontier Carbon Capture and Storage (CCS) Project

Our File: 24-8375

Dear Mr. Alvidrez:

Pursuant to your request dated June 28, 2024, pertaining to the above referenced project, please be advised that Torrance Valley Pipeline Company LLC maintains one active 8-inch pipeline (M-55), one active 12-inch pipeline (M-55), one abandoned 8-inch pipeline (M-55), one idle 8-inch pipeline (M-55), one active 8-inch pipeline (G-3-1), one idle 6-inch pipeline (G-3-1), one idle 6-inch pipeline (G-3), one idle 4-inch pipeline (G-3-13), one idle 6-inch pipeline (G-3-4) and one abandoned 6-inch pipeline (G-3-1) within the vicinity of your proposed project. Additionally, Torrance Valley also maintains approximately eleven (11) Electrolysis Test Stations (ETS) within the vicinity of the proposed project. We are prepared to mark our facility upon receiving 48-hour advanced Underground Service Alert (USA) notice.

Enclosed for your information are Torrance Valley drawings 4-A-451, 4-A-451A, D4A-3053, 4-A-450V, 4-A-451V, D4A-3204, D4A-3205, 4-A-740 & 4-A-741 that depicts the general alignment of the above referenced pipelines. Upon completion of your final project drawings, we will look to you to provide us a detailed set of your plans for our review to determine if there is a conflict with our existing facilities.

Torrance Valley requires a representative to be on site during construction activities near our facilities. Therefore, you or your contractors are hereby notified to contact, in addition to the above referenced USA notice, Torrance Valley's designated representative at (661) 763-7641 or (661) 345-7643 between the hours of 6:30 A.M. and 3:30 P.M., Monday through Friday, a minimum of 48 hours in advance of commencing said construction activities.

YOU ARE ADVISED THAT NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, IS CONVEYED, AS TO THE ACCURACY OR COMPLETENESS OF ANY RECORDS OR INFORMATION HERETOFORE OR HEREAFTER FURNISHED TO KERN COUNTY IN CONNECTION WITH THE TORRANCE VALLEY PIPELINE COMPANY LLC ASSETS AND ANY RELIANCE ON OR USE OF THE SAME SHALL BE AT KERN COUNTY'S SOLE RISK. Additionally, any and all Torrance Valley facilities identified as "Active", "Idle", or "Abandoned", unless otherwise clearly specified, remain the property of Torrance Valley Pipeline Company LLC, and that all activities affecting these facilities must be approved and controlled by Torrance Valley. Should it be determined that such Torrance Valley facility potentially interferes with your project this office must be notified immediately, at which time Torrance Valley personnel will review the issues to determine what actions will be necessary to identify and resolve any conflicts.

Please submit future project notifications to the undersigned at TOR.ROW@pbenergy.com. If you have questions or require additional information regarding this submittal, please contact Ms. Eleanor Marx at (310) 212-2914.

Very truly yours,

Michael Boss
Digitally signed by Michael Boss
DN: cn=Michael Boss
E=Michael.Boss@pbenergy.com,
Reason: I am approving this document
Date: 2024.08.01 12:14:54-0700'

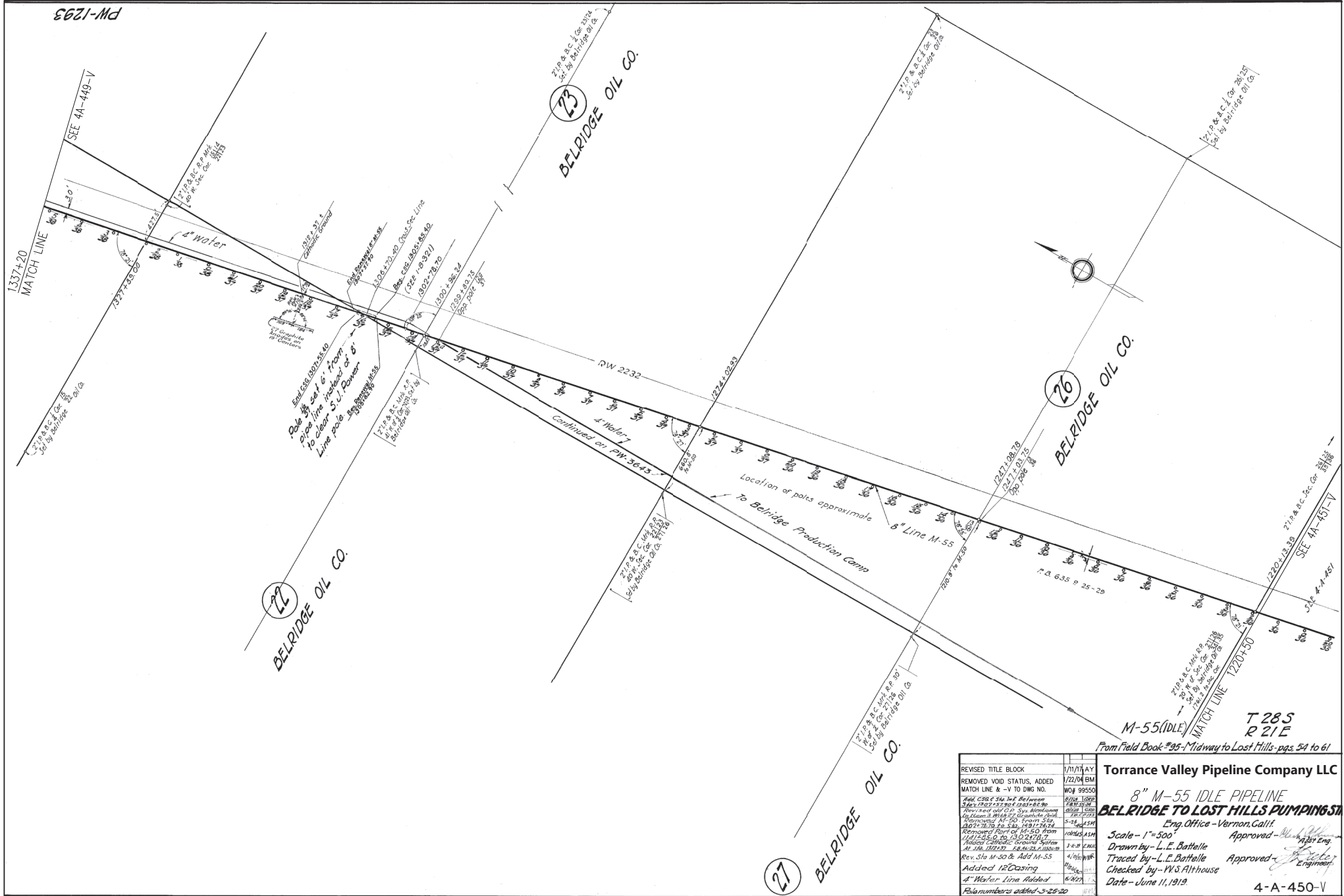
Michael Boss
Manager, Right of Way

Cc: A. Mooney
J. Scott
J. Acuna
R. Brossman

13-002

13-003

PW-1293



REVISED TITLE BLOCK	1/11/17 AY
REMOVED VOID STATUS, ADDED MATCH LINE & -V TO DWG NO.	1/22/04 BM WO# 99550
Add C&G's Sta Int Between 3.50' to 3.75' to 3.75' to 3.75'	4/04 1000
Revised of C.D. Sys. Alignment to 3.75' to 3.75' to 3.75' to 3.75'	4/04 1000
Revised M-50 to Add M-50 Add C&G's Sta Int Between 1.00' to 1.25' to 1.25' to 1.25'	5-25-20 10/05/05 AS
Revised C&G's Sta Int Between 1.00' to 1.25' to 1.25' to 1.25'	3-25-20
Revised C&G's Sta Int Between 1.00' to 1.25' to 1.25' to 1.25'	4/06/06 10/05/05 AS
Rev. 5.0 M-50 & Add M-55 Added 12" Casing	10/05/05 AS
4" Water Line Added	6/05/06
Revised numbers added 3-25-20	

Torrance Valley Pipeline Company LLC

8" M-55 IDLE PIPELINE

BELRIDGE TO LOST HILLS PUMPING STATION

Eng. Office - Vernon, Calif.

Scale - 1" = 500'

Drawn by - L.E. Battelle

Traced by - L.E. Battelle

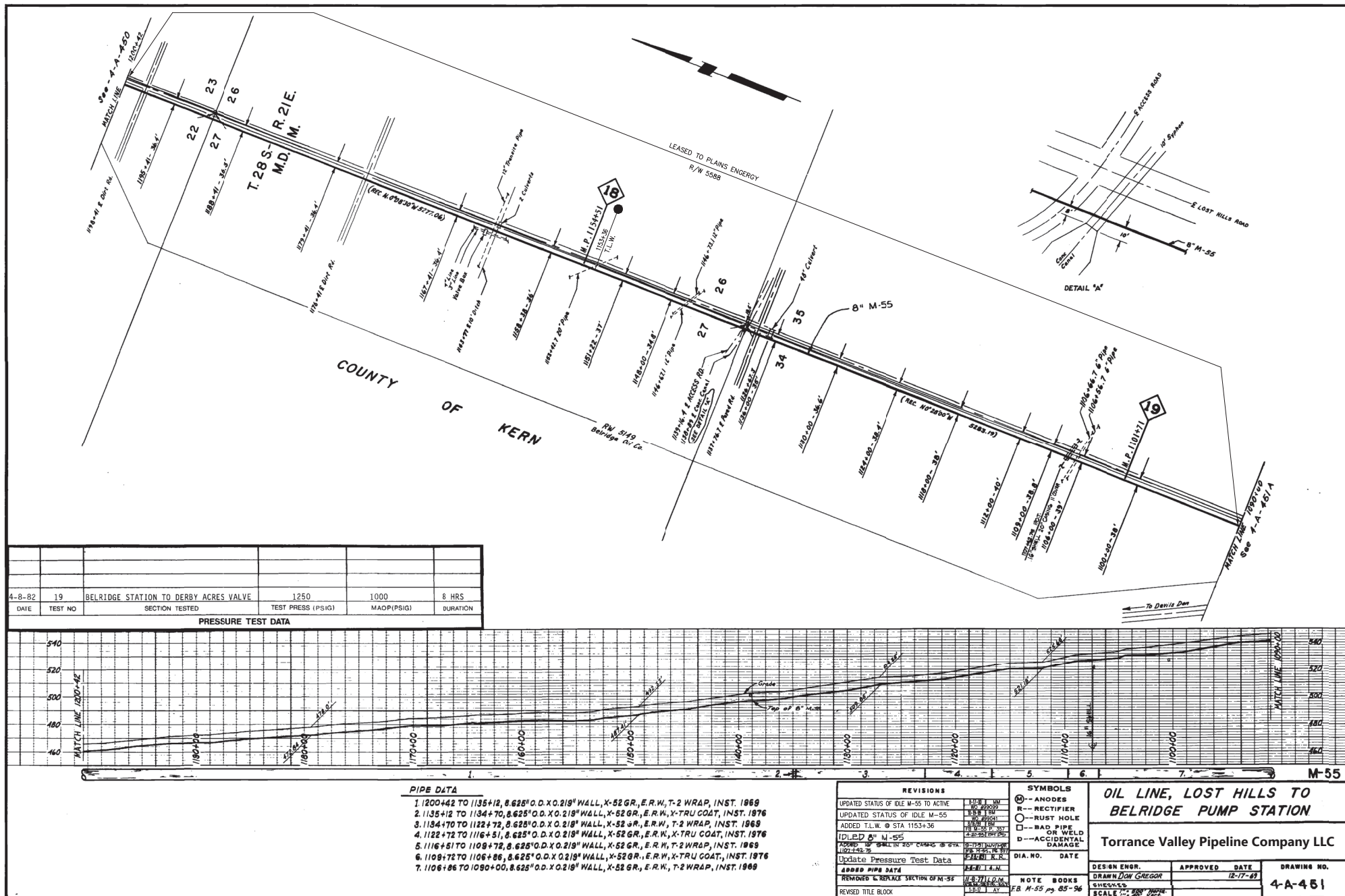
Checked by - W.S. Althouse

Date - June 11, 1919

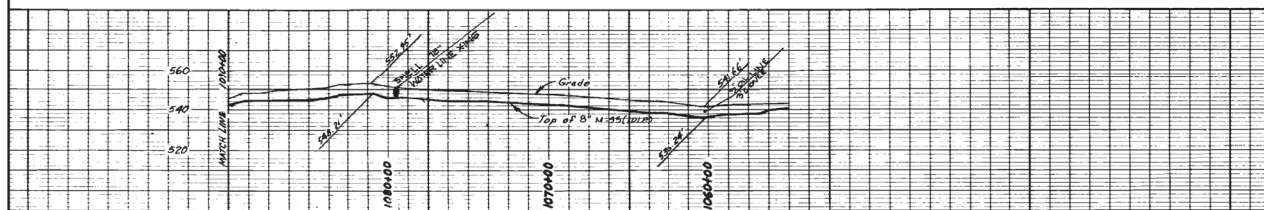
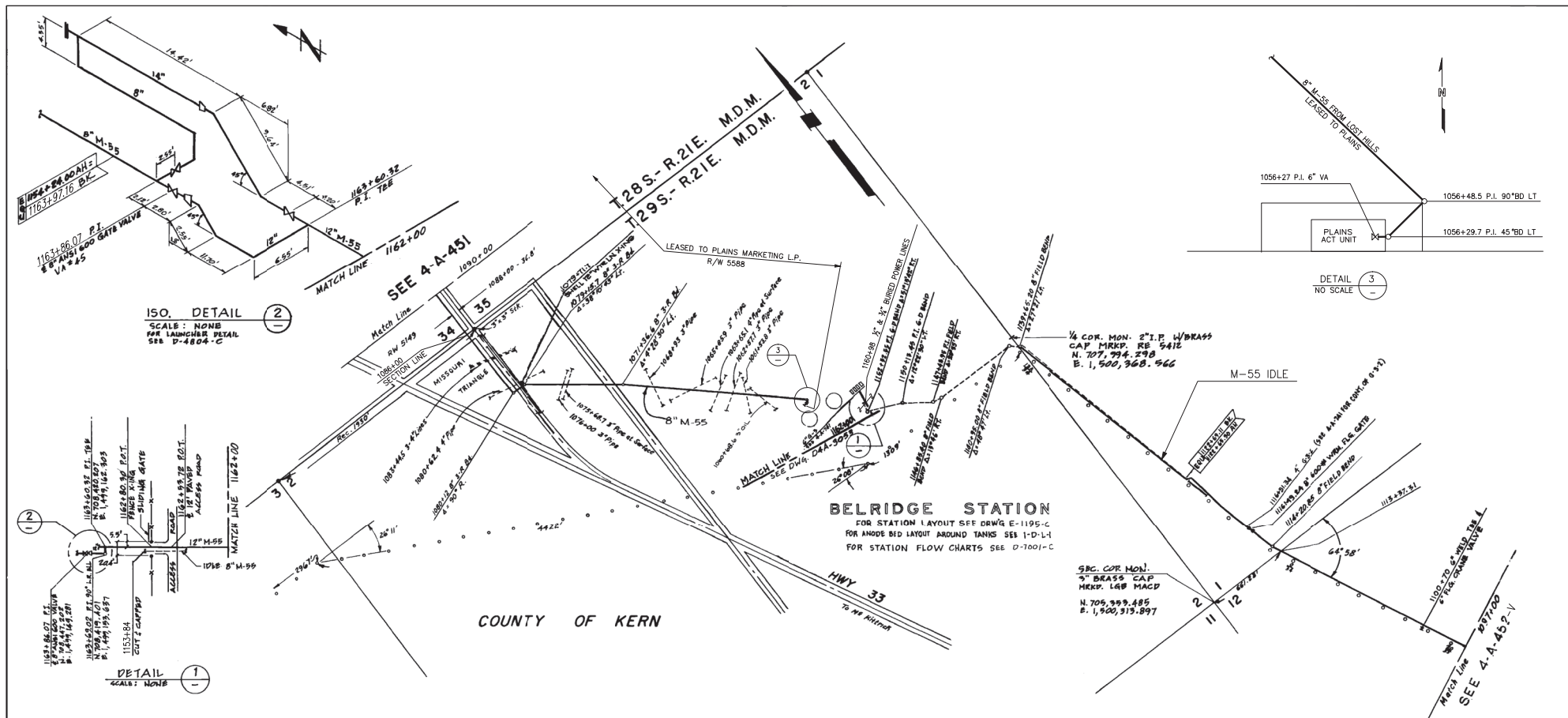
Approved - *[Signature]* Asst. Eng.

Approved - *[Signature]* Engineer

4-A-450-V



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DATE	TEST NO	SECTION TESTED	TEST PRESS (PSIG)	MAOP (PSIG)	DURATION
2-26-01	19A	BELRIDGE STA. TO 8"-12" TRANSITION	1250	1000	4 HRS.
1-25-85	11A	BELRIDGE STA. TO DERBY ACRES VALVE	2160	860	4 HRS
4-8-82	13	BELRIDGE STA. TO DERBY ACRES VALVE	1250	1000	8 HRS

PRESSURE TEST DATA

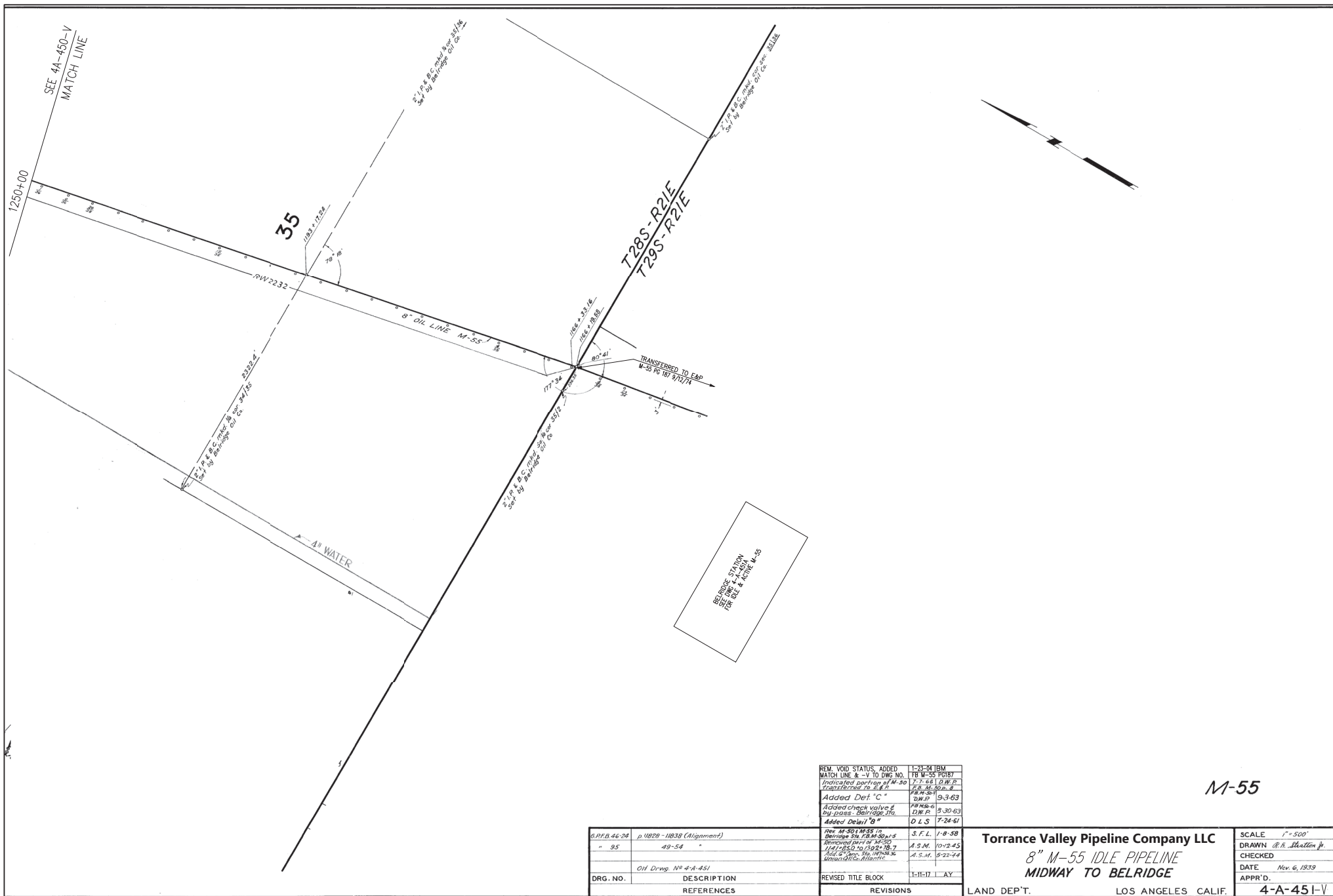
M-55

PIPE DATA

1. 1090+00 TO 1056+27, 8.625" O.D. X 0.219" WALL, X-52 GR, E.R.W., T-2 WRAP, INST. 1969 (LEASED)
2. 1163+86 TO 1162+00, 12.750" O.D. X 0.375" WALL, X-42 GR, E.R.W., F.B.E.-90-U-15, INST. 1988

REVISED TITLE BLOCK	AY 1/11/77	ADDED SHELL 18" W/ALINE XING AT STA. 1075+71.7	REVISIONS	SYMBOLS	OIL LINE, LOST HILLS TO BELRIDGE PUMP STATION			
REVISED M-55 & ADDED DET. 3 FOR FIELD VERIFICATION	RM 8/27/77	ADDED PRESSURE TEST DATA	ADD 6" GAS LINE PER EXP. DWS.	ANODES				
REVISED ISO DETAIL STA. 1163+86 TO 1163+97.16 BK	ST 6/14/77	REVISED AS BUILT	ADD 4" GAS LINE PER EXP. DWS.	RECTIFIER	Torrance Valley Pipeline Company LLC			
REVISED CUT & CAP	RM 1/21/78	ADDED CONNECTIONS	ADD 4" GAS LINE PER EXP. DWS.	RUST HOLE				
F.B. M-55, PG. 316	WO 8/9/80	ADDED FM STA. TO 1162+00	ADD 4" GAS LINE PER EXP. DWS.	BAD PIPE	DESIGN ENGR.			
ADDED X-RING @ 1160+98	MM 12/2/01	ADDED 4" PRESSURE TEST DATA	ADD 4" GAS LINE PER EXP. DWS.	ACCIDENTAL DAMAGE				
UPDATED PER	MM 9-26-01	ADDED 4" PRESSURE TEST DATA	ADD 4" GAS LINE PER EXP. DWS.		DRAWN DON GREGOR			
MARK-UP	VOE 9/20/05	ADDED 4" PRESSURE TEST DATA	ADD 4" GAS LINE PER EXP. DWS.					
UPDATED STATUS OF IDLE M-55	RM 11-5-89	ADDED 4" PRESSURE TEST DATA	ADD 4" GAS LINE PER EXP. DWS.		APPROVED			
12" ID 8" M-55	VOE 9/20/05	ADDED 4" PRESSURE TEST DATA	ADD 4" GAS LINE PER EXP. DWS.					
ADDED 8" LINE XING	RM 11-5-89	ADDED 4" PRESSURE TEST DATA	ADD 4" GAS LINE PER EXP. DWS.		DATE			
ADDED PIPE DATA	VOE 9/20/05	ADDED 4" PRESSURE TEST DATA	ADD 4" GAS LINE PER EXP. DWS.					

NOTE: THIS IS A C.A.D. PRODUCED DRAWING/DO NOT MAKE ANY MANUAL CHANGES TO ORIGINAL



6.P.F.B. 46-24	p. 4628 - 11838 (Alignment)
" 95	49-54 "
	Oil Drwg. No. 4-A-451
DRG. NO.	DESCRIPTION
	REFERENCES

REV. VOID STATUS, ADDED	1-25-04 TBM
MATCH LINE & -V TO DWG. NO.	TB M-55 P0187
Indicated portion of M-55	7-7-46 D.R.P.
Transferred to E&P	7-7-46 D.R.P.
Added Det. "C"	9-3-63
Added check valve d	9-30-63
by-pass - Belridge Sta.	D.W.P.
Added Det. "B"	7-24-61
See M-55 TBM	S.F.L. 1-8-58
Belridge Sta. 11838	A.S.M. 10-24-5
Removed part of M-55	A.S.M. 5-22-74
11838 to 11839	
Added 6" Det. Sta. 11838	
Transferred to E&P	
REVISED TITLE BLOCK	1-11-17 I.A.Y.
REVISIONS	

Torrance Valley Pipeline Company LLC
8" M-55 IDLE PIPELINE
MIDWAY TO BELRIDGE
LAND DEP'T. LOS ANGELES CALIF.

SCALE	1" = 500'
DRAWN	R.R. Station Jr.
CHECKED	
DATE	Nov. 6, 1939
APPR'D.	
	4-A-45 I-V

Emily B. Hopkins

Marina

REVISIONS:

NOTE: Corrected Lease Norms - 7.7.24
 Added: C" G-3-3 F.B. 79-2 R. 932 9-30-43 J.A.R.
 6" G-3-3 from Sta. 0+00 to 451.16 turned over to E&P 5-23-65 E.D.R.
 Noted Portion of G-3 loaned to E&P per E&P pg. 16- P. Tolman 8-14-75
 Added: 4" G-3-10 from Sta. 1.5488 to Sta. 1.5491 5/21/1997
 ADDED NEW REEF RIDGE DETAIL CALL OUT, NOV. 7/5/90. IB

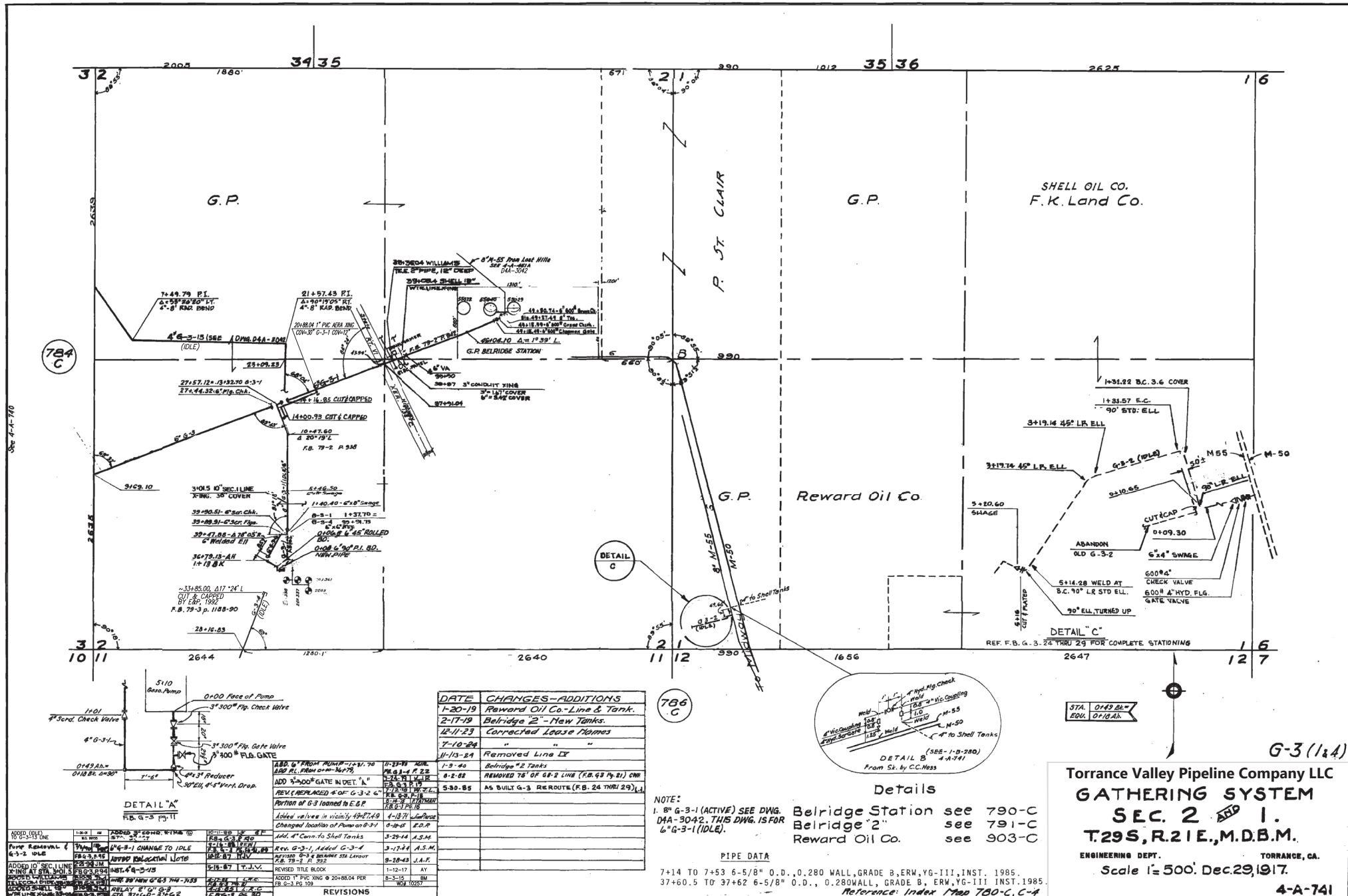
Details
 Marina see 789-C.

Reference: Index Map 780-C, B-4

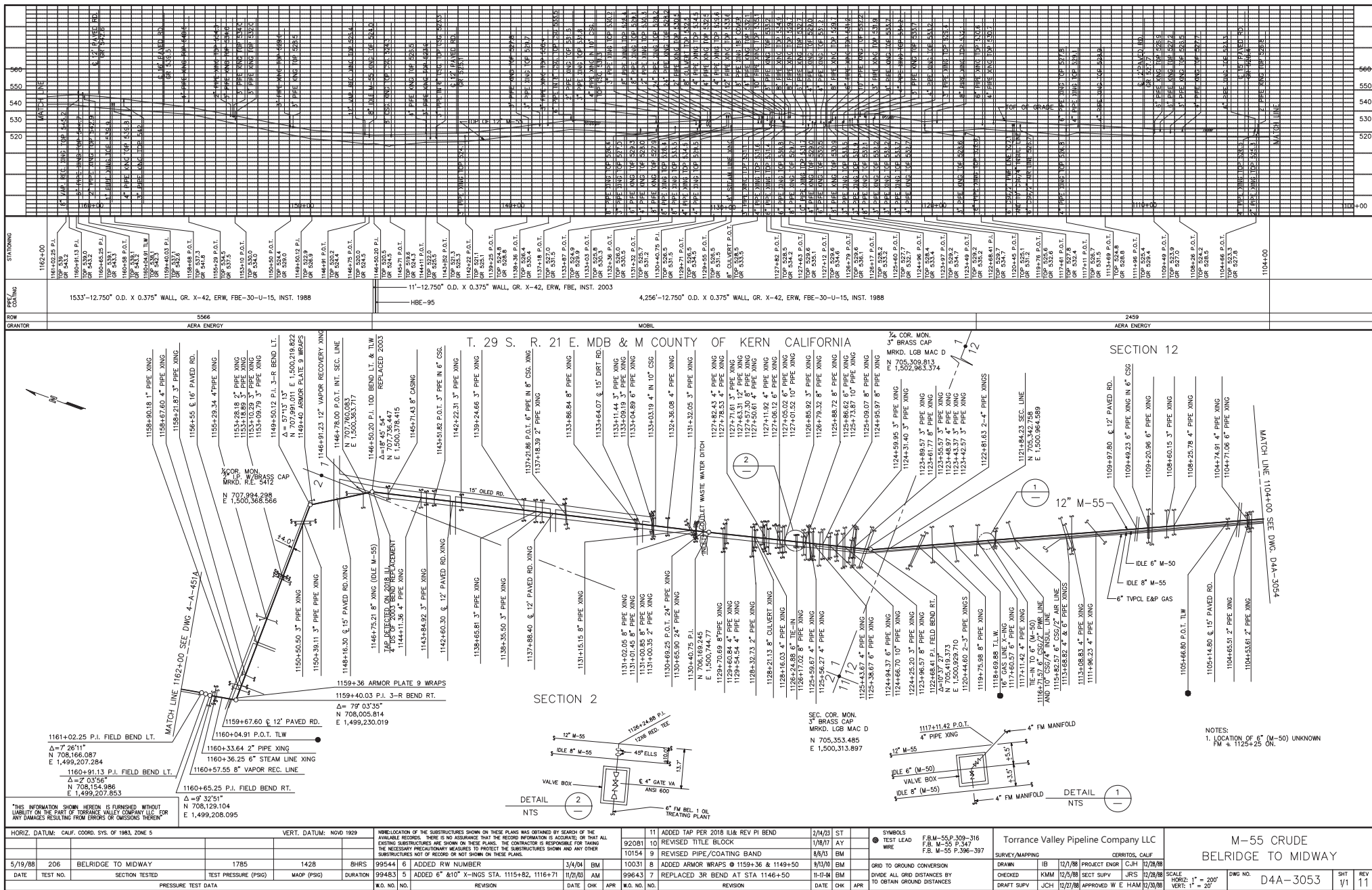
Torrance Valley Pipeline Company LLC
GATHERING SYSTEM
SEC 4 AND 3
T.29S., R.21 E., M.D.B.M.
 ENGINEERING DEPT. TORRANCE, CA.
 Scale 1"=500' Dec.29, 1917

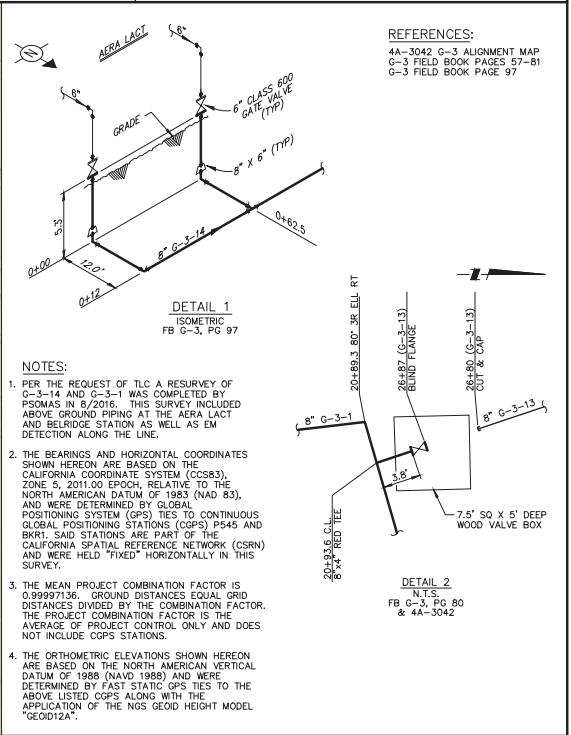
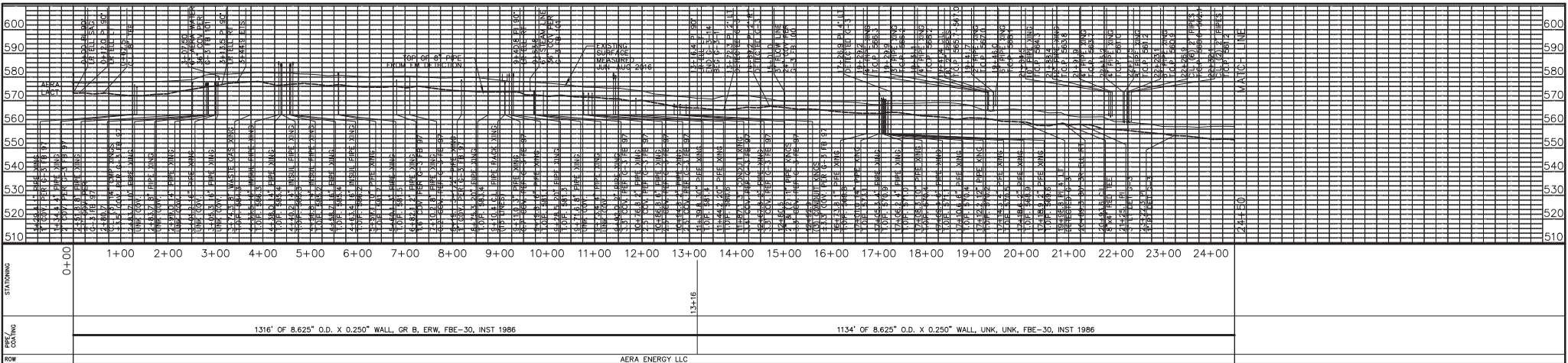
4-A-740

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NOTE: THIS IS A C.A.D. PRODUCED DRAWING/DO NOT MAKE ANY MANUAL CHANGES TO ORIGINAL





PRESSURE TEST DATA										FIELD NOTES									
DATE	TEST NO.	SECTION TESTED	TEST PRESSURE (PSIG)	MAOP (PSIG)	DURATION	W.O. NO.	NO.	REVISION		DATE	CHK	APR	W.O. NO.	NO.	REVISION	DATE	CHK	APR	

THIS INFORMATION SHOWN HEREON IS FURNISHED WITHOUT LIABILITY ON THE PART OF TORRANCE VALLEY COMPANY, LLC FOR ANY DAMAGES RESULTING FROM ERRORS OR OMISSIONS THEREIN.

AERA ENERGY LLC
APN NO. 098-112-01

FIELD NOTES

SYMBOLS

TEST LEAD WIRE

ENGINEERING

DRAWN

DRAFTING CHECK

DRAFTING SUPV

10339

0

REMAINED AND RESTATIONED

1/18/17

DBS

APPROVED

20X0031606

Torrance Valley Pipeline Company LLC

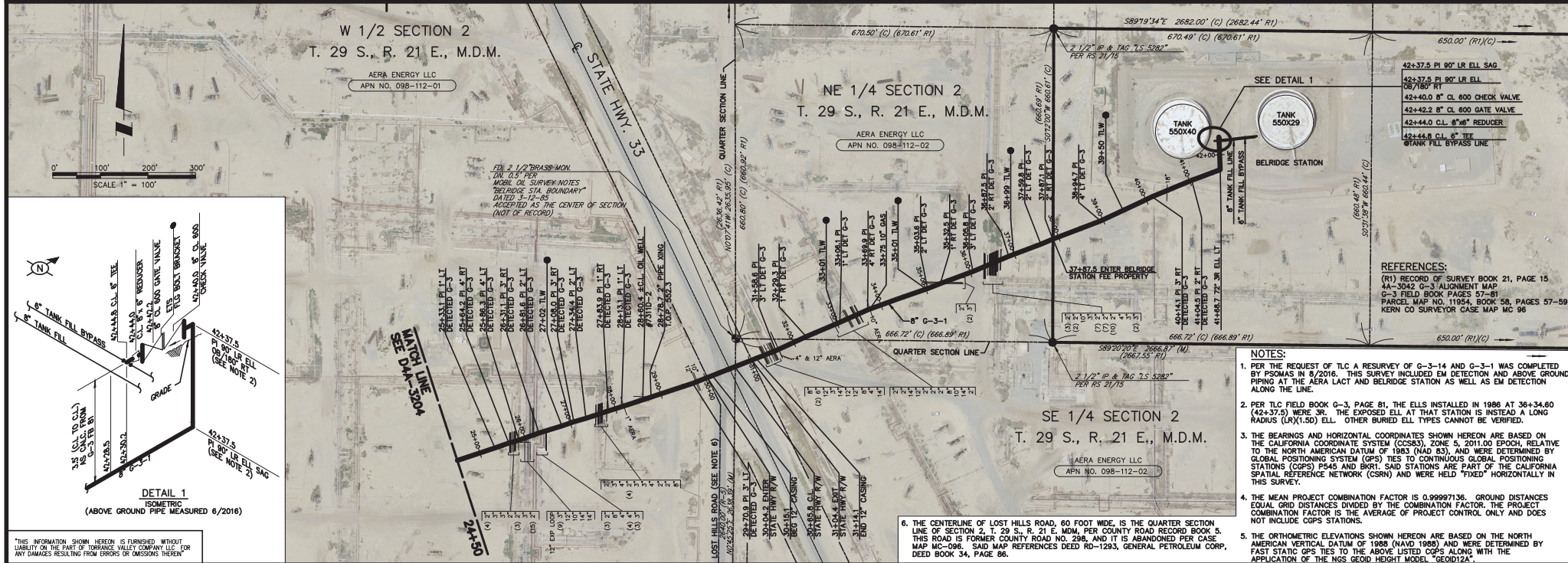
8" G-3-14/G-3-1 GATHERING LINE
AERA TO BELBRIDGE
PLAN & PROFILE

SCALE 1"=100' HORIZ
1"=20' VERT.

DWG NO. D4A-3204

SHT 7

REV 0

[illegible]

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Comment 13

Torrance Valley Pipeline Company

13-001

Thank you for your comment and participation in the public process. This comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

13-002

Commenter's remarks regarding pipelines within the vicinity of the project maintained by Torrance Valley Pipeline Company LLC are noted for the record. This information will be provided to applicant for inclusion in the required CUP Site plans for construction.

13-003

Commenter's remarks regarding representative presence during construction are noted and concluding remarks are noted. Construction activities on this CCS project only occurs in limited areas. This information will be provided to CRC for inclusion in the required CUP Site plans for construction.

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14: Organization Group

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August 12, 2024

Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301

Re: CEQA Review of the Aera CarbonFrontier Carbon Capture and Storage Project at Belridge Oil Field

To Kern County Planning and Natural Resources Department:

14-001

The undersigned 45 organizations write to express our strong opposition to the CarbonFrontier carbon capture and storage (CCS) project at the Belridge oil fields in Kern County.¹ We are deeply concerned that the CarbonFrontier project will deploy expensive, dangerous, and ultimately failed CCS technology to extend the life of dirty fossil fuel facilities.

The project's Draft Environmental Impact Report (EIR) lists a number of unacceptable impacts, such as:

14-002

- Total air pollution would be significant and expose sensitive populations to “substantial pollutant concentrations”;
- Total greenhouse gas emissions (GHGs) would have a significant impact on the environment and conflict with plans to reduce GHGs;
- The project would contribute to cumulative harms to local groundwater supply;
- A rupture from the planned CO2 pipelines could lead to significant harms, including possible fatalities to workers at the nearby Wonderful Nut Farms; and
- The project's annual electricity demand would amount to nearly 3% of the County's total.

These impacts, and many others, cannot be mitigated away. **We urge you to reject this project and invest in real clean energy solutions that advance California's air, climate, public health, and environmental justice goals.**

Importantly, too, the CarbonFrontier project will derail California's transition away from fossil fuels. The project's main purpose is to keep oil field operations alive while generating subsidies for capturing and injecting some of its GHG pollution. But for a long period of time the project will result in a net *increase* of GHG emissions because the CCS will be powered by natural gas. This is simply going in the wrong direction since fossil fuels must be phased out, rather than finding new uses for them.

14-003

It is also doubtful that the project will be net negative for GHG emissions in the future. Real world examples prove that CCS technology has not worked as promised despite decades of development and billions of dollars of investment. Carbon capture projects have repeatedly over-promised and under-delivered² on their capture rates while providing cover for polluting

¹ CEQA Project 2023060293 / Kern County PP23402.

² IEEFA, “The Carbon Capture Crux” (Sept. 2022), <https://ieefa.org/resources/carbon-capture-crux-lessons-learned>.

industries.³ In addition to its repeated failures, carbon capture is *not necessary* as a climate solution, according to the Intergovernmental Panel on Climate Change.⁴ Frontline communities in Kern County should not be used as a testing ground for flawed and unnecessary techno-fixes like carbon capture.

14-003 cont

Furthermore, relying on failed technology to keep oil fields operating decades longer flies in the face of California's climate goal of 85% *direct* emissions reductions by 2045. In order to rapidly reduce GHG emissions and actually decarbonize, California must stop permitting projects that further entrench fossil fuels that are driving the climate crisis.

The CarbonFrontier project poses serious risks to public health, safety, and the environment in Kern County: The project will lead to a host of harmful impacts to the region, including impacts to air, climate, water, health and safety, seismicity, pipeline safety, and animal and plant species.

14-004

Twenty-eight homes in Lost Hills are 3.5 miles from the project site. The project also relies on 14.5 miles of CO₂ pipelines, which increases the risk of dangerous leaks and ruptures. The Draft EIR does not offer any kind of emergency response plan, and instead puts this off to sometime in the future without the chance for public comment. This is inappropriate with such a serious (and potentially deadly) impact of the project. Moreover, the Draft EIR says that Wonderful Nut Farms, which operates a solar panel area near the project's CO₂ pipeline, may be exposed to a deadly pipeline leak. The County does not say that it plans to notify this company or its workers of the nearby danger. All workers, residents, schools, and others within several miles of the project must be notified and prepared.

Conclusion

The CarbonFrontier CCS project would prolong the life of dirty fossil fuel facilities, threaten California's progress toward its climate and clean energy goals, endanger people, and exacerbate local pollution, all when CCS is not a real climate solution. The proponent of this project, Aera Energy, recently merged with California Resources Corporation, a company with a history of financial failures. Allowing oil companies with poor financial track records to deploy failed carbon capture technology is an unacceptable risk. We urge you to reject this dangerous project.

14-005

³ See, e.g., The Guardian, "Carbon capture project is 'Band-Aid' to greenwash \$10bn LNG plant, locals say" (Feb. 3, 2023), <https://www.theguardian.com/environment/2023/feb/03/carbon-capture-gas-exports-rio-grande-lng-nextdecade>. For example, in July 2021, Chevron admitted that its commercial-scale carbon capture project in Australia failed to meet its five-year capture target of 80% CO₂, and instead only captured 30%. IEFFA, "If Chevron, Exxon and Shell Can't Get Gorgon's Carbon Capture and Storage to Work, Who Can?" (April, 2022), <https://ieefa.org/articles/if-chevron-exxon-and-shell-cant-get-gorgons-carbon-capture-and-storage-work-who-can>.

⁴ The IPCC-modeled pathway with the best chance of keeping warming at or below the target of 1.5°C makes no use of fossil fuels with carbon capture and storage (CCS) or bioenergy with carbon capture and storage (BECCS). IPCC, Summary for Policymakers in Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (2018) at 14, Section C.1.1., Figure SPM 3b (Pathway 1); see also *id.* at Ch. 2.3.3 and Table 2.SM.12. See also Center for International Environmental Law, *Confronting the Myth of Carbon Free Fossil Fuels* at 2, <https://www.ciel.org/wp-content/uploads/2021/07/Confronting-the-Myth-of-Carbon-Free-Fossil-Fuels.pdf>.

Sincerely,

Center for Biological Diversity
Central Valley Air Quality Coalition
Dolores Huerta Foundation
Leadership Counsel for Justice and Accountability
The Center on Race, Poverty, and the Environment
El Pueblo Para el Aire y Augua Limpió de Kettleman City (The people for clean air and water of Kettleman City)
Clean Water Action
The Climate Center
350 Bay Area Action
350 Sacramento
Active San Gabriel Valley
Azul
Ballona Institute
Benicians for a Safe and Healthy Community
Biodiversity First!
Biofuelwatch
California Nurses for Environmental Health & Justice
Center for Community Action and Environmental Justice (CCA EJ)
CleanEarth4Kids.org
Climate Action California
Climate First: Replacing Oil & Gas (CFROG)
Climate Hawks Vote
Climate Reality Monterey Chapter
Defend Ballona Wetlands
East Yard Communities for Environmental Justice
Elders Climate Action (ECA) Northern California (NorCal) Chapter
Elders Climate Action (ECA) Southern California (SoCal) Chapter
Environmental Justice Coalition for Water (EJCW)
Fossil Free California
Friends of the Earth
Glendale Environmental Coalition
Good Neighbor Steering Committee of Benicia
Indivisible Marin
Manhattan Beach Huddle
Oil Change International
Planning and Conservation League
San Francisco Bay Physicians for Social Responsibility
San Mateo Climate Action Team

Santa Cruz Climate Action Network
Science and Environmental Health Network
Society of Native Nations
SolidarityINFOService.org
Sunflower Alliance
Sustainable Mill Valley
West Berkeley Alliance for Clean Air and Safe Jobs

Comment 14

Organization Group

14-001

Thank you for your comment and participation in the public review of this environmental document. The comment letter submitted indicates opposition to the proposed project. This comment provides an introduction to the comments that follow.

The comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

14-002

The commentor expresses concern that the EIR discloses a number of impacts, including those related to air quality, greenhouse gas emissions, groundwater supply, pipeline rupture and safety, and electricity demand - and that the impacts cannot be mitigated. Mitigation measures to reduce the severity of the cited impacts can be found in Section 4.3, 4.8, 4.10 and 4.19, 4.9, and 4.6, respectively. Direct impacts would be less than significant for all impacts except air quality and greenhouse gas emissions.

The comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

14-003

The commentor expresses concern about the extension of the life of fossil fuels and greenhouse gas emissions. Please see the following global responses:

GR-2 Extending the Life of Fossil Fuel Facilities and GR-5 Mitigation Effectiveness.

14-004

The commentor States concerns relating to public health, safety, and the environment, including leaks and emergency response plans. Please see the following global response:

GR-4 Geological and Seismicity Risk.

14-005

The commenter express concern with the merge between Aera Energy and California Resources Corporation.

In response, the following information has been included in Chapter 3.0, Project Description, "The applicant for the CarbonFrontier CCS Project is Aera Energy, LLC. On February 7, 2024, California Resources Corporation (CRC) announced the signing of a definitive merger agreement with Aera Energy, LLC. CRC

is the applicant for the Carbon TerraVault 1 (Kern County) CCS Project in the Elk Hills oilfield, which is approximately 9 miles southeast from the CarbonFrontier CCS Surface Land use boundary, also in unincorporated Kern County. The Carbon TerraVault 1 (Kern County) CCS Project is in process of consideration for various land use permits, EPA permits, and a Draft Recirculated EIR (SCH # 2022030180) Carbon TerraVault I (Kern County) CCS Project by California Resources Corporation - Kern County Planning & Natural Resources Department. Both projects are being processed separately, have no shared facilities and are not dependent on the other for operations. They are both included in the respective cumulative impact list in each individual EIR. Common ownership of the projects, if the merger is finalized, is not sufficient evidence under the California Environmental Quality Act (CEQA) for a determination the projects are connected. There is no evidence or permitting on record that changes either project based on the announced tentative merger."

15: Kathy Anderson

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From: [Ashley Giggv](#)
To: [Keith Alvidrez](#)
Subject: Carbon Capture Belridge
Date: Monday, August 12, 2024 10:36:41 AM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Hello,

My name is Kathy Anderson and I am in opposition of carbon capture project that is being proposed for Aera Belridge. I have first had witnessed the subsidence and sink holes there and do not believe this to be a place where this project should take place. Thank you.

Kathy Anderson

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15-001

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Comment 15

Kathy Anderson

15-001

Thank you for your comment and participation in the public review of this environmental document. The comment letter submitted indicates opposition to the proposed project due to subsidence/sink holes.

The comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration.

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16: Yuhaaviatam of San Manuel Nation

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Keith Alvidrez

From: Eunice Ambriz <Eunice.Ambriz@sanmanuel-nsn.gov>
Sent: Monday, July 8, 2024 10:38 AM
To: Keith Alvidrez
Subject: Carbonfrontier Carbon Capture Sequestration (CCS) Project by AERA Energy, LLC [COU-KERN-2023-6]
Attachments: COU-KERN 2023-6 NOA.pdf

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Dear Keith,

Thank you again for contacting the Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians) regarding the above-referenced project. YSMN appreciates the opportunity to review the project documentation, which was received by the Cultural Resources Management Department on July 2, 2024. The proposed project is still located outside of Serrano ancestral territory and, as such, YSMN will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

16-001

Regards,
Eunice

Eunice Ambriz

Cultural Resources Technician
Eunice.Ambriz@sanmanuel-nsn.gov
O:(909) 864-8933 x 50-2033
M:(909) 649-4867
26569 Community Center Dr Highland, California 92346



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Comment 16**Yuhaaviatam of San Manuel Nation16-001**

Thank you for your comment and participation in the public process. The comment states that the project area is located outside Serrano ancestral territory.

Per California Public Resources Code (PRC) Section 21080.3.1, Assembly Bill (AB) 52 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency must provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project. It is noted that the San Manuel Band of Mission Indians is not requesting consultation for the project.

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17: SoCalGas

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From: [SoCalGasTransmissionUtilityRequest](#)
To: [Keith Alvidrez](#)
Subject: DCF: 1370-23-85N 1203 7056 / CarbonFrontier CCS Project by Aera Energy, LLC (PP23402)
Date: Wednesday, July 24, 2024 11:28:03 AM
Attachments: [6.8.24 EIR.pdf](#)
[DCF 1370-23-85N 1203 7056 CarbonFrontier CCS Project by Aera Energy LLC \(PP23402\).msg](#)

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Good morning Keith,

We recently received and reviewed the 6.8.24 EIR for CarbonFrontier project. After review we found that this project matches a request we received last June. We operate Transmission facilities in the area and would need to review drawings once they become available. An engineer will then be assigned to assist you and avoid potential conflicts. I have attached our response to the initial request above for your reference. Please refer to the DCF# 1370-23-85N 1203 7056 in future correspondence related to this project.

Please let me know if you have any questions.

Thank you,

Nerses Papazyan

Pipeline Planning Assistant-Transmission

17-001

SCG Transmission General Requirements



Transmission Technical
Services Department

9400 Oakdale Ave
Chatsworth, CA 91311
SC9314

July 3, 2023

Cindi Hoover
Kern County Planning & Natural Resources Dept
hooverc@kerncounty.com

Subject: CarbonFrontier CCS Project by Aera Energy, LLC (PP23402)

DCF: 1370-23-85N 1203 7056

The following are general requirements provided when performing work or planning projects near SoCalGas high pressure lines. Please review requirements along with project plans and notify SoCalGas Transmission Department about any questions or conflicts.

It is highly recommended that communication is maintained with SoCalGas to address all conflicts. Depending on the specific scope of your project there may be less or more requirements that need to be discussed regarding your project.

- 1- Consideration must be given to the safety of our pipeline(s) during all project stages.
- 2- SoCalGas must have continuous and uninterrupted access to the pipeline(s) and easement(s). In addition, SoCalGas conducts routine patrols and surveys of the pipeline(s); SoCalGas needs drivable access along the pipeline(s)/easement(s).
- 3- Buried pipelines must have a minimum cover of 3 feet and a maximum cover of 7 feet below finished grade. No change of grade whatsoever, even within these parameters, shall be made without prior approval of SoCalGas.
- 4- Prior to SoCalGas approving encroachment onto its easement(s), SoCalGas must be furnished with final grading plans showing the depth of the pipeline(s) below the existing surface and the depth of the pipeline(s) below the proposed finished grade. These elevations must meet SoCalGas' requirements for buried pipelines.
- 5- No permanent structures, such as buildings, block walls, foundations, gates, etc., shall be constructed within the easement or over the pipeline(s).

SCG Transmission General Requirements

- 6- There shall be no planting of trees or other deep-rooted plants within the easement(s) or over the pipeline(s).
- 7- Substructures shall cross perpendicular to the easement(s). Substructure crossings must provide a minimum of 18-inches vertical clearance from the pipeline(s). Additional separation is required for leach lines, fuel lines, etc.
- 8- Parallel encroachments within the easement(s) are prohibited. In areas where a parallel substructure is being constructed outside of the easement(s), SoCalGas requires five feet of separation, with three feet of undisturbed fill, in order to protect the integrity of our facilities and allow the facilities to be safely accessed during inspection, maintenance, and repair. Additional separation may be needed for leach lines, fuel lines, high voltage electric, etc.
- 9- All encroachments onto SoCalGas' easement(s) must have written approval of SoCalGas prior to construction or encroaching onto the easement(s).
- 10- All work within the SoCalGas easement(s) and/or within 10 feet of the pipeline(s) must be witnessed by a SoCalGas representative, and no work will be allowed without the SoCalGas representative on site.
- 11- No heavy equipment shall cross the pipeline(s) without SoCalGas' approval. Additional protective measures may be required where heavy equipment is expected to cross the pipeline(s).
- 12- No mechanical equipment shall operate within three horizontal feet of the pipeline(s), and any closer work must be performed by hand.
- 13- No mechanical equipment shall operate within two vertical feet of the pipeline(s), and any closer work must be performed by hand.
- 14- Buried pipeline(s) shall not be left exposed, and exposed pipeline(s) shall not be buried, without prior inspection and approval by SoCalGas. If the pipeline(s) are exposed during construction (e.g. substructure crossings, etc.), the pipeline must be backfilled with sand or zero-sack slurry only.
- 15- No vibratory compaction is permitted over the pipeline(s). In rare cases, vibratory compaction may be approved by SoCalGas' Engineering Department following review of detailed site conditions, pipeline data, and equipment specifications.
- 16- All contractors and subcontractors must be notified of the presence of the pipeline(s).
- 17- Contractors and subcontractors must call DigAlert (811) at least 2 working days prior to construction, grading, or excavation.
- 18- Once approved, encroachments within SoCalGas' easement(s) shall be documented in an easement amendment or other document, as deemed appropriate by SoCalGas' Land Services Department.

SCG Transmission General Requirements

In addition to the previous requirements, SoCalGas recommends the following:

- 19- Potholes should be made, as necessary, to establish the horizontal and vertical alignment of the pipeline(s) within the project area. This information should be indicated on the plans, as needed. CAUTION: SoCalGas personnel must be present during potholing operations. Arrangements for SoCalGas personnel to stand by during potholing activities can be made by calling DigAlert at 811.
- 20- Consideration should be given to building setbacks from the easement lines. A minimum 15-foot setback is recommended whenever possible.
- 21- All potential buyers or tenants of the property should be made aware of the presence of the pipeline(s) and easement restrictions.

Best Regards,

SoCalGas Transmission Technical Services

Comment 17

SoCalGas

17-001

The comment indicates that SoCalGas operates Transmission facilities in the area and would need to review drawings once available. The comment includes the General Requirements (DCF# 1370-23-85N 1203 7056) for performing work or planning projects near SoCalGas high pressure lines. The comment does not state a specific concern related to the adequacy of the DEIR and therefore does not require a detailed response. The project design and construction would conform to industry accepted best practices as well as all local, state, and federal requirements. This comment is noted and will be considered by County decisionmakers in regard to working near transmission lines.

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7.3 References

- California Air Resources Board (CARB). 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16, 2022. Accessed August 31, 2023. https://ww2.arb.ca.gov/default/files/2022-12/2022-sp_1.pdf.
- Templeton, D.C., Schoenball, M., Layland-Bachmann, C., Foxall, W., Guglielmi, Y., Kroll, K., Burghardt, J., Dilmore, R., White, J. 2021. Recommended Practices for Managing Induced Seismicity Risk Associated with Geologic Carbon Storage. Lawrence Livermore National Laboratory, LLNL-TR-818759, January 26, 2021.
- Templeton, D.C., Schoenball, M., Layland-Bachmann, C.E., Foxall, W., Guglielmi, Y., Kroll, K.A., Burghardt, J.A., Dilmore, R., White, J.A. 2023. A project lifetime approach to the management of induced seismicity risk at geologic carbon storage sites. *Seismological Research Letters* 94, 1, 113-122.