

Draft Environmental Impact Report

SCH# 2022100646

Volume 1

Chapters 1 through 11

MOJAVE MICRO MILL PROJECT by PSGM3 Holdings Corp (Pacific Steel Group) (PP22402)

General Plan Amendment No. 3, Map No. 213
Zone Classification Change No. 62, Map No. 213
Conditional Use Permit No. 71, Map No. 213
Conditional Use Permit No. 72, Map No. 213
Precise Development Plan No. 3, Map No. 213
Zone Variance No. 24, Map No. 213
Zone Variance No. 25, Map No. 213



Kern County
Planning and Natural Resources Department
Bakersfield, California

November 2023

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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
Web Address: <http://kernplanning.com/>



**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

DATE: November 17, 2023

TO: See Attached Mailing List

FROM: Kern County Planning and Natural
Resources Department
Attn: Mark Tolentino
2700 "M" Street, Suite 100
Bakersfield, CA 93301
(661)862-5041; TolentinoM@kerncounty.com

**SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE MOJAVE MICRO
MILL BY PSGM3 HOLDINGS CORP (PACIFIC STEEL GROUP) (PP22402)**

Dear Interested Party:

The Kern County Planning and Natural Resources Department, as Lead Agency, has prepared a Draft Environmental Impact Report (DEIR) for the construction and operation of a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes. Development would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. The proposed project would include an approximate 63-acre accessory solar array on 174 total acres of privately owned land included in the proposed project site. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and 7 ancillary structures.

The proposed project site is located in the unincorporated area of southeastern Kern County, approximately five (5) miles northeast from the unincorporated community of Rosamond and approximately eight (8) miles southeast from the unincorporated community of Mojave.

The project site is bordered by Sopp Road to the north, State Route 14 (SR-14) and the Union Pacific Railroad to the west, and Edwards Air Force Base to the east, in Section 27 of Township 10 North, Range 12 West San Bernardino Meridian & Base.

The Kern County Planning and Natural Resources Department, as Lead Agency, has determined that preparation of an Environmental Impact Report would be appropriate for the referenced project. Enclosed is a copy of the Draft EIR. If we have not received a reply from you by **January 2, 2024, at 5:00 P.M.**, we will assume that you have no comments regarding this Draft EIR.

Should you have any questions regarding this project, please do not hesitate to contact me at TolentinoM@kerncounty.com or (661) 862-5041.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mark Tolentino".

Mark Tolentino, Planner II
Planning and Natural Resources Department

I:\Planning\WORKGRPS\PLN\Advanced
Planning\EIR\Active\Mojave Micro Mill -
Pacific Steel Group M3\Draft EIR
AT: 10/25/2022

Trinity Consultants
Attn: Sydney Kwan
20 Corporate Park, STE 285
Irvine, CA 92606

Sespe Consulting, Inc
Attn: Graham Stephens
3990 Old Town Ave, STE A203
San Diego, CA 92110

U.S. Bureau of Land Management
Ridgecrest Field Office
300 South Richmond Road
Ridgecrest, CA 93555

China Lake Naval Weapons Center
Tim Fox, RLA - Comm Plans & Liaison
429 E Bowen, Building 981, Mail Stop 4001
China Lake, CA 93555

Edwards AFB, Mission Sustainability
Liaison
412 TW, Bldg 2750, Ste 117-14
195 East Popson Avenue
Edwards AFB, CA 93524

U. S. Fish & Wildlife Service
Division of Ecological Services
2800 Cottage Way #W-2605
Sacramento, CA 95825-1846

Eastern Kern Resource Cons Dist
300 South Richmond Road
Ridgecrest, CA 93555-4436

So. San Joaquin Valley Arch Info Ctr
California State University of Bkfd
9001 Stockdale Highway
Bakersfield, CA 93311

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

Caltrans/Dist 9
Planning Department
500 South Main Street
Bishop, CA 93514

State Dept of Conservation
Director's Office
801 "K" Street, MS 24-01
Sacramento, CA 95814-3528

State Dept of Conservation
Geologic Energy Management Division
4800 Stockdale Highway, Ste 108
Bakersfield, CA 93309

California Fish & Wildlife
1234 East Shaw Avenue
Fresno, CA 93710

California Regional Water Quality
Control Board/Lahontan Region
15095 Amargosa Road - Bld 2, Suite 210
Victorville, CA 92392

Kern County Public Works Department/
Building & Development/Floodplain

Kern County Public Works Department/
Building & Development/Survey

Kern County
Env Health Services Department

Kern County Fire Dept (Put in FIRE BOX)
Regina Arriaga
Roxanne Routh
Jim Killam

Kern County Fire Dept
Cary Wright, Fire Marshall

Kern County Library/Beale
Local History Room

Kern County Library/Beale
Andie Sullivan

Kern County Parks & Recreation

Kern County Sheriff's Dept
Administration

Kern County Public Works Department/
Building & Development/Development
Review

Kern County Public Works
Department/Operations &
Maintenance/Regulatory Monitoring &
Reporting

Kern County Public Works Department/
Building & Development/Code
Compliance

Mojave Unified School Dist
3500 Douglas
Mojave, CA 93501

Kern County Superintendent of Schools
Attention School District Facility Services
1300 - 17th Street
Bakersfield, CA 93301

Local Agency Formation Comm/LAFCO
5300 Lennox Avenue, Suite 303
Bakersfield, CA 93309

Antelope Valley-East Kern
Water Agency
6500 West Avenue N
Palmdale, CA 93551

Kern County Water Agency
3200 Rio Mirada Drive
Bakersfield, CA 93308

East Kern Air Pollution
Control District

U.S. Air Force
Attn: David Bell/AFCEC CZPW
Western Regional/Leg Branch
510 Hickam Avenue, Bld 250-A
Travis AFD, CA 94535-2729

U.S. Army
Attn: Philip Crosbie, Chief
Strategic Plans, S3, NTC
P.O. Box 10172
Fort Irwin, CA 92310

U.S. Army
Attn: Tim Kilgannon, Reg 9 Coord
Office of Strategic Integration
721 - 19th Street, Room 427
Denver, CO 80202

U.S. Navy
Attn: Steve Chung, Plans & Liaison Officer
1220 Pacific Highway
San Diego, CA 92132-5190

U.S. Marine Corps
Command Gen MCIWEST-MCB CamPen
Attn: A/CS, G7
Box 555010, Bldg 1160, Rm 280
Camp Pendleton, CA 92055-5246

AT&T California
OSP Engineering/Right-of-Way
4901 Ashe Road
Bakersfield, CA 93313

Center on Race, Poverty & the Environment
Attn: Marissa Alexander
1999 Harrison Street – Suite 650
San Francisco, CA 94612

Center on Race, Poverty & the
Environmental/
CA Rural Legal Assistance Foundation
1012 Jefferson Street
Delano, CA 93215

Defenders of Wildlife/
Kim Delfino, California Dir
980 - 9th Street, Suite 1730
Sacramento, CA 95814

Mojave Chamber of Commerce
P.O. Box 935
Mojave, CA 93502

Native American Heritage Council of Kern
County
Attn: Gene Albitre
3401 Aslin Street
Bakersfield, CA 93312

Sierra Club/Kern Kaweah Chapter
P.O. Box 3357
Bakersfield, CA 93385

Southern California Edison
Planning Dept.
421 West "J" Street
Tehachapi, CA 93561

Southern California Gas Co
35118 McMurtrey Avenue
Bakersfield, CA 93308-9477

Southern California Gas Co
Transportation Dept
9400 Oakdale Avenue
Chatsworth, CA 91313-6511

Southern California Gas Co
35118 McMurtrey Avenue
Bakersfield, CA 93308-9477

Southern California Gas Co
Transportation Dept
9400 Oakdale Avenue
Chatsworth, CA 91313-6511

David Laughing Horse Robinson
P.O. Box 20849
Bakersfield, CA 93390

Kern Valley Indian Council
Attn: Robert Robinson, Chairperson
P.O. Box 401
Weldon, CA 93283

Kern Valley Indian Council
Historic Preservation Office
P.O. Box 401
Weldon, CA 93283

Leadership Counsel for Justice &
Accountability
1527 - 19th Street, Suite 212
Bakersfield, CA 93301

LIUNA
Attn: Danny Zaragoza
2201 "H" Street
Bakersfield, CA 93301

Northcutt and Associates
4220 Poplar Street
Lake Isabella, CA 93240-9536

Kern County Water Agency
3200 Rio Mirada Drive
Bakersfield, CA 93308

Big Pine Paiute Tribe of the Owens Valley
Attn: James Rambeau, Chairperson
P.O. Box 700
Big Pine, CA 93513

Big Pine Paiute Tribe of the Owens Valley
Attn: Danelle Gutierrez, Tribal Historic
Preservation Office
P.O. Box 700
Big Pine, CA 93513

Big Pine Paiute Tribe of the Owens Valley
Attn: Sally Manning, Environmental Director
P.O. Box 700
Big Pine, CA 93513

Tejon Indian Tribe
Attn: Candice Garza
4941 David Road
Bakersfield, CA 93307

Chumash Council of Bakersfield
Attn: Julio Quair, Chairperson
729 Texas Street
Bakersfield, CA 93307

Kern Valley Indian Community
Attn: Robert Robinson
P.O. Box 1010
Lake Isabella, CA 93283

Kitanemuk & Yowlumne Tejon Indians
Attn: Delia Dominguez, Chairperson
115 Radio Street
Bakersfield, CA 93305

Quechan Tribe of the Fort Yuma Reservation
Attn: Jill McCormick, Historic Preservation
Officer
P.O. Box 1899
Yuma, AZ 85366

San Fernando Band of Mission Indians
Attn: Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA 91322

San Manuel Band of Mission Indians
Attn: Alexandra McCleary, Sr. CRM Mgr
26569 Community Center Drive
Highland, CA 92346

Tejon Indian Tribe
Attn: Octavio Escobedo, Chairperson
P.O. Box 640
Arvin, CA 93203

Southern California Edison
2244 Walnut Grove, Ave, GO-1 Quad 2C
Rosemead, CA 91770

Southern California Edison
2244 Walnut Grove, Ave, GO-1 Quad 2C
Rosemead, CA 91770

City of Arvin
P.O. Box 548
Arvin, CA 93203

Bakersfield City Planning Dept 1715
Chester Avenue
Bakersfield, CA 93301

Bakersfield City Public Works Dept
1501 Truxtun Avenue
Bakersfield, CA 93301

California City Planning Dept
21000 Hacienda Blvd.
California City, CA 93515

Delano City Planning Dept
P.O. Box 3010
Delano, CA 93216

City of Maricopa
P.O. Box 548
Maricopa, CA 93252

City of McFarland
401 West Kern Avenue
McFarland, CA 93250

City of Ridgecrest
100 West California Avenue
Ridgecrest, CA 93555

City of Shafter
336 Pacific Avenue
Shafter, CA 93263

City of Taft Planning & Building
209 East Kern Street
Taft, CA 93268

City of Tehachapi
Attn: John Schlosser
115 South Robinson Street
Tehachapi, CA 93561-1722

City of Wasco
764 E Street
Wasco, CA 93280

Inyo County Planning Dept
P.O. Drawer "L"
Independence, CA 93526

Kings County Planning Agency
1400 West Lacey Blvd, Bldg 6
Hanford, CA 93230

Los Angeles Co Reg Planning Dept
320 West Temple Street
Los Angeles, CA 90012

San Bernardino Co Planning Dept
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

San Luis Obispo Co Planning Dept
Planning and Building
976 Osos Street
San Luis Obispo, CA 93408

Santa Barbara Co Resource Mgt Dept
123 East Anapamu Street
Santa Barbara, CA 93101

Tulare County Planning & Dev Dept
5961 South Mooney Boulevard
Visalia, CA 93291

Ventura County RMA Planning Div
800 South Victoria Avenue, L1740
Ventura, CA 93009-1740

U.S. Fish & Wildlife Service
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

Environmental Protection Agency
Region IX Office
75 Hawthorn Street
San Francisco, CA 94105

U.S. Dept of Agriculture/NRCS
5080 California Avenue, Ste 150
Bakersfield, CA 93309-0711

State Air Resources Board
Stationary Resource Division
P.O. Box 2815
Sacramento, CA 95812

Caltrans/
Division of Aeronautics, MS #40
P.O. Box 942873
Sacramento, CA 94273-0001

State Clearinghouse
Office of Planning and Research
1400 - 10th Street, Room 222
Sacramento, CA 95814

State Dept of Conservation
Office of Land Conservation
801 "K" Street, MS 18-01
Sacramento, CA 95814

State Dept of Conservation Div
Recycling Cert. Sec.
801 "K" Street, MS 19-01
Sacramento, CA 95814

California State University
Bakersfield - Library
9001 Stockdale Highway
Bakersfield, CA 93309

California Energy Commission James W.
Reed, Jr.
1516 Ninth Street, Mail Stop 17
Sacramento, CA 95814

California Highway Patrol Planning &
Analysis Division
P.O. Box 942898
Sacramento, CA 94298-0001

Integrated Waste Management
P.O. Box 4025, MS #15
Sacramento, CA 95812-4025

State Dept of Toxic Substance
Control Environmental Protection
Agency 1515 Tollhouse Road
Clovis, CA 93612

Cal Environmental Protection Agency/
Dept of Toxic Substances Control, Reg 1
Attn: Dave Kereazis, Permit Div - CEQA
8800 Cal Center Drive, 2nd Floor
Sacramento, CA 95826

Kern County
Agriculture Department

Kern County Administrative Officer

Mojave Town Council
Bill Deaver, President
P.O. Box 1113
Mojave, CA 93502-1113

KernCOG
1401 19th Street - Suite 300
Bakersfield, CA 93301

Mojave Airport
1434 Flightline
Mojave, CA 93501

East Kern Airport Dist
Attention Stuart Witt
1434 Flightline
Mojave, CA 93501

East Kern Airport Dist Engineer
3900 Ridgemoor Avenue
Bakersfield, CA 93306

Northcutt and Associates
4220 Poplar Street
Lake Isabella, CA 93240-9536

Adams, Broadwell, Joseph & Cardozo
Attention: Alex Stukan
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Kern Audubon Society
Attn: Frank Bedard, Chairman
4124 Chardonnay Drive
Bakersfield, CA 933064

Kevin Johnston
2476 Buena Vista Avenue
Livermore, CA 94550

Lozeau Drury LLP
1939 Harrison St, STE 150
Oakland, CA 94612

Alvaro Gutierrez
8101 Sierra Highway
Mojave, CA 93501

Richard Gazinya
<electronic>

Adams, Broadwell, Joseph & Cardozo
Attn: Alex Stukan
<electronic>

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**NOTICE OF AVAILABILITY FOR PUBLIC REVIEW AND HEARING
ON THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR
THE PROPOSED MOJAVE MICRO MILL PROJECT**

This is to advise that the Kern County Planning and Natural Resources Department has prepared an Environmental Impact Report (EIR) for the project identified below. As mandated by State law, the minimum public review period for this document is 45 days.

PROJECT TITLE: Mojave Micro Mill by PSGM3 Holdings Corp (Pacific Steel Group) (PP22402); GPA No. 3, Map No. 213; ZCC No. 62, Map No. 213; CUP No. 71, Map No. 213; CUP No. 72, Map No. 213; PD Plan No. 3, Map No. 213; ZV No. 24, Map No. 213; ZV No. 25, Map No. 213

PROJECT LOCATION: The proposed project site is located in the unincorporated area of southeastern Kern County, approximately five (5) miles northeast from the unincorporated community of Rosamond and approximately eight (8) miles southeast from the unincorporated community of Mojave. The project site is bordered by Sopp Road to the north, State Route 14 (SR-14) and the Union Pacific Railroad to the west, and Edwards Air Force Base to the east, in Section 27 of Township 10 North, Range 12 West San Bernardino Meridian & Base.

DOCUMENT AVAILABILITY: The Draft EIR and the documents referenced in it are available for public review at the Planning and Natural Resources Department, which is located at 2700 "M" Street, Suite 100, in Bakersfield, CA 93301 or on the Departmental website at <https://kernplanning.com/planning/environmental-documents/>.

PUBLIC HEARING AND COMMENT: A public hearing has been scheduled with the Kern County Planning Commission to solicit comments on the adequacy and completeness of the analysis and proposed mitigation measures described in the Draft EIR. You may comment by providing testimony at the public hearing on:

DATE: February 8, 2024
TIME: 7:00 P.M. or soon thereafter
LOCATION: Chambers of the Board of Supervisors
Kern County Administrative Center, First Floor
1115 Truxtun Avenue, Bakersfield, CA 93301

And/or by submitting written comments to the project planner identified below prior to the close of the public comment period on January 2, 2024, at 5:00 p.m. to:

**Kern County Planning and Natural Resources Department
ATTN: Mark Tolentino, Planner II
2700 "M" Street, Suite 100, Bakersfield, CA 93301
Phone: (661) 862-5041
E-mail: TolentinoM@kerncounty.com**

If you challenge the action taken on this request in court, you may be limited to raising only those issues you or someone else raised at this public hearing, or in written correspondence delivered to the Planning and Natural Resources Department at, or prior to, the public hearing.

PROJECT DESCRIPTION: The proposed Mojave Micro Mill project includes development of an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. Additionally, the proposed project would include

a 63-acre accessory solar array. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and eight (8) ancillary structures. Project improvements would occur on 174 total acres of privately owned land. Implementation of the proposed project includes the following requests:

- a. General Plan Amendment No. 3, Map No. 213 – From Map Code 8.5 (Resource Management) to 7.3 (Heavy Industrial), or a more restrictive map code designation
- b. Zone Change Case No. 62, Map No. 213 – From zone classification A-1 (Limited Agriculture) to M-3 PD (Heavy Industrial – Precise Development Combining) on approximately 174 acres
- c. Conditional Use Permit No. 71, Map No. 213 – to allow on-site capture of carbon dioxide (CO₂) and temporary storage for eventual transport for off-site distribution (Sections 19.08.085 & 19.06.920)
- d. Conditional Use Permit No. 72, Map No. 213 – to allow an on-site water treatment plant (Section 19.40.030.K)
- e. Precise Development Plan No. 3, Map No. 213 – to allow for the construction and operation of an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, served by a 63-acre solar array accessory to the proposed use on 174 total acres in the M-3 PD District (Sections 19.40.020.E.1 & 19.40.020.H)
- f. Zone Variance No. 24, Map No. 213 – to allow for a reduction in the required number parking spaces from 993 spaces to 306 spaces
- g. Zone Variance No. 25, Map No. 213 – to allow for a maximum building and structure height of 165 feet where 150 feet is permitted (Sections 19.40.080.A & 19.08.160.B) in the M-3 PD (Heavy Industrial – Precise Development Combining) District.

ENVIRONMENTAL REVIEW FINDINGS: Anticipated significant and unavoidable impacts on: Aesthetics (Cumulative); Air Quality (Project and Cumulative); Biological (Cumulative); Noise (Project and Cumulative); Wildfire (Cumulative)

LORELEI H. OVIATT, AICP, Director
Planning and Natural Resources Department

To be published once only on next available date and as soon as possible

THE BAKERSFIELD CALIFORNIAN
MOJAVE DESERT NEWS

MFT (11/17/23)

cc: County Clerk (2) (with fee)
Environmental Status Board
LiUNA
Supervisory District No. 2

I:\Planning\WORKGRPS\WP\LABELS\
PSG_MojaveMicroMill_APNs
AT: 10/26/2023

430 260 22 00 5
BERESEWICZ WLADYSLAN &
MONIQUE FAMILY TRUST
3334 BENT TWIG LN
DIAMOND BAR CA 91765-3811

430 122 04 00 6
BERG WOLFGANG & MERCEDES M
477 EAST F ST
COLTON CA 92324-3030

431 030 17 00 1
CANZONERI DONNA M
17909 ALBURTIS AV
ARTESIA CA 90701-3920

431 040 10 00 3
COX JERRY & NANCY FAMILY
TRUST
P O BOX 175
ROSAMOND CA 93560-0175

431 040 11 00 6
COX JERRY & NANCY FAMILY
TRUST
PO BOX 175
ROSAMOND CA 93560-0175

431 030 14 00 2
DUFFY GERALD L & PATRICIA B
1461 CAROL ST
LA HABRA CA 90631-2723

430 260 24 00 1
DYAS ROBERT KEITH & KATHRYN M
P O BOX 687
ROSAMOND CA 93560

430 260 25 00 4
DYSON MICOLE D JACKSON
6722 WYNDHAM DR
KALAMAZOO MI 49009-9100

431 030 18 00 4
EDWARDS ROBERT WINFIELD
209 CALLE TINAJA
SAN CLEMENTE CA 92672

430 122 05 00 9
GUTIERREZ ALVARO E
7618 WILLIS AV
VAN NUYS CA 91405-1224

430 122 12 00 9
GUTIERREZ ALVARO E
8101 SIERRA HW
MOJAVE CA 93501-7125

431 040 29 00 9
HALSTED FAMILY TRUST
842 SWANSTON DR
SACRAMENTO CA 95818-3320

430 260 32 00 4
HUNTER TRUST
9812 LA CANADA WY
SUNLAND CA 91040-1615

431 040 16 00 1
KUO KEN N
105 INDIAN TRAIL RD
OAK BROOK IL 60523-2793

430 122 06 00 2
LAHEY FAMILY LIVING TRUST
439 SEQUOIA
PASADENA CA 91105

431 030 16 00 8
LAND TITLE LLC
PO BOX 6492
ORANGE CA 92863

431 030 07 00 2
MATROS BARBARA L
2556 WEST N-4
PALMDALE CA 93551

430 260 31 00 1
MEA MANUFACTURING PROP LLC
11374 TUXFORD ST
SUN VALLEY CA 91352-2678

431 030 01 00 4
PHAM KRYSTAL VO
1809 LAKEVIEW DR
GRAND PRAIRIE TX 75051-5551

431 010 02 00 1
PSGM3 HOLDINGS CORP
4805 MURPHY CANYON RD
SAN DIEGO CA 92123

431 030 13 00 9
QUACH DUC KIM
4743 W ADAMS CT
NEW ORLEANS LA 70128

431 021 04 00 7
R&M REALTY CORP
311 N ROBERTSON BL PMB 401
BEVERLY HILLS CA 90211-1705

431 040 12 00 9
RAMIREZ CYNTHIA JORDAN
213 OCEAN AV APT A
SEAL BEACH CA 90740

430 260 23 00 8
STONEHILL JUDY M
40 RADCLIFF AV
PORT WASHINGTON NY 11050-1802

430 260 26 00 7
STONEHILL ROBERT
8514 W OAK PL
VIENNA VA 22182-5064

431 021 06 00 3
SWISHER DONALD C FAMILY TRUST
18844 RIVERSIDE DR
SONOMA CA 95476-4512

430 122 11 00 6
TIMMONS WILLIAM V & RACHEL E
FMLY TR
15980 WASHINGTON ST
RIVERSIDE CA 92504

431 040 28 00 6
TSCHUMPER DIANNE L
11550 DISCOVERY PARK DR
ANCHORAGE AK 99515

430 011 06 00 3
U S A
*
*

431 030 08 00 5
VUICH DAVID & GINGER
5904 MOUNT EAGLE DR APT 914
ALEXANDRIA VA 22303-2539

431 030 15 00 5
WADDELL MARY G
12887 RAENETTE WY
MORENO CA 92553-1218

431 021 07 00 6
AGUINALDO FAMILY LIVING
TRUST
145 INDIAN LOOKOUT DR
LANDER WY 82520-3057

Draft Environmental Impact Report

SCH# 2022100646

Volume 1

Chapters 1 through 11

MOJAVE MICRO MILL PROJECT by PSGM3 Holdings Corp (Pacific Steel Group) (PP22402)

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Zone Variance No. 24, Map No. 213
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Kern County
Planning and Natural Resources Department
Bakersfield, California

Technical Assistance by:
Kimley-Horn

November 2023

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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 # 2022100646

Project Title: Mojave Micro Mill Project by PSGM3 Holdings Corp (Pacific Steel Group)

Lead Agency: Kern County Planning and Natural Resources Department

Contact Person: Mark Tolentino, Planner II

Mailing Address: 2700 "M" Street Suite 100

Phone: (661) 862-5041

City: Bakersfield

Zip: 93301

County: Kern

Project Location: County: Kern

City/Nearest Community: Mojave, Rosamond

Cross Streets: Sopp Road and State Route 14

Zip Code: 93501

Lat. / Long.: 34.9338300° N, 118.1447660° W

Total Acres: approx. 174

Assessor's Parcel No.: 431-010-02; 431-030-02

Section: 27

Twp.: 10 N

Range: 12 W

Base: SBB&M

Within 2 Miles: State Hwy #: SR-14

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 _____

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: Zone Variances

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☒ Industrial: Sq.ft. 550,921 sf Acres 174 Employees 440
☐ Educational _____
☐ Recreational _____

☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☒ Power: Type 63-ac Accessory Solar MW approx. 10 MW
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☐ Other: off-site re-poling/re-conductoring of SCE transmission lines

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☒ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☐ Coastal Zone
☒ Drainage/Absorption
☒ Economic/Jobs
☒ Other GHG, Wildfire, Tribal Cultural Resources, Energy

☐ Fiscal
☒ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☒ Geologic/Seismic
☒ Minerals
☒ Noise
☒ Population/Housing Balance
☒ Public Services/Facilities

☒ Recreation/Parks
☒ Schools/Universities
☒ Septic Systems
☒ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☒ Solid Waste
☒ Toxic/Hazardous
☒ Traffic/Circulation

☒ Vegetation
☒ Water Quality
☒ Water Supply/Groundwater
☒ Wetland/Riparian
☒ Wildlife
☒ Growth Inducing
☒ Land Use
☒ Cumulative Effects

Present Land Use/Zoning/General Plan Designation: Undeveloped / A-1 (Limited Agriculture) / 8.5 (Resource Management)

Project Description: The proposed Mojave Micro Mill project includes development of an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. Additionally, the proposed project would include a 63-acre accessory solar array. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and eight (8) ancillary structures. Project improvements would occur on 174 total acres of privately owned land. Implementation of the proposed project includes the following requests:

- a. General Plan Amendment No. 3, Map No. 213 – From Map Code 8.5 (Resource Management) to 7.3 (Heavy Industrial), or a more restrictive map code designation

- b. Zone Change Case No. 62, Map No. 213 – From zone classification A-1 (Limited Agriculture) to M-3 PD (Heavy Industrial – Precise Development Combining) on approximately 174 acres
- c. Conditional Use Permit No. 71, Map No. 213 – to allow on-site capture of carbon dioxide (CO₂) and temporary storage for eventual transport for off-site distribution (Sections 19.08.085 & 19.06.920)
- d. Conditional Use Permit No. 72, Map No. 213 – to allow an on-site water treatment plant (Section 19.40.030.K)
- e. Precise Development Plan No. 3, Map No. 213 – to allow for the construction and operation of an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, served by a 63-acre solar array accessory to the proposed use on 174 total acres in the M-3 PD District (Sections 19.40.020.E.1 & 19.40.020.H)
- f. Zone Variance No. 24, Map No. 213 – to allow for a reduction in the required number parking spaces from 993 spaces to 306 spaces
- g. Zone Variance No. 25, Map No. 213 – to allow for a maximum building and structure height of 165 feet where 150 feet is permitted (Sections 19.40.080.A & 19.08.160.B) in the M-3 PD (Heavy Industrial – Precise Development Combining) District.

Reviewing Agencies Checklist

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

<u>S</u> Air Resources Board	<u>X</u> Office of Emergency Services
<u> </u> Boating & Waterways, Department of	<u> </u> Office of Historic Preservation
<u>S</u> California Highway Patrol	<u> </u> Office of Public School Construction
<u>X</u> CalFire	<u> </u> Parks & Recreation
<u>S</u> Caltrans District # <u>6 & 9</u>	<u> </u> Pesticide Regulation, Department of
<u>S</u> Caltrans Division of Aeronautics	<u>X</u> Public Utilities Commission
<u> </u> Caltrans Planning (Headquarters)	<u>S</u> Regional WQCB # <u>Lahontan</u>
<u> </u> Central Valley Flood Protection Board	<u>X</u> Resources Agency
<u> </u> Coachella Valley Mountains Conservancy	<u> </u> S.F. Bay Conservation & Development Commission
<u> </u> Coastal Commission	<u> </u> San Gabriel & Lower L.A. Rivers and Mtns Conservancy
<u> </u> Colorado River Board	<u> </u> San Joaquin River Conservancy
<u>S</u> Conservation, Department of	<u> </u> Santa Monica Mountains Conservancy
<u> </u> Corrections, Department of	<u> </u> State Lands Commission
<u> </u> Delta Protection Commission	<u> </u> SWRCB: Clean Water Grants
<u> </u> Education, Department of	<u>X</u> SWRCB: Water Quality
<u>S</u> Energy Commission	<u> </u> SWRCB: Water Rights
<u>S</u> Fish & Game Region # <u>Fresno</u>	<u> </u> Tahoe Regional Planning Agency
<u> </u> Food & Agriculture, Department of	<u>S</u> Toxic Substances Control, Department of
<u> </u> General Services, Department of	<u>X</u> Water Resources, Department of
<u> </u> Health Services, Department of	<u> </u> Other _____
<u> </u> Housing & Community Development	<u> </u> Other _____
<u>S</u> Integrated Waste Management Board	
<u>S</u> Native American Heritage Commission	

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

Starting Date November 17, 2023 Ending Date January 2, 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: _____/s/ _____ Date: 11/17/2023

Mark Tolentino, Planner II

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

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Chapter 1

Executive Summary

1.1 Introduction

This Environmental Impact Report (EIR) has been prepared by Kern County (County), the CEQA Lead Agency, to identify and evaluate potential environmental impacts associated with implementation of the Mojave Micro Mill Project (project), proposed by PSGM3 Holdings Corporation (Pacific Steel Group) (project proponents/applicant). The proposed project includes the construction and operation of a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal through various recycling processes and a 63-acre solar field on an approximately 174 acre site.

Development would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. The proposed project would include an approximate 63-acre accessory solar array on 174 total acres of privately owned land included in the proposed project site. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and 7 ancillary structures.

Within this EIR when necessary, the off-site improvement work involving the re-poling and reductoring of Southern California Edison's (SCE) existing power and communication line routes that are proposed to power and connect to the project site are independently identified as "off-site improvements." Conversely, where necessary, all portions of the proposed project except for the off-site improvements are referred to as the "proposed project" within the "project site." Other conventions used in this EIR to distinguish among components of the project as a whole include "SCE off-site work," "fiber optic lines," connection to the Antelope Valley-East Kern (AVEK) water main, and SCE improvement work within the Edward Air Force Base (EAFB) "utility corridor."

The project proponent/operator is requesting approval of the following applications by the County (acreages are approximate):

- General Plan Amendment No. 3, Map No. 213
 - From Map Code 8.5 (Resource Management) to 7.3 (Heavy Industrial), or a more restrictive map code designation
- Zone Change Case No. 62, Map No. 213
 - From zone classification A-1 (Limited Agriculture) to M-3 PD (Heavy Industrial – Precise Development Combining) on approximately 174 acres
- Conditional Use Permit No. 71, Map No. 213
 - To allow on-site capture of carbon dioxide (CO₂) and temporary storage for eventual transport for off-site distribution (Sections 19.08.085 & 19.06.920)
- Conditional Use Permit No. 72, Map No. 213
 - To allow an on-site water treatment plant (Section 19.40.030.K)

- Approval of Precise Development Plan No. 3, Map No. 213
 - To allow for the construction and operation of an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, served by a 63-acre solar array accessory to the proposed use on 174 total acres (Sections 19.40.020.E.1 & 19.40.020.H)
- Approval of Zone Variance No. 24, Map No. 213
 - To allow for a reduction in the required number parking spaces from 993 spaces to 300 spaces.
- Approval of Zone Variance No. 25, Map No. 213
 - To allow for a maximum building and structure height of 165 feet where 150 feet is permitted (Sections 19.40.080.A & 19.08.160.B) in the M-3 PD (Heavy Industrial – Precise Development Combining) District.

Table 1-1: Project Assessor Parcel Numbers (APNs) –Existing and Proposed General Plan Map Code Designation and Zone District, identifies the Assessor Parcel Numbers (APN) for the project site.

Table 1-1: Project Assessor Parcel Numbers (APNs) –Existing and Proposed General Plan Map Code Designation and Zone District

APN	Existing Kern County General Plan Map Code Designation	Proposed Kern County General Plan Map Code Designation	Existing Zone District	Proposed Zone District	Acres
431-010-02	8.5	7.3	A-1	M-3 PD	154
431-030-02	8.5	7.3	A-1	M-3 PD	20
<i>Approximate Proposed Project Total Acreage</i>					<i>174</i>

General Plan Map Code:

8.5= Resource Management – min. 20 acres;

7.3 = Heavy Industrial

Zone Designation:

A-1 = Limited Agriculture;

M-3 PD = Heavy Industrial – Precise Development Combining

This Draft Environmental Impact Report (EIR) has been prepared by Kern County as the Lead Agency under CEQA. The Draft EIR provides information about the environmental setting and impacts of the project and alternatives. It informs the public about the project and its impacts and provides information to meet the needs of local, State, and federal permitting agencies that are required to consider the project. The EIR will be used by Kern County to determine whether to approve the requested General Plan Amendment (GPA No. 3, Map No. 213), Zone Classification Change (ZCC No. 62, Map No. 213) CUP(s) (CUP No. 71, Map No. 213; CUP No. 72, Map No. 213) Precise Development Plan (PDP No. 3, Map No. 213) and Zone Variance(s) (ZV No. 24, Map No. 213; ZV No. 25, Map No. 213). This Executive Summary summarizes the requirements of the *CEQA Guidelines*; provides an overview of the project and alternatives; identifies the purpose of this EIR; outlines the potential impacts of the project and the recommended mitigation measures; and discloses areas of controversy and issues to be resolved.

1.2 Project Summary

The project would develop a Micro Mill Facility. As shown in **Chapter 3, Project Description, Figure 3-1, Regional Vicinity Map**, and **Figure 3-2, Site Vicinity Map**, of this EIR, the project is located in the southeastern portion of Kern County, approximately 5 miles southwest of the unincorporated community of Rosamond. The proposed project includes the construction and operation of a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes. Development would include an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, as well as a 63-acre accessory solar array on 174 total acres of privately owned land. Outdoor storage for scrap materials and staging is also included as part of the proposed project. See Section 3.7, *Project Characteristics* for a full list of project components and **Figure 3-8: Proposed PD Plan – Statistical Information** through **Figure 3-13: Proposed PD Plan – Block 4**.

1.2.1 Discretionary Entitlements Required

To implement this project, depending upon site surveys and jurisdictional determinations, the following discretionary and ministerial permits/approvals may be required if applicable to the project, including but not limited to the following:

Federal

- U.S. Fish and Wildlife Service (USFWS), Section 10 Incidental Take Permit and Habitat Conservation Plan (if required)

State

- Lahontan Regional Water Quality Control Board (RWQCB)
 - Water Quality Certification (401 Permit)
 - Waste Discharge Requirements
 - National Pollutant Discharge Elimination System (NPDES) Construction General Permit
- California Department of Fish and Wildlife (CDFW)
 - Section 1600 et seq. (Lake and Streambed Alteration Agreement) (if required)
 - Section 2081 Permit (Incidental Take Permit) (if required)
 - Western Joshua Tree Conservation Act Incidental Take Permit (if required)
- California Department of Transportation (Caltrans)
 - Oversized Loads Permit (if required)

Local

Kern County Board of Supervisors

- Consideration and Certification of Final EIR.

- Adoption of 15091 Findings of Fact and 15093 Findings and Statement of Overriding Considerations.
- Approval of proposed Mitigation Monitoring and Reporting Program.
- Approval for the proposed General Plan Map Code Designation Amendment.
- Approval for proposed change in Zone Classification.
- Approval for proposed Conditional Use Permits
- Approval for proposed Precise Development Plan.
- Approval for proposed Zone Variances.

Kern County Public Works

- Approval of Kern County Grading Permits
- Approval of Kern County Building Permits

Kern County Fire Department

- Fire Safety Plan

Kern County Environmental Health Department

- Environmental Health Permits

Eastern Kern Air Pollution Control District (EKAPCD)

- Fugitive Dust Control Plan
- Authority to Construct Permit
- Authority to Operate Permit
- Any other permits as required

Other additional permits or approvals from responsible agencies may be required for the proposed project.

1.3 Purpose and Use of the EIR

An EIR is a public informational document used in the planning and decision-making process. This project-level EIR will analyze the environmental impacts of the project. The Kern County Planning Commission and Board of Supervisors will consider the information in this EIR, including the public comments and staff response to those comments, during the public hearing process. The final decision is made by the Kern County Board of Supervisors, who may approve, conditionally approve, or deny the project. The purpose of an EIR is to identify:

- The significant potential impacts on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and
- Reasonable and feasible alternatives to the project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of past, present, and reasonably anticipated future projects. CEQA requires preparation of an EIR that reflects the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting counterproposals. Reviewers of a draft EIR are requested to focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment, and ways in which the significant impacts of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

This EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with *CEQA Guidelines* Section 15087. The EIR process, including means by which members of the public can comment on the EIR, is discussed further in **Chapter 2, Introduction**.

1.4 Project Overview

1.4.1 Regional Setting

The project site is located in southeastern Kern County approximately 5 miles north of the unincorporated community of Rosamond (see **Figure 3-1: Regional Location Map**). The proposed project is in the eastern high desert region of unincorporated Kern County. The project is in the western extent of the Mojave Desert approximately 8 miles south of Mojave, California, within the western Antelope Valley and approximately 58 miles southeast of the city of Bakersfield. The project site is located within Section 27 Township 10 North, Range 12 West San Bernardino Meridian and Base. **Figure 3-2: Site Vicinity**, shows the project in context of the region.

1.4.2 Surrounding Land Uses and Project Site Conditions

The project site is comprised of a total of 2 individual parcels within the Soledad Mountain USGS 7.5-minute topographic quadrangle map. The proposed project is within the western Mojave Desert. Land uses in the region include a mix of undeveloped land, agriculture, residential, recreational and public facilities. Development in the area surrounding the project sites includes mixed industrial, Edwards Air Force Base, undisturbed desert land, and Union Pacific Railroad.

Land uses immediately surrounding the project site are varied but sparsely developed. To the west, land uses include the Union Pacific Railway and Sierra Highway, followed by SR-14 approximately 0.75 miles away; the nearest residence to the site is approximately 1000 feet northwest and across Sierra Highway, with the next cluster of residential uses located approximately 1 mile west beyond SR-14. To the east, the fully operational Edwards Solar Project sits just within the boundaries of Edwards Airforce Base (EAFB) adjacent to the site, whereas the Base itself located approximately 14 miles from the proposed project site. To the south, there are no discernable land uses, however, the unincorporated community of Rosamond is about five miles southwest. Immediately north, land is generally characterized as dispersed industrial, with medium-

industrial uses including the Shemshad Food Products, Inc. for warehouse storage and residual outdoor storage for the former Desert Block Company manufacturing and distribution facility.

Northwest of the site across Sierra Highway and the United Pacific Railroad are sparse residential uses, with the nearest being approximately one-third (1/3) of a mile from the project site. Approximately one mile further to the northwest of the proposed project, between Sierra Highway and SR 14, is a cluster of residences located in the unincorporated community of Actis. The remainder of the surrounding areas are sparsely developed with the vast majority of land being vacant.

The project site is approximately 12 miles southeast of the Tehachapi Mountain Range and is approximately 22 miles northeast of the Central Transverse Range. The proposed project and surrounding land are in a relatively flat-lying plain and exhibit little topographic variation. **Table 1-2: Existing Project Site and Surrounding Land Uses**, presents the existing land uses, designations, and zoning classification for the project site and surrounding area.

Table 1-2: Existing Project Site and Surrounding Land Uses

Location	Existing Land Use	Existing Map Code Designation	Existing Zoning Classification
Project Site	Agriculture – storage and seasonal	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)
North	Mixed Industrial	4.2/7.2 (Interim Rural Community Plan/Service Industrial)	M-2 (Medium Industrial)
East	Edwards Air Force Base; Edwards Sanborn Solar Project	1.1 (State and Federal Land)	A-1 (Limited Agriculture)
South	Vacant Agriculture Land	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)
West	Vacant Agriculture Land; Sierra Highway; Union Pacific Railroad	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)

SOURCE: Kern County, 2023

1.4.3 Applicant submitted Project Objectives

State CEQA Guidelines Section 15124(b) requires that a project description include a clearly written statement of objectives. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits. The following are the applicant submitted project objectives for the proposed project:

- Provide an environmentally responsible, reliable, long-term method for disposing of junk cars and other iron and steel scrap materials.
- Provide a reliable, high quality and price-competitive supply of concrete-reinforcing rebar to serve California's growing demand for rebar.

- Reintroduce the production of reinforcing steel to California, which is currently being imported from both domestic and international sources, with the objective to reduce emissions through the adoption of cutting-edge green technologies that are revolutionizing the steel industry.
- Develop an innovative industrial use on land with ready access to infrastructure and a major transportation corridor.
- Develop a visually appealing industrial project that is consistent with the provisions of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
- Promote land use compatibility with adjacent industrial uses by developing a compatible industrial project with a secure perimeter.
- Positively contribute to the local economy through new capital investment, the creation of new employment opportunities, expansion of the tax base, economic growth and development.
- Site an industrial project in a location that minimizes conflicts with residential, conservation, and agricultural land uses.
- Incorporate clean energy and emission-reduction technologies such as on-site, accessory solar energy generation and carbon capture and utilization (CCU).

1.4.4 Project Characteristics

As noted previously, development would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. The proposed project would include an approximate 63-acre accessory solar array on 174 total acres of privately owned land included in the proposed project site. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and 7 ancillary structures. See **Chapter 3.7, Project Description** for further breakdown of construction and operation of project facilities.

Micro Mill Facility - The approximate 489,200 square-foot facility includes 13 attached and detached buildings, as follows:

Raw Material Handling

- 24,300 square foot scrap bay (approximately 80 feet high) for metal scrap storage areas;

Melt Shop Process

- 22,700 square foot melt shop (MS) Complex structure (52 feet high);
- 15,500 square foot electric arc furnace (EAF)/ladle metallurgy station (LMS) bay (approximately 116 feet high) with 3 bridge cranes (76 feet high);
- 12,500 square foot caster bay (approximately 110 feet high) with a 76-foot bridge crane;
- 8,700 square foot ladle maintenance bay (approximately 50 feet high);

Rolling Mill Process

- 61,000 square foot rolling mill bay (approximately 55 feet high);
- 18,700 square foot roll shop (approximately 40 feet high);
- 61,000 square foot service bay (approximately 40 feet high);
- 12,700 square foot spooler bay (approximately 40 feet high);
- 112,600 square foot finished goods bay (approximately 55 feet high);

- 1,300 square foot test bay (approximately 22 feet high);

Fabrication Shop Process

- 93,000 square foot stock bay (approximately 50 feet high); and
- 93,000 square foot fabrication bay (approximately 50 feet high).

Ancillary Buildings – The micro mill facility would be supported by eight (8) ancillary structures that would serve the operation of the micro mill facility, as follows:

- 27,385 square foot storeroom and vehicle maintenance building (approximately 40 feet high);
- 10,500 square foot office building (approximately 21 feet high);
- 9,000 square foot Water pre-treatment building
- 4,400 square foot locker room (approximately 18 feet high);
- 4,000 square foot slag processing office building (approximately 18 feet high);
- 5,500 square foot Containerized Power Control Room (PCR) (approximately 18 feet high);
- 900 square foot guard shack/scale house (approximately 18 feet high); and
- 36 square foot Trucker Restroom Facility (approximately 18 feet high)

Additional Site Components – Other notable components of the project site are as follows:

- Approximately 63 acres of ground-mounted solar panels;
- Substation to support ground-mounted solar panels;
- Fume Treatment Plant (approximately 165 feet high);
- Carbon capture system and temporary storage
- Air separation system
- Scrap handling equipment
- A water treatment plant that includes a settling basin, cooling towers, pump pads, and heat exchangers;
- Slag Processing Plant;
- Dolomite and lime silos (approximately 40 feet high);
- Staging and spare parts storage;
- Numerous AC power unit substations throughout the project area in order to power the various buildings;
- On-site access corridors;
- 6 foot high perimeter security fencing
- On-site parking area including approximately 300 auto parking spaces, 17 truck stalls, and 50 trailer stalls;
- Road improvements along Sopp Road and future private road south of Lone Butte Road and Sopp Road corner;
- Landscaping; and
- New pavement, curb and gutter, and sidewalk.

1.5 Environmental Impacts

CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons why any new and possibly significant effects of a project were determined not to be significant and were, therefore, not discussed in detail in the EIR. The County has engaged the public to participate in the scoping of the environmental document. The contents of this EIR were

established based on a notice of preparation/initial study (NOP/IS) prepared in accordance with the *CEQA Guidelines*, as well as public and agency input that was received during the scoping process. Comments received on the NOP/IS are located in Appendix A of this EIR. Based on the findings of the NOP/IS and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of all environmental issues identified in *CEQA Guidelines* Appendix G.

1.6 Impacts of the Project

Sections 4.1 through 4.20 in **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, provide a detailed discussion of the environmental setting, impacts associated with the project, and mitigation measures designed to reduce significant impacts to less-than-significant levels, when feasible. The impacts, mitigation measures, and residual impacts for the project are summarized in **Table 1-7: *Summary of Impacts, Mitigation Measures, and Levels of Significance***, located at the end of this chapter, and are discussed further below.

Impacts related to the following resource areas are evaluated in this EIR for their potential significance:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfires

1.6.1 Less-than-Significant Impacts

Table 1-3: *Summary of Project Impacts that are Less than Significant or Less than Significant with Mitigation*, presents those impacts of the project that were determined to be less than significant by themselves, or less than significant with implementation of mitigation measures. Less-than-significant cumulative impacts are also included in this table. Sections 4.1 through 4.20 of this EIR present detailed analysis of these impacts and describe the means by which the mitigation measures listed in **Table 1-3**, would reduce impacts to a less-than-significant level.

Table 1-3: Summary of Project Impacts That Are Less than Significant or Less than Significant with Mitigation

Impact	Mitigation Measures
Agriculture and Forestry Resources (Project and Cumulative)	No mitigation required
Biological Resources (Project)	MM 4.1-5 through MM 4.1-7 and MM 4.4-1 through MM 4.4-7
Cultural Resources (Project and Cumulative)	MM 4.5-1 through MM 4.5-5
Energy (Project and Cumulative)	MM 4.3-1 through MM 4.3-4 and MM 4.6-1

Impact	Mitigation Measures
Geology and Soils (Project and Cumulative)	MM 4.7-1 through MM 4.7-10, MM 4.5-1 through MM 4.5-4, and MM 4.10-1 and MM 4.10-2
Greenhouse Gas Emissions (Project and Cumulative)	No mitigation required
Hazards and Hazardous Materials (Project and Cumulative)	MM 4.1-3, MM 4.9-1 through MM 4.9-12, MM 4.15-1, and MM 4.19-1
Hydrology and Water Quality (Project and Cumulative)	MM 4.9-1, MM 4.10-1 and MM 4.10-2
Land Use and Planning (Project and Cumulative)	MM 4.11-1
Mineral Resources (Project and Cumulative)	No mitigation required
Population and Housing (Project and Cumulative)	MM 4.15-3
Public Services (Project and Cumulative)	MM 4.15-1 through MM 4.15-3
Recreation (Project and Cumulative)	No mitigation required
Transportation and Traffic (Project and Cumulative)	MM 4.17-1 through MM 4.17-3
Tribal Cultural Resources (Project and Cumulative)	MM 4.5-1 through MM 4.5-4
Utilities and Service Systems (Project and Cumulative)	MM 4.1-3, MM 4.10-1, MM 4.10-2, MM 4.19-1, and 4.19-2.
Wildfire (Project)	MM 4.10-1, MM 4.15-1, MM 4.17-2, and MM 4.17-3

1.6.2 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(b) requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR.

According to *CEQA Guidelines* Section 15355, the term cumulative impacts “... refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable. This EIR has considered the potential cumulative effects of the project along with other current and reasonably foreseeable projects. Impacts for the following have been found to be cumulatively considerable:

- Aesthetics (Project and Cumulative)
- Air Quality (Project and Cumulative)
- Biological Resources (Cumulative)
- Noise (Project and Cumulative)
- Wildfire (Cumulative)

Table 1-4, *Summary of Significant and Unavoidable Project-Level and Cumulative Impacts*, presents the environmental topic areas with significant and unavoidable impacts. Sections 4.1, 4.3, 4.4, 4.13, and 4.20 of this EIR present detailed analyses of these impacts and describe the means by which the mitigation measures listed in **Table 1-4**, would reduce the severity of impacts to the extent feasible.

Table 1-4: Summary of Significant and Unavoidable Project-Level and Cumulative Impacts

Resources	Project Impacts	Cumulative Impacts
Aesthetics	<p>Implementation of the project would result in potentially significant visual impacts to the existing visual quality or character of the site. Mitigation Measures MM 4.1-1 through MM 4.1-7 would be incorporated to reduce visual impacts associated with the proposed project by color treating proposed buildings to blend with surrounding landscape, implementing regular waste/trash removal and recycling programs, directing nighttime lighting downward, shielding it and confining it to the project site, requiring rooftop screening features, and installing landscape structural elements. However, because there are no feasible mitigation measures that can be implemented to maintain the existing open and undeveloped desert landscape character of the project site, impacts to visual character would be significant and unavoidable.</p>	<p>The project would result in significant and unavoidable impacts related to visual character despite implementation of mitigation. While other projects in the region would also be required to implement various mitigation measures to reduce impacts, the conversion of a presently rural desert area to industrial and solar development cannot be mitigated to a degree that impacts are no longer significant. Even with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-7, the project's contribution to significant impacts associated with visual character in the Antelope Valley would be cumulatively significant and unavoidable.</p>
Air Quality	<p>The proposed project's long-term operational emissions would exceed EKAPCD's applicable significance thresholds. Implementation of Mitigation Measure MM 4.3-1 would reduce operational emissions from off-road equipment. However, emissions would still exceed the significance thresholds.</p> <p>In addition, compliance with all applicable EKAPCD New Source Review (NSR) rules would reduce operational emissions. However operational emissions of the project would still exceed EKAPCD CEQA significance thresholds; therefore, impacts would be significant and unavoidable.</p>	<p>The construction emissions generated by the project individually, but inclusive of both on-site facilities and off-site improvements, would not exceed EKAPCD thresholds. With regard to project level construction emissions, Mitigation Measures MM 4.3-1 and MM 4.3-5 would reduce impacts related to NOX and PM10 from diesel emissions, reduce dust generation, and address potential Valley Fever risk by implementing fugitive dust control measures, establishing a public complaint protocol for excessive dust generation, and requiring Valley Fever-related training for construction workers. However, assuming on a worst-case basis that the construction schedules for all cumulative projects would overlap with each other and with the proposed project, cumulative impacts during construction could be significant and unavoidable related to NOX and PM10 emissions.</p> <p>Despite implementation of mitigation measures MM 4.3-1 through MM 4.3-5, operation of the project exceeds the project level regulatory thresholds and, therefore, would contribute to a long-term cumulative increase in criteria pollutants. Therefore, the project would result in a significant and unavoidable cumulative impact.</p>

Resources	Project Impacts	Cumulative Impacts
Biological Resources	With the implementation of Mitigation Measures MM 4.1-5 through MM 4.1-7 from Section 4.1, Aesthetics , and MM 4.4-1 through MM 4.4-7, project impacts to biological resources would be less than significant	As development increases within Kern County, impacts to biological resources within the region are increasing on a cumulative level. When considered with the number of present and reasonably foreseeable future development projects in the Antelope Valley, the project would result cumulative loss of habitat for transient special-status species. Even with the implementation of project-specific Mitigation Measures MM 4.4-1 through MM 4.4-7, when combined with other related development projects proposed throughout the County, cumulative impacts would be considered significant and unavoidable .
Noise	Implementation of the project would result in potentially significant impact to noise. Mitigation Measure MM 4.13-1 and MM 4.13-2 would require measures to reduce short-term noise associated with project construction. However, project level impacts to construction noise would still result in a significant and unavoidable impact. Additionally, operation traffic noise would be significant and unavoidable with no feasible mitigation to reduce impacts.	The proposed project's cumulative contribution from operational traffic and construction associated with the project would result in a cumulative significant and unavoidable impact.
Wildfire	With the implementation of Mitigation Measures MM 4.10-1, from Section 4.10, Hydrology and Water Quality , MM 4.15-1 from Section 4.15, Public Services , MM 4.17-2 and MM 4.17-3 from Section 4.17, Traffic and Transportation , project impacts would be less than significant .	Given the location is subject to high wind speeds, with limited surrounding infrastructure, the project and related projects have the potential to result in a cumulative impact. The project, when considered with the number of present and reasonably foreseeable future development projects in the Antelope Valley, would result in the increased exposure of pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire given the character of the area. Therefore, even with implementation of MM 4.10-1, MM 4.15-1, MM 4.17-2 and MM 4.17-3 cumulative impacts would be significant and unavoidable .

1.6.3 Growth Inducement

The Kern County General Plan recognizes that certain forms of growth are beneficial, both economically and socially. *CEQA Guidelines* Section 15126.2(d) provides the following guidance on growth-inducing impacts:

“A project is identified as growth-inducing if it “would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.”

Growth inducement can be a result of new development that requires an increase in employment levels, removes barriers to development, or provides resources that lead to secondary growth. With respect to employment, the project would not induce substantial growth. Construction workers

would primarily be drawn from the local labor pool or would temporarily stay in hotels in local communities. The duration of the construction phase is expected to last approximately 24 months and would be temporary. Additionally, it is expected that the number of employees needed during the construction phase would be approximately 515 workers. Therefore, due to the temporary nature of the construction phase, it is not expected that the project would induce substantial population growth.

During the operational phase, it is expected that the proposed project would employ approximately 440 workers. Approximately 417 of the proposed workers would be hourly and salaried employees while approximately 23 employees being third-party employees mostly used for on-site security and slag processing. The employees needed for the operational phase of the project would most likely be drawn from the surrounding cities and unincorporated communities. These areas would include, but not be limited to, the unincorporated communities of Rosamond and Mojave and the cities of Tehachapi, Lancaster, and Palmdale. Given the size of the surrounding communities, the nature of the job, and the relatively high unemployment, it is not expected that the proposed project during the operational phase would induce substantial population growth.

1.6.4 Irreversible Impacts

CEQA Guidelines Section 15126.2(c) defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified. Build-out of the project would commit nonrenewable resources during project construction. During project operations, oil, gas, and other fossil fuels and nonrenewable resources would be consumed, primarily in the form of transportation fuel for project employees. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Kern County General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

1.7 Alternatives to the Project

CEQA Guidelines Section 15126.6 states that an EIR must address “a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives.” Based on the significant environmental impacts of the project, the aforementioned objectives established for the project and the feasibility of the alternatives considered, a range of alternatives is analyzed below and discussed in detail in Chapter 6, *Alternatives*, of this EIR.

1.7.1 Alternatives Considered and Rejected

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (*CEQA Guidelines* Section 15126.6(c)). Alternatives that are remote or

speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (*CEQA Guidelines* Section 15126(f)(2)). Kern County considered several alternatives to reduce impacts to aesthetics (project and cumulative), biological resources (cumulative only), and wildfire (cumulative only). Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The following alternatives were initially considered but were eliminated from further consideration in this EIR because they do not meet project objectives or were infeasible.

Alternative Site

This alternative would involve the development of the proposed project the micro mill facility and solar facility on another site located within Kern County. Although undetermined at this time, the alternative project site would likely be located in the southeastern corner of the desert region of the County. Similar to the proposed project, this alternative is assumed to involve construction of a 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet and 63-acre accessory solar array. *CEQA Guidelines* Section 15126.6(f)(2)(a) states that the key and initial step in considering an alternative site is whether “any of the significant effects of the project would be avoided or substantially lessened” in relocating the project, while remaining consistent with the same basic objectives of the proposed project.

The desert region of the County has attracted renewable energy and industrial development applications that are being proposed for vacant land or land with a history of agricultural uses. However, the availability of alternative sites is constrained by the renewable energy market itself. While other sites with similar size, configuration, and use history may exist in the County, alternative project sites in the area are likely to have similar project and cumulatively significant impacts after mitigation, including cumulatively significant impacts to aesthetics, wildfire, and biological resources. This is based on the known general conditions in the area and the magnitude of the proposed project.

In addition, alternative sites for the proposed project are not considered to be “potentially feasible,” as there are no suitable sites within the control of the project proponent that would reduce project impacts. The potential amount of available similar sites is further reduced because unlike the proposed project, alternative sites may not include sites with close proximity to transmission infrastructure. As noted above, alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce significant environmental effects. Therefore, this alternative was eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project.

Reduced Size Micro Mill – No Solar

This alternative would develop and operate an approximate 366,900 square-foot steel mill facility with an additional 46,290 square feet of accessory buildings and structures, for a total of 413,190 square feet. This alternative would represent an approximately 25-percent smaller micro mill facility as compared to the project. Further, this alternative would not include a solar energy production component, and the approximately 63-acres proposed for solar arrays under the project would remain vacant and unimproved.

The Reduced Size Micro Mill – No Solar alternative would result in proportionally lesser construction and operational impacts to all environmental resource areas due to the reduced project footprint. However, overall implementation of the Reduced Size Micro Mill – No Solar would still require development on a site that is currently vacant and within an area with limited development. Therefore, development of a reduced size project is likely to have similar project and cumulatively significant impacts after mitigation, including cumulatively significant impacts to aesthetics, wildfire, and biological resources.

In addition, a Reduced Size Micro Mill – No Solar alternative is not considered to be “potentially feasible,” as this alternative would not have economy to scale. As proposed, the project would be economically viable; however, if the solar component was removed and the micro mill facility reduced in size, the proposed development would not have sufficient production capacity to be profitable. Further, this alternative would reduce the degree to which the project’s objectives are met.

As noted above, alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce significant environmental effects. Therefore, this alternative was eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project and would not be economically feasible.

1.7.2 Alternatives Selected for Analysis

The following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the project, but which may avoid or substantially lessen any of the significant impacts of the project. The following alternatives are analyzed in detail in this Chapter 6 of this EIR:

- Alternative 1: No Project Alternative
- Alternative 2: Micro Mill Only

Table 1-5: *Summary of Development Alternatives*, provides a summary of the relative impacts and feasibility of each alternative and **Table 1-6:** *Comparison of Alternatives*, provides a summary side-by-side comparison of the potential impacts of the alternatives and the project. A complete discussion of each alternative is provided below.

Table 1-5: Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Project	The project proposes to develop and operate a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes. Additionally, the project would include an approximate 63-acre accessory solar array. The project would require a GPA, ZCC, CUPs, PDP, ZVs.	N/A

Alternative	Description	Basis for Selection and Summary of Analysis
Alternative 1: No Project Alternative	No development would occur on the project site. The project site would remain unchanged.	<ul style="list-style-type: none"> • Required by CEQA • Avoids need for GPA, ZCC, CUPs, PDP, and ZVs Avoids all significant and unavoidable impacts • Less impact in all remaining environmental issue areas • Does not meet any of the project objectives
Alternative 2: Micro Mill Only	This alternative would consist of converting the proposed project to a project that would develop and operate a micro mill facility with associated infrastructure but eliminate solar energy production.	<ul style="list-style-type: none"> • Similar significant and unavoidable impacts to noise, wildfire • Reduced significant and unavoidable impact to aesthetics, air quality, and biological resources • Greater overall impacts to energy, and greenhouse gas emissions, • Similar impacts in all remaining environmental issue areas • Meets some of the project objectives

Table 1-6: Comparison of Alternative

Environmental Resource	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Micro Mill Only
Aesthetics	Significant and Unavoidable (project and cumulative)	Less (NI)	Less (SU)
Agricultural and Forestry Resources	Less than Significant	Less (NI)	Less (LTS)
Air Quality	Significant and Unavoidable (project and cumulative)	Less (NI)	Less (SU)
Biological Resources	Less than Significant with Mitigation (project); Significant and Unavoidable (cumulative)	Less (NI)	Less (SU)
Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)
Energy	Less than Significant with Mitigation	Less (NI)	Greater (LTS)
Geology and Soils	Less than Significant with Mitigation	Less (NI)	Less (LTS)
Greenhouse Gas Emissions	Less than Significant	Less (NI)	Greater (LTS)
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Hydrology and Water Quality	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Land Use and Planning	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Mineral Resources	Less than Significant	Less (NI)	Similar (LTS)
Noise	Significant and Unavoidable (project and cumulative)	Less (NI)	Similar (SU)
Population and Housing	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Public Services	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Recreation	Less than Significant	Less (NI)	Similar (LTS)
Transportation and Traffic	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Tribal Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)
Utilities and Service Systems	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Wildfire	Less than Significant with Mitigation (project); Significant and Unavoidable (cumulative)	Less (LTS)	Similar (SU)
Meet Project Objectives?	All	None	Some
Reduce Significant and Unavoidable Impacts?	N/A	All	None

1.7.3 Alternative 1: No Project Alternative

The *CEQA Guidelines* require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the proposed project versus a No Project Alternative. Accordingly, Alternative 1, the No Project Alternative, assumes that the development of the micro mill facility, 63-acre solar array, ancillary buildings, and project components would not occur. The No Project Alternative would not require Conditional Use Permits (CUPs), a Precise Development Plan (PDP) or Zone Variances (ZVs) for construction and operation of the proposed project and associated facilities. Amendments to the Kern County General Plan land use map and zone changes would not be required. The No Project Alternative would maintain the current land use designations, zoning classifications, and existing land uses, which consist mostly of undisturbed desert vegetation. No physical changes would be made to the project site.

1.7.4 Alternative 2: Micro Mill Only

Alternative 2, the Micro Mill Only alternative, would develop and operate a micro mill facility with associated infrastructure. This alternative would eliminate solar energy production but would still develop the approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. Approval of this alternative would still require the GPA, ZCC, CUPs, PD Plan, and ZVs to allow the micro mill facility and accessory buildings and structures. It is reasonably assumed that by removing the proposed solar energy production component under the Micro Mill Only alternative, the severity of impacts to aesthetics, air quality, and biological resources would be reduced, although impacts would remain significant and unavoidable. Significant and unavoidable impacts to noise and wildfire would not be notably reduced under this alternative. The proposed project would also rely fully on SCE as the source for powering the facility, and the SCE off-site improvements would be installed in this alternative to ensure power is adequately delivered to the site. While this alternative would meet a majority of the project's objectives, it would reduce the degree to which the following objective is met due to the removal of a solar facility: incorporate clean energy and emission-reduction technologies such as on-site, accessory solar energy generation and carbon capture and utilization (CCU).

1.7.5 Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in **Table 1-6, Comparison of Alternatives**, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the project on the basis of its minimization or avoidance of physical environmental impacts. However, *CEQA Guidelines* Section 15126.6(e)(2) states:

The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Because the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA, the Environmentally Superior Alternative is considered to be the Micro Mill Only alternative. This alternative would reduce the severity of significant and unavoidable impacts to aesthetics, air quality, and biological resources due to the proportionate reduction in project size. This alternative, however, would have lower efficiency and greater GHG impacts due to the lack of a solar component to aid in offsetting total on-site energy demand.

The Micro Mill Only alternative would result in less impact to aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology/soils, and tribal cultural resources. Thus, for most environmental issue areas, this alternative would result in fewer environmental impacts, when compared to the proposed project.

It is important to note that it is considered to be impracticable and infeasible to construct Micro Mill Only alternative, as the increased cost of energy resources due to the lack of solar infrastructure would make this alternative economically infeasible. Nonetheless, because this alternative reduces the severity of some potential impacts, the Micro Mill Only alternative is considered the Environmentally Superior Alternative.

1.8 Areas of Controversy

Areas of controversy were identified through written agency and public comments received during the scoping period. Public comments received during the scoping period are provided in Appendix A. In summary, the following issues were identified during scoping and are addressed in the appropriate sections of **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***:

- Impacts related to air quality
- Impacts to cultural resources
- Impacts related to biological resources

1.9 Issues to Be Resolved

CEQA Guidelines Section 15123(b)(3) requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the EIR adequately describes the environmental impacts of the project;
- Choose among alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the project.

1.10 Summary of Environmental Impacts and Mitigation Measures

Table 1-7: *Summary of Impacts, Mitigation Measures, and Level of Significance*, summarizes the environmental impacts of the project, mitigation measures, and unavoidable significant impacts identified and analyzed in Sections 4.1 through 4.20 of this EIR. Refer to the appropriate EIR section for additional information.

Table 1-7: Summary of Impacts, Mitigation Measures, and Levels of Significance

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.1 Aesthetics			
Impact 4.1-1: The project would have a substantial adverse effect on a scenic vista.	Less than significant	No mitigation would be required.	Less than significant
Impact 4.1-2: The project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.	Less than significant	No mitigation would be required.	Less than significant
Impact 4.1-3: The project would, in nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.	Potentially significant	MM 4.1-1: Prior to the issuance of building permits, the project operator shall demonstrate compliance with the following: <ul style="list-style-type: none"> a. The project proponent shall present a plan to color treat the proposed buildings to blend in with the colors found in the surrounding natural landscape while not producing reflection, as approved by the Kern County Planning and Natural Resources Department. b. The project proponent/operator shall erect signs with contact information for the project proponent/operator's maintenance staff at regular intervals along the site boundary, as required by the Kern County Planning and Natural Resources Department. Maintenance staff shall respond within two weeks to resident requests for additional cleanup of debris. Correspondence with such requests and responses shall be submitted to the Kern County Planning and Natural Resources Department. c. The project proponent/operator shall implement a regular trash removal and recycling program on an ongoing basis during construction and operation of the project. Barriers to prevent pest/rodent access to food waste receptacles shall be implemented. Locations of all trash receptacles during operation of the project shall be shown on final plans. d. Trash and food items shall be contained in closed secured containers at the end of the day and removed at least once per 	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>week to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs.</p> <p>MM 4.1-2: The following aesthetic features shall be required in site plans and building permits for commercial buildings located within 1,000 feet of the Sierra Highway corridor:</p> <ul style="list-style-type: none"> a. Rooftop screening features shall be installed to create a visual screen for rooftop mechanical equipment, such as a parapet or screening material. b. Reflective metal exteriors shall not be used as exterior architectural elements in buildings immediately adjacent to Sierra Highway. <p>MM 4.1-3: During construction, demolition debris and construction wastes shall be recycled to the extent feasible.</p> <ul style="list-style-type: none"> a. An on-site recycling coordinator will be designated by the Project Proponent/ Developer to facilitate recycling of all construction waste through coordination with the on-site contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes. b. The name and phone number of the coordinator will be provided to the Kern County Public Works - Waste Management Division prior to issuance of building permits c. The on-site recycling coordinator will be responsible for ensuring that wastes requiring special disposal are handled according to state and County regulations that are in effect at the time of disposal <p>MM 4.1-4: Prior to the issuance of building permits for any facilities on the project site, the project proponent shall submit to the Kern County Planning and Natural Resources Department, a landscape plan that complies with the Kern County zoning ordinance requirements Chapter 19.86 – Landscaping.</p> <p>The plan shall also include:</p> <ul style="list-style-type: none"> a. Should perimeter fencing be proposed, fencing materials shall be constructed of any materials commonly used in the construction of fences such as chainlink, tubular steel, wrought iron, or other durable materials. 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> b. The office building shall be fenced with masonry block walls that are decorative and not bare masonry blocks. Decorative materials include façade, colored masonry blocks, or other materials. c. Fencing proposed around sumps shall be chainlink with view obscuring slats. 	
Impact 4.1-4: The project would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.	Potentially significant	<p>MM 4.1-5: The project shall continuously comply with the following: project facility lighting shall comply with the applicable provisions of the Dark Skies Ordinance (Chapter 19.81 of the Kern County Zoning Ordinance) and shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the desired areas only and avoid light trespass into adjacent areas. Lenses and bulbs shall not extend below the shields.</p> <p>MM 4.1-6: Prior to the issuance of building permits for any facilities on the project site, the project proponent shall submit, and the Kern County Planning and Natural Resources Department shall have approved, plans verifying all outdoor lighting is designed so that all direct lighting is confined to the project site property lines and that adjacent properties and roadways are protected from spillover light and glare.</p> <p>MM 4.1-7: Prior to the issuance of building permits, the project proponent shall demonstrate the solar panels and hardware are designed to minimize glare and spectral highlighting. Emerging technologies shall be used, such as diffusion coatings and nanotechnological innovations, to effectively reduce the refractive index of the solar cells and protective glass. These technological advancements are intended to make the solar panels more efficient with respect to converting incident sunlight into electrical power while also reducing the amount of glare generated by the panels. Specifications of such designs shall be submitted to the Kern County Planning and Natural Resources Department.</p>	Less than significant
Cumulative Impacts	Potentially Significant	Implement Mitigation Measures MM 4.1-1 through MM 4.1-7.	Significant and unavoidable.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.2 Agriculture and Forestry Resources			
Impact 4.2-1: The project would conflict with existing zoning for agricultural use or Williamson Act Contract.	Less than significant	No mitigation would be required.	Less than significant.
Cumulative Impact	Less than significant	No mitigation would be required.	Less than significant.
4.3 Air Quality			
Impact 4.3-1: Implementation of the proposed project would conflict with or obstruct implementation of the applicable air quality plan.	Potentially significant	<p>MM 4.3-1: To control NO_x and PM emissions during construction and operation, the project proponent/operator and/or its contractor(s) shall implement the following measures during construction and operation of the project, subject to verification by the County:</p> <ul style="list-style-type: none"> a. Off-road equipment engines over 25 horsepower shall be equipped with EPA Tier 4 or higher. b. All equipment shall be maintained in accordance with the manufacturer's specifications. c. Heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes. d. Notification shall be provided to trucks and vehicles in loading or unloading queues that their engines shall be turned off when not in use for more than 5 minutes. e. Electric equipment shall be used to the extent feasible in lieu of diesel or gasoline powered equipment. f. All vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_x emissions. g. Existing electric power sources shall be used to the extent feasible. This measure would minimize the use of higher polluting gas or diesel generators. h. The hours of operation of heavy-duty equipment and/or the quantity of equipment in use shall be limited to the extent feasible. 	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>MM 4.3-2: To control fugitive PM emissions during construction, prior to the issuance of grading or building permits and any earthwork activities, the project proponent shall prepare a comprehensive Fugitive Dust Control Plan for review and approval by the Eastern Kern Air Pollution Control District and submitted to the Kern County Planning and Natural Resources Department. The plan shall include all Eastern Kern Air Pollution Control District recommended measures, including but not limited to, the following:</p> <ul style="list-style-type: none"> a. All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soils areas. Watering shall take place a minimum of three times daily where soil is being actively disturbed, unless dust is otherwise controlled by rainfall or use of a dust suppressant. b. Vehicle speed for all on site (i.e., within the project boundary) construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. Signs identifying construction vehicle speed limits shall be posted along onsite roadways, at the site entrance/exit, and along unpaved site access roads. c. Vehicle speeds on all offsite unpaved project-site access roads (i.e., outside the project boundary) construction vehicles shall not exceed 25 mph. Signs identifying vehicle speed limits shall be posted along unpaved site access roads and at the site entrance/exit. d. All onsite unpaved roads and offsite unpaved public project-site access road(s) shall be effectively stabilized of dust emissions using water or Eastern Kern Air Pollution Control District approved dust suppressants/palliatives, sufficient to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads. If water is used, watering shall occur a minimum of three times daily, sufficient to keep soil moist along actively used roadways. During the dry season, unpaved road surfaces and vehicle parking/staging areas shall be watered immediately prior to periods of high use (e.g., worker commute periods, truck convoys). Reclaimed (non-potable) water shall be used to the extent available and feasible. 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> e. The amount of the disturbed area (e.g., grading, excavation) shall be reduced and/or phased where possible. f. All disturbed areas shall be sufficiently watered or stabilized by Eastern Kern Air Pollution Control District approved methods to prevent excessive dust. On dry days, watering shall occur a minimum of three times daily on actively disturbed areas. Watering frequency shall be increased whenever wind speeds exceed 15 mph or, as necessary, to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads. Reclaimed (nonpotable) water shall be used to the extent available and feasible. g. All clearing, grading, earth moving, and excavation activities shall cease during periods when dust plumes of 20 percent or greater opacity affect public roads or nearby occupied structures. h. All disturbed areas anticipated to be inactive for periods of 30 days or more shall be treated to minimize wind-blown dust emissions. Treatment may include, but is not limited to, the application of an Eastern Kern Air Pollution Control District-approved chemical dust suppressant, gravel, hydro-mulch, revegetation/seedling, or wood chips. i. All active and inactive disturbed surface areas shall be stabilized, where feasible. j. Equipment and vehicle access to disturbed areas shall be limited to only those vehicles necessary to complete the construction activities. k. Where applicable, permanent dust control measures shall be implemented as soon as possible following completion of any soil-disturbing activities. l. Stockpiles of dirt or other fine loose material shall be stabilized by watering or other appropriate methods sufficient to reduce visible dust emissions to a limit of 20 percent opacity. If necessary and where feasible, three-sided barriers shall be constructed around storage piles and/or piles shall be covered by use of tarps, hydro-mulch, woodchips, or other materials sufficient to minimize windblown dust. 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> m. Water shall be applied prior to and during the demolition of onsite structures sufficient to minimize wind-blown dust. n. Where acceptable to the fire department and feasible, weed control shall be accomplished by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. o. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least six inches of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with California Vehicle Code Section 23114. p. Gravel pads, grizzly strips, or other material track-out control methods approved for use by Eastern Kern Air Pollution Control District shall be installed where vehicles enter or exit unpaved roads onto paved roadways. q. Haul trucks and off-road equipment leaving the site shall be washed with water or high pressure air, and/or rocks/grates at the project entry points shall be used, when necessary, to remove soil deposits and minimize the track out/deposition of soil onto nearby paved roadways. r. During construction paved road surfaces adjacent to the site access road(s), including adjoining paved aprons, shall be cleaned, as necessary, to remove visible accumulations of track-out material. If dry sweepers are used, the area shall be sprayed with water prior to sweeping to minimize the entrainment of dust. Reclaimed water shall be used to the extent available. s. Portable equipment, 50 horsepower or greater, used during construction activities (e.g., portable generators) shall require California statewide portable equipment registration (issued by California Air Resources Board) or an Eastern Kern Air Pollution Control District permit. t. The Fugitive Dust Control Plan shall identify a designated person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures, as necessary, to minimize the transport of dust off site and to ensure compliance 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>with identified fugitive dust control measures. Contact information for a hotline shall be posted on site should any complaints or concerns be received during working hours and holidays and weekend periods when work may not be in progress. The names and telephone numbers of such persons shall be provided to the Eastern Kern Air Pollution Control District Compliance Division prior to the start of any grading or earthwork.</p> <ul style="list-style-type: none"> u. Signs shall be posted at the project site entrance and written notifications shall be provided a minimum of 30 days prior to initiation of project construction to residential land uses located within 1,000 feet of the project site. The signs and written notifications shall include the following information: (a) Project Name; (b) Anticipated Construction Schedule(s); and (c) Telephone Number(s) for designated construction activity monitor(s) or, if established, a complaint hotline. v. The designated construction monitor shall document and immediately notify Eastern Kern Air Pollution Control District of any air quality complaints received. If necessary, the project operator and/or contractor will coordinate with Eastern Kern Air Pollution Control District to identify any additional feasible measures and/or strategies to be implemented to address public complaints. w. The solar array shall obtain a permit from the Eastern Kern Air Pollution Control District and implement phased removal of vegetation from the site to ensure dust control during construction. 	
Impact 4.3-2: Implementation of the project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region in non-attainment under an applicable federal or state ambient air quality standard.	Potentially significant	Implement Mitigation Measures MM 4.3-1 and MM 4.3-2	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.3-3: Implementation of the project would not expose sensitive receptors to substantial pollutant concentrations.	Potentially significant	<p>Implement Mitigation Measures MM 4.3-1, MM 4.3-2, and MM 4.17-3 from Section 4.17, <i>Transportation and Traffic</i>; and</p> <p>MM 4.3-3: Complete a screening procedure approved by the Federal Land Manager that demonstrates the 98th percentile change in light extinction is less than 5 percent for each modeled year, when compared to the annual average natural condition value for the Class I areas within 100 km of the proposed site.</p> <p>MM 4.3-4: To minimize personnel and public exposure to potential Valley Fever–containing dust on and off site, the following control measures shall be implemented during project construction:</p> <ol style="list-style-type: none"> Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved off site to other work locations. Wherever possible, grading and trenching work shall be phased so that earthmoving equipment is working well ahead or downwind of workers on the ground. The area immediately behind grading or trenching equipment shall be sprayed with water before ground workers move into the area. In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers being exposed to dust shall leave the area until a truck can resume water spraying. To the greatest extent feasible, heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEP-filtered air system. Workers shall receive training in procedures to minimize activities that may result in the release of airborne <i>Coccidioides immitis</i> (CI) spores, to recognize the symptoms of Valley Fever, and shall be instructed to promptly report suspected symptoms of work related Valley Fever to a supervisor. Evidence of training shall be provided to the Kern County Planning and Natural Resources Department within 5 days of the training session. A Valley Fever informational handout shall be provided to all onsite construction personnel. The handout shall, at a 	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>minimum, provide information regarding the symptoms, health effects, preventative measures, and treatment. Additional information and handouts can be obtained by contacting the Kern County Public Health Services Department.</p> <p>h. Onsite personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health–approved respirators shall be provided to onsite personnel, upon request. When exposure to dust is unavoidable, provide appropriate NIOSH-approved respiratory protection to affected workers. If respiratory protection is deemed necessary, employers must develop and implement a respiratory protection program in accordance with Cal/OSHA's Respiratory Protection standard (8 CCR 5144).</p> <p>MM 4.3-5: Prior to the issuance of any grading permit, a one-time fee shall be paid to the Kern County Public Health Services Department in the amount of \$3,200 for Valley Fever public awareness programs</p>	
Impact 4.3-4: Implementation of the project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people).	Less than significant	No mitigation would be required.	Less than significant
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.3-1 through MM 4.3-5	Significant and Unavoidable
4.4 Biological Resources			
Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California	Potentially significant	<p>Implement Mitigation Measures MM 4.1-5 through MM 4.1-7 from Section 4.1 Aesthetics, and:</p> <p>MM 4.4-1: Prior to the issuance of grading or building permits, and prior to decommissioning, the project operator shall retain a Lead Biologist(s) who meets the qualifications of an Authorized Biologist as defined by the California Department of Fish and Wildlife to oversee compliance with protection measures for all listed and other special-status species that may be affected by the construction, operation, and decommissioning of the project. The</p>	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Department of Fish and Wildlife or U.S. Fish and Wildlife Service.		<p>contact information for the Lead Biologist(s) shall be provided in writing to the Kern County Planning and Natural Resources Department.</p> <p>The following measures pertain to the Lead Biologist(s):</p> <ol style="list-style-type: none"> The Lead Biologist(s), or their designee, shall be on the project site during all construction activities which include, but are not limited to, installation of perimeter fencing, clearing of vegetation, grading activities, site buildout, and decommissioning. The Lead Biologist(s) or their designee shall have the right to halt all activities that are in violation of the special-status species protection measures, as well as any regulatory permits from the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife, if applicable. Work shall proceed only after hazards to special-status species are removed and the species is no longer at risk. <p>MM 4.4-2: Prior to initial ground disturbance, a qualified biologist shall prepare a Joshua Tree Preservation Plan. The Joshua Tree Preservation Plan shall be developed in coordination with the California Department of Fish and Wildlife and shall apply to Joshua trees within the project footprint that cannot be avoided. As part of the Joshua Tree Preservation Plan, all western Joshua trees shall be individually identified and evaluated to determine if preservation or transplantation is appropriate.</p> <p>The Joshua Tree Preservation Plan shall show which western Joshua trees shall be avoided and protected, and those western Joshua trees shall be protected from construction activities by fencing, flagging, or stakes establishing a buffer to protect the dripline plus no less than 5 feet from the dripline. The project proponent/operator shall maintain and/or replace those temporary protection measures as needed during construction. After construction is complete, the project proponent/operator may remove those temporary protective materials after consulting and receiving written approval from a qualified biologist.</p> <p>The project proponent/operator shall obtain a Western Joshua Tree Conservation Act Incidental Take Permit if required for those that</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>cannot be avoided or preserved on the project site, and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any incidental take permit issued for the project. All trees removed may be salvaged to the extent feasible and as allowed by issued permits.</p> <p>MM 4.4-3: Prior to the start of construction activities, the project proponent shall conduct pre-construction wildlife surveys, including for special-status wildlife species such as burrowing owl, desert tortoise, and Mohave ground squirrel, within 100 feet of construction activities. The pre-construction surveys shall be conducted 7 days prior to the start of construction activities. If any of these species are present or determined to be within 100 feet of construction areas, construction best management practices and Worker Environmental Awareness Program training shall be implemented to avoid potential impacts to these species. Best management practices shall include, but not be limited to, exclusion fencing (see MM 4.4-5), work areas using temporary silt fencing, and cleaning up all trash and debris daily. Additional avoidance measures shall include establishing a buffer around active nests or burrows and on-site monitoring if individuals of a special-status wildlife species is observed. If present, California Department of Fish and Wildlife and United States Fish and Wildlife Service will be contacted for the potential to relocate listed species to suitable offsite habitat. Any relocation of wildlife will be completed by an appropriately permitted wildlife biologist.</p> <p>Worker Environmental Awareness Program training will be prepared by a qualified biologist to describe species that could be impacted and summarize the construction best management practices to be implemented. Construction personnel will be instructed to not directly harm any wildlife species on-site by halting activities until the species can move to off-site areas or contact a qualified biologist to move non-listed wildlife species out of harm's way.</p> <p>MM 4.4-4: A project Lead Biologist shall be on-site during all initial ground-disturbing activities to survey and monitor for potential burrowing owl habitat. A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience)</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation																							
		<p>shall conduct pre-disturbance surveys of the permanent and temporary impact areas, plus an ISO-meter (approximately 500-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to initial ground-disturbing activities. The survey methodology will be consistent with the methods outlined in the <i>Staff Report on Burrowing Owl Mitigation</i> and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. Copies of the survey results shall be submitted to the California Department of Fish and Wildlife and Kern County Planning and Natural Resources Department.</p> <p>a. If burrowing owls are detected within the project site, no ground-disturbing activities shall be permitted within the distances listed below in the table titled “Burrowing Owl Burrow Buffers,” unless otherwise authorized by the California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season.</p> <p>Burrowing Owl Burrow Buffers</p> <table> <tr> <th rowspan="2">Location</th> <th rowspan="2">Time of Year</th> <th colspan="3">Level of Disturbance</th> </tr> <tr> <th>Low</th> <th>Medium</th> <th>High</th> </tr> <tr> <td>Nesting sites</td> <td>April 1 – August 15</td> <td>200 meters</td> <td>500 meters</td> <td>500 meters</td> </tr> <tr> <td>Nesting sites</td> <td>August 16 – October 15</td> <td>200 meters</td> <td>200 meters</td> <td>500 meters</td> </tr> <tr> <td>Any occupied burrow</td> <td>October 16 – March 31</td> <td>50 meters</td> <td>100 meters</td> <td>500 meters</td> </tr> </table> <p>California Department of Fish and Game 2012</p> <p>b. If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 <i>Staff Report on Burrowing Owl Mitigation</i>. Burrowing owls shall not be excluded from burrows unless or until the following circumstances occur:</p> <ol style="list-style-type: none"> Occupied burrows shall not be disturbed during the nesting season unless a qualified biologist meeting the Biologist Qualifications set forth in the 2012 <i>Staff Report on Burrowing Owl Mitigation</i> verifies through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation or (2) juveniles from the occupied burrows are foraging independently and are capable of 	Location	Time of Year	Level of Disturbance			Low	Medium	High	Nesting sites	April 1 – August 15	200 meters	500 meters	500 meters	Nesting sites	August 16 – October 15	200 meters	200 meters	500 meters	Any occupied burrow	October 16 – March 31	50 meters	100 meters	500 meters	
Location	Time of Year	Level of Disturbance																								
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Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>independent survival. Burrowing owls shall not be moved or excluded from burrows during the breeding season.</p> <p>2. A Burrowing Owl Exclusion Plan shall be developed and approved by the applicable local California Department of Fish and Wildlife office and submitted to the Kern County Planning and Natural Resources Department. The plan shall include, at a minimum:</p> <ul style="list-style-type: none"> A. Confirmation by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping; B. The type of scope and appropriate timing of scoping to avoid impacts; C. Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors shall be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and cannot escape [i.e., look for sign immediately inside the door]); D. How the burrow(s) will be excavated, including excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow); E. Removal of other potential owl burrow surrogates or refugia on-site; F. Photographs of the excavation and closure of the burrow to demonstrate success and sufficiency; G. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take; and H. How the impacted site will continually be made inhospitable to burrowing owls and fossorial 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.</p> <p>3. Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below.</p> <p>A. Temporary exclusion is mitigated in accordance with the measures described below.</p> <p>B. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.</p> <p>C. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band resight).</p> <p>D. In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow. Forty-eight hours after the installation of the one-way doors, the doors can be removed, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation.</p> <p>c. During ground-disturbing activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, the Kern County Planning and Natural Resources Department, and other applicable resource agencies documenting the effectiveness of mitigation</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>measures and the level of burrowing owl take associated with the proposed project.</p> <p>d. Should burrowing owls be found within the project site, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented on-site or off-site in accordance with the <i>Staff Report on Burrowing Owl Mitigation</i> guidance and in consultation with the California Department of Fish and Wildlife. At a minimum, the following recommendations shall be implemented:</p> <ol style="list-style-type: none"> 1. Restore temporarily disturbed habitat, if feasible, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent shall implement “2” below. 2. Mitigate permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced based on a site-specific analysis and shall include permanent conservation of similar vegetation communities (grassland, scrub lands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals. Conservation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls. 3. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area of a California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project proponent/operator may purchase available burrowing owl conservation bank credits. 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ol style="list-style-type: none"> 4. Develop and implement a mitigation land management plan in accordance with the Staff Report on Burrowing Owl Mitigation guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls. 5. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism, such as an endowment. 6. Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured; are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring, and reporting plans; and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed. 7. Mitigation lands shall be on, adjacent to, or in proximity to the impact site, where feasible, and where habitat is sufficient to support burrowing owls. <p>MM 4.4-5: Prior to issuance of grading or building permits, the project site shall be fenced with a temporary exclusion fence to prevent any special-status species that may be using habitat adjacent to the site from entering during construction phase. This exclusion fencing shall be constructed of metal flashing, plastic sheeting, or other materials that will prohibit desert tortoise, Mohave ground squirrel, and other special-status wildlife species from entering the project site. The fencing shall be buried a minimum of six inches below grade and extend a minimum of 30 inches above grade. The fencing shall be inspected by a qualified biologist on a daily basis during construction activities to ensure fence integrity. Any needed repairs to the fence shall be performed on the day of their discovery. Fencing shall be installed and maintained during all phases of construction and decommissioning but is only required where construction will occur within 200 feet of adjacent habitat suitable for supporting special-status reptiles, rodents, and mammals.</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Exclusion fencing shall be removed once construction or decommissioning activities are complete.</p> <ul style="list-style-type: none"> a. If any special-status species are found on the site during project construction, operation shall cease in the vicinity of the animal and the animal shall be passively restricted to the area encompassing its observed position on the construction site and its point of entry shall be determined, if possible. The Lead Biologist shall install a temporary exclusion fence around this area. Concurrent with this effort, United States Fish and Wildlife Service and California Department of Fish and Wildlife shall be consulted regarding any additional avoidance, minimization, or mitigation measures that may be necessary. Once the animal is observed leaving the exclusion area, work in the area can resume. A report shall be prepared by the Lead Biologist to document the activities of the animal within the site; all fence construction, modification, and repair efforts; and movements of the animal once outside the exclusion fence. This report shall be submitted to wildlife and resource agency representatives and the Kern County Planning and Natural Resources Department. b. The Lead Biologist or biological monitor will monitor ground-disturbance activities. Work shall only occur during daylight hours. Prior to conducting brushing or grading activities inside the temporarily fenced area, a Lead Biologist or biological monitor under the supervision of a Lead Biologist shall survey the area immediately prior to conducting these activities to ensure that no special-status animals are present. c. To prevent inadvertent entrapment of wildlife during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species are trapped, the United States Fish and Wildlife Service and 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>California Department of Fish and Wildlife shall be contacted, as appropriate, for appropriate action such as relocation outside the project construction area.</p> <p>d. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of four inches or more shall be thoroughly inspected for special-status wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status animal is discovered inside or beneath a pipe, that section of pipe shall not be moved until the appropriate resource agency has been consulted and the animal is safely located out of harm's way. If necessary, under the direct supervision of the Lead Biologist, the pipe may be moved once to remove it from the path of construction activity until the animal has escaped.</p> <p>e. Intentional killing or collection of either plant or wildlife species, including listed species, in the project site and surrounding areas shall be prohibited, unless authorized by approved permit or entitlement. The Lead Biologist, wildlife and resource agency representatives and Kern County Planning and Natural Resources Department shall be notified of any such non-permitted occurrences within 24 hours.</p> <p>f. Construction monitoring shall be conducted by either the Lead Biologist or by biological monitors under the Lead Biologist's supervision. The biological monitors shall have experience in monitoring for special-status wildlife.</p> <p>g. Initial ground disturbance activities should commence within the interior of the Project, as practicable, to allow for the wildlife escape to outside the active construction area. Working from the center of the project site out to the exclusion fenced areas.</p> <p>h. During construction, daily monitoring reports summarizing daily activities shall be prepared by the monitoring biologists. The Lead Biologist shall prepare a summary monitoring report for the wildlife and resource agencies and Kern County Planning and Natural Resources Department on a monthly</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>basis, documenting the effectiveness and practicality of the protection measures that are in place and making recommendations for modifying the measures to enhance species protection, as needed. The report would also provide information on the overall biological resources-related activities conducted, including the worker awareness training, clearance/pre-activity surveys, monitoring activities, and any observed special-status species, including injuries and fatalities.</p> <p>MM 4.4-6: The project operator shall develop a site-specific Common Raven Management Plan in accordance with United States Fish and Wildlife Service guidelines and shall implement management measures for ravens in the project site. These measures may include but are not limited to designing structures to eliminate perches, waste management, road kill management, management of ponded water during construction and operations, and nest removal on structures within the project site.</p> <p>MM 4.4-7: If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors 30 days prior to the start of construction, and then weekly, within 500-feet of the construction limits to determine and map the location and extent of breeding birds that could be affected by the proposed project. Nesting bird surveys shall be conducted at appropriate nesting times. Weekly surveys will take place with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.” If proposed project activities are delayed or suspended for more than 7 days after the last survey, surveys shall be repeated before work can resume.</p> <p>If an active nest is located, clearing and construction within appropriate buffers as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Due to the disturbed nature of the project site, 300-feet for raptors and 150-feet for passerine birds could suffice for nesting bird buffers however it will be at the discretion of the qualified biologist. The buffer zone from the nest shall be established in the</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		field with flagging and stakes. The qualified biologist shall retain the ability to increase buffers if needed to protect the nesting birds. Temporary fencing and signage shall be maintained for the duration of the proposed project. Construction personnel shall be instructed on the sensitivity of the area and be advised not to work, trespass, or engage in activities that would disturb nesting birds near or inside the buffer. On-site construction monitoring may also be required to ensure that no direct or indirect impacts occur to the active nest. Project activities may encroach into the buffer only at the discretion of the qualified biologist	
Impact 4.4-2: The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.	Less than significant	No mitigation is required.	Less than significant.
Impact 4.4-3: The project would have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Less than significant	No mitigation is required.	Less than significant.
Impact 4.4-4: The project would interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Potentially Significant	Implement Mitigation Measure MM 4.4-7	Less than significant.
Impact 4.4-5: The project would conflict with any local policies or ordinances protecting biological	Potentially significant	Implement Mitigation Measures MM 4.4-2	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
resources, such as a tree preservation policy or ordinance.			
Impact 4.4-6: The project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.	Potentially significant	No mitigation would be required.	Less than significant.
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM4.1-5, MM 4.1-6, and MM 4.1-7 from Section 4.1 <i>Aesthetics</i> and MM 4.4-1 through MM 4.4 7.	Significant and Unavoidable

4.5 Cultural Resources

Impact 4.5-1: The project would cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5.	Potentially significant	<p>MM 4.5-1: The project proponent/operator shall retain a Lead Archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior, 2011), to carry out all mitigation measures related to archaeological and historical resources during ground-disturbing activities. The contact information for this Lead Archaeologist shall be provided to the Kern County Planning and Natural Resources Department prior to the commencement of any construction activities on-site. Further, the Lead Archaeologist shall be responsible for ensuring the following employee training provisions are implemented during implementation of the project:</p> <p>a. Prior to commencement of any ground disturbing activities, the Lead Archaeologist, in consultation with the Native American Monitor(s), shall prepare Cultural Resources Sensitivity Training materials, including a Cultural Resources Sensitivity Training Guide, to be used in an orientation program given to all personnel working on the project. The training guide may be presented in video form. A copy of the proposed training materials, including the Cultural Resources Sensitivity Training Guide, shall be provided to the Planning and Natural Resources Department prior to the issuance of any grading or building permit.</p>	Less than significant.
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Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> b. The project proponent/operator shall ensure all new employees or onsite workers who have not participated in earlier Cultural Resources Sensitivity Trainings shall meet provisions specified above. c. The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the Lead Archaeologist for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources. d. A copy of the Cultural Resources Sensitivity Training Guide/Materials shall be kept on-site and available for all personnel to review and be familiar with as necessary. It is the responsibility of the Lead Archaeologist to ensure all employees receive appropriate training before commencing work on-site. e. During implementation of the project, the services of Native American Monitors, as identified through consultation with appropriate Native American tribes, working under the supervision of the Lead Archaeologist, shall be retained by the project to monitor project-related ground-disturbing activities as identified in Mitigation Measure MM 4.5-2. <p>MM 4.5-2: Prior to the issuance of any grading or building permit, the project proponent shall submit to the Kern County Planning and Natural Resources Department a Cultural Resources Treatment Plan. The plan shall:</p> <ul style="list-style-type: none"> a. Require that prior to conducting initial ground disturbance in the vicinity of prehistoric archaeological sites, and in coordination with the Lead Archaeologist and Native American Monitor(s), exclusion areas (i.e., the recorded boundaries of the archaeological sites and all areas within 50 feet thereof) shall be temporarily marked with exclusion markers or protective fencing as determined by the Lead Archaeologist in consultation with the Native American Monitor. 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> b. Require that the construction zone shall be narrowed or otherwise altered to avoid any exclusion areas. c. Provide an overview of best management practices to be utilized during ground-disturbing construction activities to ensure protection of cultural resources. d. Outline the process for evaluation of any unanticipated cultural discoveries during project construction activities. e. Provide a Data Recovery Plan, if required, prepared by the Lead Archeologist in consultation with the Native American Monitor(s), for the recovery of known and unanticipated cultural discoveries that cannot be avoided or preserved in place. <p>MM 4.5-3: During implementation of the project, in the event that archaeological materials are encountered during the course of grading or construction, the project contractor shall cease any ground-disturbing activities within 50 feet of the find. The area of the discovery shall be marked off by temporary fencing that encloses a 50-foot radius from the location of the discovery. Signs shall be posted that establish it as an Environmentally Sensitive Area, and all entrance into the area shall be avoided until the discovery is assessed by the Lead Archaeologist and Native American Monitor. The Lead Archaeologist, in consultation with any Native American Monitor, shall evaluate the significance of the resources and recommend appropriate treatment measures. If further treatment of the discovery is necessary, the Environmentally Sensitive Area shall remain in place until all work is completed. Per California Environmental Quality Act (CEQA) Guidelines Section 15126.4(b)(3), project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources.</p> <p>Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the Lead Archaeologist, in consultation with any Native American Monitor, shall develop additional treatment measures in consultation with the County of Kern (County), which may include data recovery or other appropriate measures. The County shall consult with appropriate</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.5-2: The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	Potentially significant	<p>Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. Diagnostic archaeological materials with research potential recovered during any investigation shall be curated at an accredited curation facility. The Lead Archaeologist, in consultation with a designated Native American Monitor, shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to the Kern County Planning and Natural Resources Department and to the Southern San Joaquin Valley Information Center at California State University, Bakersfield</p>	Less than significant.
		<p>Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.</p> <p>MM 4.5-4: During implementation of the project, the services of both an Archaeological and Native American Monitor, working under the supervision of the Lead Archaeologist as identified through consultation with appropriate Native American tribes, shall be retained by the project proponent/operator to monitor, on a full-time basis, during ground-disturbing activities associated with project-related construction activities, as follows:</p> <ol style="list-style-type: none"> All initial ground-disturbing activities within 50 feet of prehistoric archaeological sites within the project site shall be monitored by Native American Monitor(s) and Archaeological Monitor(s). During implementation of the project, Archaeological and Native American monitoring shall be conducted for all initial excavation or ground-disturbing activities. If no archaeological discoveries are made during the course of this monitoring, no additional monitoring will be required. If the Lead Archaeologist can demonstrate that the level of monitoring should be reduced or discontinued, or a need for continuing monitoring, the Lead Archaeologist, in consultation with the Kern County Planning and Natural Resources Department, may adjust the level of monitoring to circumstances as warranted. 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> c. All ground disturbing activities within 100 feet of a grave site shall be monitored by Native American Monitor(s) and Archeological Monitor(s). d. The Lead Archaeologist and Native American Monitor(s) shall be provided all project documentation related to cultural resources within the project site prior to commencement of ground disturbance activities. Should the services of any additional individuals be retained (as the Lead Archaeologist, Archeological Monitor, or Native American Monitor) subsequent to commencement of ground disturbing activities, such individuals shall be provided all proposed project documentation related to cultural resources within the project area, prior to beginning work. Documentation shall include but not be limited to previous cultural studies, surveys, maps, drawings, etc. Any modifications or updates to project documentation, including construction plans and schedules, shall immediately be provided to the Lead Archaeologist, Archeological Monitor, and Native American Monitor. e. The Archeological Monitor(s) shall keep daily logs and the Lead Archaeologist shall submit monthly written updates to the Kern County Planning and Natural Resources Department and Native American Monitor. After monitoring has been completed, the Lead Archaeologist shall prepare a monitoring report that details monitoring results; assessment of inadvertent discoveries; communication with Tribal representatives; installation of, maintenance of, and guidance for environmentally sensitive areas; and general implementation of the required mitigation. The final monitoring report shall act as a record of compliance with guiding documents and mitigation and shall be submitted to the Kern County Planning and Natural Resources Department and the Southern San Joaquin Valley Information Center at California State University, Bakersfield. 	
Impact 4.5-3: The project would disturb any human remains, including	Potentially significant	MM 4.5-5: If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
those interred outside of formal cemeteries.		(e)(1) of the California Environmental Quality Act Guidelines. Notification shall be made to the Kern County Planning and Natural Resources Department within 12 hours of contacting the Coroner. If the County Coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply. No work shall recommence on the site until all provisions of these reviews have occurred.	
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-5.	Less than significant.
4.6 Energy			
Impact 4.6-1: The project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	Potentially significant	Implement Mitigation Measure MM 4.3-1 through MM 4.3-4 as provided in Section 4.3, <i>Air Quality</i> , of this EIR. MM 4.6-1: The proposed Project, shall to the extent feasible and to the satisfaction of the Kern County Planning Department incorporate the following energy conservation and design features to reduce the level of energy consumption of the proposed project. The following list is non-inclusive of all potential mitigation that may be included and may be added to at the discretion of Kern County as new technologies become available and feasible to be incorporated:	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> a. Solar photovoltaics (PV) mounted on proposed structure's roofs to provide a portion of the future electrical demand and offset emissions from fossil fuel fired power plants. Encourage green building measures that contribute to reducing energy use to 25% less than Title 24 requirements; b. Solar water heating to provide non-industrial water heating; c. Ground mounted solar PV arrays to provide a portion of the estimated electrical demand for the proposed project; d. Commercial buildings shall be designed to meet LEED Silver standards; e. Roofs on all buildings shall be of a light color to reduce heat generation; f. Portions of parking lots (drive aisles) may be paved with concrete versus asphalt to reduce initial solar reflectance; g. Depending on the usage, portions of parking lots may be covered, and the parking lot roofs contain solar PV; h. Use LED lighting fixtures on all indoor and exterior site lighting; i. Use LED lighting fixtures on all public streets and site lighting; j. Include dedicated EV parking at a rate more than required by current codes; k. Include EV charging facilities to encourage the usage of electric vehicles; l. Encourage the utilization of electric forklifts and other material handling vehicles to reduce usage of fossil fuels; m. Design circulation features into the public street improvements to include bus stops and/or other public transportation; n. Include bicycle friendly features to reduce Vehicle Miles Traveled (VMT) and to encourage non-vehicular transportation; o. Encourage the usage of high efficiency electric motors for industrial uses 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.6-2: The project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than significant	No mitigation would be required.	Less than significant
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.6-1, as well as MM 4.3-1 through MM 4.3-4 (see Section 4.3, <i>Air Quality</i> for full Mitigation Measure).	Less than significant.
4.7 Geology and Soils			
Impact 4.7-1: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map issued by the state geologist for the area or based on other substantial evidence of a known fault.	Less than significant	No mitigation would be required.	Less than significant
Impact 4.7-2: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	Potentially significant	<p>MM 4.7-1: The project proponent shall limit grading to the minimum area necessary for construction. Prior to the initiation of a construction or grading project exceeding one (1)-acre in size, the project proponent shall retain a California registered and licensed professional engineer to submit final grading earthwork and foundation plans prior to construction to the Kern County Public Works Department for approval.</p> <p>MM 4.7-2: Prior to the issuance of building or grading permits for the project, the project proponent shall conduct a final engineering design specific geotechnical study in accordance with all applicable ordinances of the Kern County Building Code (Chapter 17.08) and the CBC to evaluate soil conditions and geologic hazards on the project site and submit it to the Kern County Public Works Department for review and approval.</p> <p>MM 4.7-3: Prior to the issuance of grading permits, the project proponent shall retain a California registered engineer to design the</p>	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>project facilities to withstand probable seismically induced ground shaking at the site. All grading and construction on-site shall adhere to the specifications, procedures, and site conditions contained in the final design plans, which shall be fully compliant with the seismic recommendations of the California-registered professional engineer. The procedures and site conditions shall encompass site preparation, foundation specifications, and protection measures for buried metal. The final structural design shall be subject to approval and follow-up inspection by the Kern County Building Inspection Department. Final design requirements shall be provided to the on-site construction supervisor and the Kern County Building Inspector to ensure compliance.</p> <p>MM 4.7-4: Building locations shall be stabilized against the occurrence of liquefaction by dynamic compaction, or other accepted soil stabilization method approved by the County Building official.</p> <p>MM 4.7-5: Prior to the issuance of grading permits, a geotechnical evaluation, consisting of field exploration (drilling and soil sampling), laboratory testing of soil samples, and engineering analysis, shall be prepared to determine soil properties related, but not limited, to ground-motion acceleration parameters, the amplification properties of the subsurface units at the specific site, the potential for hydrocompaction to affect the proposed facilities, and the potential for collapsible, subsiding, or expansive soils to affect the proposed facilities.</p> <p>These studies shall be used to determine the appropriate engineering for foundations and support structures as well as building requirements to minimize geotechnical hazard impacts. Copies of all analyses shall be submitted to the Kern County Public Works Department for review and approval. An approved copy of the evaluation shall be submitted to the Kern County Planning and Natural Resources Department.</p> <p>MM 4.7-6: The project proponent shall continuously comply with the following:</p> <p>The project proponent shall use existing roads to the greatest extent feasible to minimize erosion.</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Prior to approval of the grading permit, final plans shall be reviewed and approved by the Kern County Public Works Department to confirm existing roads were used to the greatest extent feasible.</p> <p>MM 4.7-7: The project proponent shall continuously comply with the following:</p> <p>The project proponent shall limit grading to the minimum area necessary for construction and operation of the project. Final grading plans shall include best management practices (BMPs) to limit on-site and off-site erosion, a water plan to treat disturbed areas during construction and reduce dust, and a plan for the disposal of drainage waters originating on-site and from adjacent rights-of-way (if required).</p> <p>The plans shall be submitted to the Kern County Public Works Department for review and approval.</p>	
Impact 4.7-3: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction.	Potentially significant	Implement Mitigation Measures MM 4.7-2, MM 4.7-4, and MM 4.7-5	Less than significant.
Impact 4.7-4: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving landslides.	Less than significant	No mitigation would be required.	Less than significant.
Impact 4.7-5: The project would result in substantial soil erosion or the loss of topsoil.	Potentially significant	<p>Implement Mitigation Measures MM 4.10-1 and MM 4.10-2.</p> <p>MM 4.7-8: The project proponent shall prepare a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion. The plan shall be prepared by a California registered civil engineer or other professional approved to prepare said Plan and submitted for review and approval by the Kern County Public Works Department. The Soil Erosion and Sedimentation Control Plan shall include, but is not limited to, the following:</p> <p>a. Best Management Practices to minimize soil erosion consistent with Kern County grading requirements and the California</p>	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Regional Water Quality Control Board requirements pertaining to the preparation and approval of a Stormwater Pollution Prevention Plan (Best Management Practices recommended by the Kern County Public Works Department shall be reviewed for applicability);</p> <p>b. Provisions to maintain flow in washes, should it occur, throughout construction;</p> <p>c. Provisions for site revegetation using native seed mix;</p> <p>d. Sediment collection facilities as may be required by the Kern County Public Works Department;</p> <p>e. A timetable for full implementation, estimated costs, and a surety bond or other security as approved by the County;</p> <p>f. Other measures required by the County during permitting, including long-term monitoring (post-construction) of erosion control measures until site stabilization is achieved; and</p> <p>g. Provisions to comply with local and state codes relating to drainage and runoff, including use of pervious pavements, and/or other methods to the extent feasible, to increase stormwater infiltration and reduce runoff onto agricultural lands.</p>	
Impact 4.7-6 The project would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Potentially significant	Implement Mitigation Measure MM 4.7-2.	Less than significant.
Impact 4.7-7: The project would be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial risks to life or property.	Potentially significant	Implement Mitigation Measure MM 4.7-2.	Less than significant.
Impact 4.7-8: The project would have soils incapable of adequately	Less than significant	MM 4.7-9: Prior to the issuance of permits, the project proponent shall provide evidence to the Kern County Planning and Natural	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.		Resources Department that the siting, design and construction of proposed septic system(s) and leach field disposal system(s) comply with the 2016 Kern County Onsite Systems Manual as authorized by the California Water Board Local Agency Management Program and administered locally by the Kern County Public Health Services Department – Environmental Health Division. Proving the proposed septic design plans comply with these requirements will ensure that all standards for septic tanks, seepage pits, and soils are capable of adequately supporting the use of septic tanks. MM 4.7-10: The final leach field disposal system shall be designed by a licensed engineer, taking into full consideration the requirements provided in the June 2016 Kern County Onsite Systems Manual	
Impact 4.7-9: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, as defined in CEQA Guidelines Section 15064.	Potentially significant	Implement Mitigation Measure MM 4.5-1 through MM 4.5-4, see Section 4.5, <i>Cultural Resources</i>	Less than significant.
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.7-1 through MM 4.7-10, MM 4.5-1 through MM 4.5-4 (see Section 4.5, <i>Cultural Resources</i>), and MM 4.10-1 and MM 4.10-2 (see Section 4.10, <i>Hydrology and Water Quality</i>).	Less than significant.
4.8 Greenhouse Gas Emissions			
Impact 4.8-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than significant	No mitigation would be required.	Less than significant.
Impact 4.8-2: The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas.	Less than significant	No mitigation would be required.	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Cumulative Impact	Less than significant	No mitigation would be required.	Less than significant.
4.9 Hazards and Hazardous Materials			
Impact 4.9-1: The project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Potentially significant	<p>Implement Mitigation Measures 4.1-3 (see Section 4.1, <i>Aesthetics</i> for full mitigation measures), 4.9-1 and MM 4.19-1 (see Section 4.19, <i>Utilities and System Services</i>, for full mitigation measure text).</p> <p>MM 4.9-1: During the life of the project, the project operator shall prepare and maintain a Hazardous Materials Business Plan, as applicable, pursuant to Article 1 and Article 2 of California Health and Safety Code 6.95 and in accordance with Kern County Ordinance Code 8.04.030, by submitting all the required information to the California Environmental Reporting System at http://cers.calepa.ca.gov/ for review and approval. The Hazardous Materials Business Plan shall:</p> <ul style="list-style-type: none"> a. Delineate hazardous material and hazardous waste storage areas b. Describe proper handling, storage, transport, and disposal techniques including which routes will be used to transport hazardous materials c. Describe methods to be used to avoid spills and minimize impacts in the event of a spill d. Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction and operation e. Establish public and agency notification procedures for spills and other emergencies including fires f. Describe federal, state, or local agency coordination, as applicable, and clean-up efforts that would occur in the event of an accidental release. g. Include procedures to avoid or minimize dust from existing residual pesticides and herbicides that may be present on the site <p>The project proponent shall ensure that all contractors working on the project are familiar with the facility's Hazardous Materials</p>	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.9-2: The project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Potentially significant	Business Plan as well as ensure that one copy is available at the project site at all times. In addition, a copy of the approved Hazardous Materials Business Plan from California Environmental Reporting System shall be submitted to the Kern County Planning and Natural Resources Department for inclusion in the projects permanent record. Implement Mitigation Measure MM 4.9-1. MM 4.9-2: The project proponent shall continuously comply with the following: a. If suspect materials or wastes of unknown origin are discovered during construction on the project site, which is thought to include hazardous waste materials the following shall occur: 1. All work shall immediately stop in the vicinity of the suspected contaminant; Project Construction Manager shall be notified; 2. Area(s) shall be secured as directed by the Project Construction Manager; 3. Notification shall be made to the Kern County Environmental Health Services Division/Hazardous Materials Section for consultation, assessment, and appropriate actions; and 4. Copies of all notifications and correspondence shall be submitted to the Kern County Planning and Natural Resources Department. MM 4.9-3: Prior to issuance of the grading permit, a qualified hazardous materials specialist shall inspect each power pole with a transformer. Those containing polychlorinated biphenyls shall be removed by the hazardous specialist and disposed of at an appropriate hazardous materials disposal site to the satisfaction of Department of Toxic Substances Control. The hazardous materials specialist shall provide a short report to the Kern County Planning and Natural Resources Department and the Kern County Environmental Health Services Division/Hazardous Materials Section for review and approval.	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>a. Prior to construction, Southern California Edison Company (SCE) shall be contacted regarding the disposition of pole-mounted transformers. In the event of a future release or leak of insulating fluids from any of the pole-mounted transformers, SCE shall be contacted for their removal or replacement.</p> <p>MM 4.9-4: Prior to start of construction, any abandoned petroleum prospect wells shall be located, exposed, and re-abandoned, if required, to conform to the current abandonment requirements of the California Department of Conservation, Geologic Energy Management Division (CalGEM) and the Kern County Department of Environmental Health Services.</p> <p>MM 4.9-5: The following note shall appear on all final maps and grading plans: “If during grading or construction, any plugged and abandoned or unrecorded wells are uncovered or damaged, the California Department of Conservation – Geologic Energy Management Division (CalGEM) will be contacted to inspect and approve any remediation required.”</p> <p>MM 4.9-6: Underground Service Alert One-call. Prior to grading or excavating the Underground Service Alert One-call center shall be contacted. The proposed excavation area shall be delineated with white marking paint or with other suitable markers such as flags or stakes at least two days prior to commencing any excavation work. A “Dig Alert” ticket number would be issued at the time Underground Service Alert is contacted. Excavating is not permitted without this ticket number and is valid for twenty-eight days. Underground Service Alert would notify its member utilities having underground facilities in the area. Underground Service Alert does not notify nonmember utilities or energy companies, or California Department of Transportation (CalTrans).</p> <p>MM 4.9-7: If a rupturing of a pipeline should occur during excavation and construction activities the Kern County Fire Department and SoCalGas Company should be contacted immediately. Natural gas transmission pipeline rupture most often indicated an emergency situation and 9-1-1 should be dialed. If an emergency is not indicated, the Kern County Fire Department Rosamond Station 15, located at 3219 35th St. West, Rosamond, CS 93560, should be contacted at (661) 256-2401. The Non-</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Emergency telephone number for the Kern County Fire Department is (661) 324-6551 and the project proponent shall follow all safety and cleanup regulations.</p> <p>MM 4.9-8: If the on-site water wells are not to be used for irrigation or industrial purposes, they shall be destroyed in accordance with California Well Standards as governed by the California Department of Water Resources, and permit requirements of the Kern County Environmental Health Services Division.</p> <p>MM 4.9-9: Prior to the issuance of grading or building permits for the project, if herbicides are to be utilized, the contractor or personnel applying herbicides must have the appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use.</p> <ol style="list-style-type: none"> Herbicides shall be mixed and applied in conformance with the product manufacturer's directions. The herbicide applicator shall be equipped with splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and material safety data sheets for all hazardous materials to be used. To minimize harm to wildlife, vegetation, and waterbodies, herbicides shall not be applied directly to wildlife, products identified as non-toxic to birds and small mammals shall be used if nests or dens are observed. Herbicides shall not be applied if it is raining at the site, rain is imminent, or the target area has puddles or standing water, and shall not be applied when wind velocity exceeds 10 miles per hour. If spray is observed to be drifting to a non-target location, spraying shall be discontinued until conditions causing the drift have abated. <p>MM 4.9-10: If asbestos containing materials are identified during construction (particularly in the concrete irrigation (transite) pipe located on-site, then the East Kern Air Pollution Control District shall be contacted for removal and disposal procedures. These</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		procedures shall be followed in order to eliminate asbestos exposure to construction workers and surrounding workers and residents.	
Impact 4.9-3: The project would emit hazardous emissions or involves handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.	Less than significant	No mitigation would be required.	Less than significant.
Impact 4.9-4: The project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	Less than significant	No mitigation would be required.	Less than significant.
Impact 4.9-5: The project would expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Potentially significant	<p>MM 4.9-11: Prior to issuance of building and grading permits for portions of the project that meet the Federal Aviation Administration's noticing requirements, the project proponent/operator shall comply with the following:</p> <ul style="list-style-type: none"> a. Submit Form 7460-1 (Notification of Proposed Construction or Alteration) to the Federal Aviation Administration, in the form and manner prescribed in Code of Federal Regulation 77.17. b. Obtain a Federal Aviation Administration issued "Determination of No Hazard to Air Navigation" or make the Federal Aviation Administration's recommended changes to the project. c. Provide documentation to the Kern County Planning and Natural Resources Department demonstrating the project would comply with the Kern County Zoning Ordinance Figure 19.08.160 that all project components in the flight area would create no significant military mission impact and a copy of the site plan has been provided to the appropriate military authority responsible for operations in the flight area. 	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		d. Provide documentation to the Kern County Planning and Natural Resources Department demonstrating that a copy of the final site plan has been provided to the operators of Mojave Air and Space Port	
Impact 4.9-6: The project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	Less than significant	No mitigation would be required.	Less than significant.
Impact 4.9-7: The project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Potentially significant	Implement Mitigation Measure MM 4.15-1 (see Section 4.15-1, <i>Public Services</i> , for full text).	Less than significant.
Impact 4.9-8: The project would generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste. Specifically, the project would exceed the following qualitative threshold: The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors: i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and ii. Are associated with design, layout, and management of project operations; and	Potentially significant	MM 4.9-12: Prior to issuance of grading or building permits, a long-term trash abatement program shall be established for construction, operations and maintenance. Trash and food items shall be contained in closed containers and removed daily.	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
iii. Disseminate widely from the property; and iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.			
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.9-1 through MM 4.9-12, MM 4.15-1, and MM 4.19-1 (see Sections 4.15-1, <i>Public Services</i> , and 4.19, <i>Utilities and System Services</i> , for full text).	Less than significant.
4.10 Hydrology and Water Quality			
Impact 4.10-1: The project would violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality.	Potentially significant	Implement Mitigation Measure MM 4.9-1. MM 4.10-1: Prior to issuance of a grading permit, the project proponent/operator shall submit a Stormwater Pollution Prevention Plan for review and approval by the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department. The Stormwater Pollution Prevention Plan shall be designed to minimize runoff and shall specify best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sediment or any other pollutants from moving offsite and into receiving waters. The requirements of the Stormwater Pollution Prevention Plan shall be incorporated into design specifications and construction contracts. Recommended best management practices to be incorporated in the Stormwater Pollution Prevention Plan shall include the following: <ol style="list-style-type: none"> Minimization of vegetation removal; Implementing sediment controls, including silt fences as necessary; Installation of a stabilized construction entrance/exit and stabilization of disturbed areas; Properly containing and disposing of hazardous materials used for construction onsite; Properly covering stockpiled soils to prevent wind erosion; Proper protections and containment for fueling and maintenance of equipment and vehicles; and 	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> g. Appropriate disposal of demolition debris, concrete and soil, and aggressively controlling litter. h. Cleanup of silt and mud on adjacent street due to construction activity. i. Checking all lined and unlined ditches after each rainfall. j. Restore all erosion control devices to working order to the satisfaction of the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department after each rainfall run-off. k. Install additional erosion control measures as may be required due to uncompleted grading operations or unforeseen circumstances which may arise. <p>MM 4.10-2: Prior to the issuance of a grading permit, the project proponent/operator shall complete a hydrologic study and final drainage plan designed to evaluate and minimize potential increases in runoff from the project site. The study shall include, but is not limited to the following:</p> <ul style="list-style-type: none"> a. A numerical stormwater model for the project site that evaluates existing and proposed (with project) drainage conditions during storm events ranging up to the 100-year event. b. The study shall also consider potential for erosion and sedimentation in light of modeled changes in stormwater flow across the project area that would result from project implementation. c. Engineering recommendations to be incorporated into the project design and applied within the site boundary. Engineering recommendations will include measures to offset increases in stormwater runoff that would result from the project, as well as implementation of design measures to minimize or manage flow concentration and changes in flow depth or velocity so as to minimize erosion, sedimentation, and flooding onsite or offsite. d. The hydrologic study and drainage plan shall be prepared in accordance with the Kern County Grading Code and Kern 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		County Development Standards, and approved by the Kern County Public Works Department prior to the issuance of grading permits	
Impact 4.10-2: The project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less than significant.	Implement Mitigation Measure MM 4.10-1.	Less than significant.
Impact 4.10-3: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner than would result in substantial erosion and/or sedimentation on-site or off-site.	Potentially significant	Implement Mitigation Measures MM 4.10-2.	Less than significant.
Impact 4.10-4: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in flooding onsite or offsite.	Potentially significant	Implement Mitigation Measure MM 4.10-2.	Less than significant.
Impact 4.10-5: The project would create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.	Potentially significant	Implement Mitigation Measure MM 4.10-2.	Less than significant.
Impact 4.10-6: The project would place within a 100-year flood hazard	Potentially significant	Implement Mitigation Measure MM 4.10-2.	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
area structures that would impede or redirect flood flows.			
Impact 4.10-7: The project would result in a flood hazard, tsunami, or seiche zone, and risk release of pollutants due to project inundation.	Potentially significant	Implement Mitigation Measure MM 4.9-1 and MM 4.10-2.	Less than significant.
Impact 4.10-8: The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than significant	No mitigation would be required.	Less than significant
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.9-1 (see Section 4.9, Hazards and Hazardous Materials for full mitigation measure), MM 4.10-1, and MM 4.10-2.	Less than significant.
4.11 Land Use			
Impact 4.11-1: The project would cause a significant environmental impact due to physically dividing an established community.	Less than significant	No mitigation would be required.	Less than significant
Impact 4.11-2: The project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Potentially significant	MM 4.11-1: Prior to the issuance of building permits, the operator shall consult with the Department of Defense to identify the appropriate Frequency Management Office officials to coordinate the use of telemetry to avoid potential frequency conflicts with military operations.	Less than significant
Cumulative Impact	Less than significant	No mitigation would be required.	Less than significant.
4.12 Mineral Resources			
Impact 4.12-1: The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.	Less than significant	No mitigation would be required.	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.12-2: The project would result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	Less than significant	No mitigation would be required.	Less than significant.
Cumulative Impact	Less than significant	No mitigation would be required.	Less than significant.
4.13 Noise			
Impact 4.13-1: The project would result in generation of a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.	Potentially significant	<p>MM 4.13-1: The following measures are recommended to reduce short-term noise levels associated with project construction:</p> <ul style="list-style-type: none"> a. Construction activities at the project site may operate with no hourly restrictions. The hours, as specified in the Kern County Noise Ordinance (Municipal Ordinance Code 8.36.020), are waived. Non-essential construction or operational noise, such as loud speakers for outdoor music, are prohibited except with written permission from the Kern County Planning and Natural Resources Department. b. Equipment staging and laydown areas shall be located at the furthest practical distance from nearby residential land uses. To the extent possible, staging and laydown areas should be located at least 500 feet of existing residential dwellings. c. Where feasible construction equipment shall be fitted with approved noise-reduction features such as mufflers, baffles and engine shrouds that are no less effective than those originally installed by the manufacturer. d. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing). e. On-site vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency). f. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational 	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Safety and Health's safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.</p> <p>MM 4.13-2: The following notes shall be placed on all grading and building permits issued for the project site:</p> <p>Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.</p> <p>During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.</p> <p>All equipment shall be fitted with factory equipped mufflers, and be in good working condition. Construction contracts shall specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices</p>	
Impact 4.13-2: The project would generate excessive groundborne vibration or groundborne noise levels.	Less than significant	No mitigation would be required.	Less than significant
Impact 4.13-3: The project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Potentially significant	No mitigation would be feasible.	Significant and unavoidable
Impact 4.13-4: The project would be located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.	Less than significant	No mitigation would be required.	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.13-1 and MM 4.13-2	Significant and unavoidable
4.14 Population and Housing			
Impact 4.14-1: The project would induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Potentially significant	Implement Mitigation Measure MM 4.15-3 (see Section 4.15, Public Services for full mitigation measure text).	Less than significant
Impact 4.14-2: The project would displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	Less than significant	No mitigation would be required.	Less than significant
Cumulative Impact	Potentially significant	Implement Mitigation Measure MM 4.15-3 (see Section 4.15, Public Services for full mitigation measure text).	Less than significant.
4.15 Public Services			
Impact 4.15-1: The project would result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services or police protection services.	Potentially significant	<p>MM 4.15-1: Prior to the issuance of grading or building permits, the project proponent shall develop and implement a Fire Safety Plan for use during construction and operation. The project proponent will submit the Fire Safety Plan, along with maps of the project site and access roads, to the Kern County Fire Department for review and approval. The Fire Safety Plan will contain notification procedures and emergency fire precautions for construction and operations phases of the proposed project.</p> <p>MM 4.15-2: The project proponent/operator shall work with the County to determine how the use of sales and use taxes from construction of the project can be maximized. This process shall include, but is not necessarily limited to, the project proponent/operator obtaining a street address within the unincorporated portion of Kern County for acquisition, purchasing and billing purposes, and registering this address with the State</p>	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Board of Equalization. As an alternative to the aforementioned process, the project proponent/operator may make arrangements with Kern County for a guaranteed single payment that is equivalent to the amount of sales and use taxes that would have otherwise been received (less any sales and use taxes actually paid); with the amount of the single payment to be determined via a formula approved by Kern County. The project proponent/operator shall allow the County to use this sales tax information publicly for reporting purposes.</p> <p>MM 4.15-3: Prior to the issuance of any building permits on the property, the project operator shall submit a letter detailing the hiring efforts prior to commencement of construction, which encourages all contractors of the project site to hire at least 50 percent of their workers from local Kern County communities. The project operator shall provide the contractors a list of training programs that provide skilled workers and shall require the contractor to advertise locally for available jobs, notifying the training programs of job availability, all in conjunction with normal hiring practices of the contractor.</p>	
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.15-1 through MM 4.13-3.	Less than significant.
4.16 Recreation			
Impact 4.16-1: Result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated.	Less than significant	No mitigation would be required.	Less than significant
Impact 4.16-2: Include recreational facilities or require construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Less than significant	No mitigation would be required.	Less than significant
Cumulative Impact	Less than significant	No mitigation would be required.	Less than significant
4.17 Transportation and Traffic			

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.17-1: The project would conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, as follows: Metropolitan Bakersfield General Plan LOS C and Kern County General Plan LOS “D.”	Potentially significant	<p>MM 4.17-1: Prior to the issuance of construction or building permits for each Facility, the project proponent/operator shall implement measures to ensure peak hour construction worker vehicle limits are maintained during the AM and PM peak hours in order to maintain LOS D or better at the study intersections. These measures may include, but are not limited to the following:</p> <ul style="list-style-type: none"> a. The Construction Traffic Control Plan (see MM 4.17-2, below) shall outline the methods used to count worker vehicle traffic arriving and departing from the project site during peak AM and PM hours, methods used to control the number of trips during these hours, and documentation of reasonable coordination efforts with other projects in the area to avoid impacts to study intersections. b. The project proponent/operator shall limit construction worker vehicle trips to and from the site to the extent possible during the AM and PM peak periods (i.e., 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.). c. If monitoring indicates that either AM or PM peak hour construction trips may exceed the peak hour construction worker vehicle limits, the project proponent/operator shall implement measures to reduce peak hour passenger vehicle trips. These measures could include: <ul style="list-style-type: none"> 1. Scheduling construction worker shifts so that a majority of the workers arrive and depart the project site outside the AM and PM peak periods. 2. Staggering construction worker shifts so that construction worker vehicle trips are distributed over a broader period (i.e., construction workers arrive in staggered shifts starting from 6:00 a.m. and depart in staggered shifts starting from 2:00 p.m.). 3. Instituting incentives and providing options for construction workers to carpool and/or vanpool to and from the project site. 	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>d. Should applicant be able to demonstrate LOS will not fall below LOS C, then the Traffic Control Plan will not be necessary.</p> <p>MM 4.17-2: Prior to the issuance of construction or building permits, the project proponent/operator shall:</p> <p>a. Prepare and submit a Construction Traffic Control Plan to Kern County Public Works Department-Development Review and the California Department of Transportation offices for District 9, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following issues:</p> <ol style="list-style-type: none"> 1. Timing of deliveries of heavy equipment and building materials. To the extent feasible, restrict deliveries and vendor vehicle arrivals and departures during either the AM and PM peak periods; 2. Directing construction traffic with flaggers along the Rosamond Corridor; 3. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic; 4. Ensuring access for emergency vehicles to the project sites; 5. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections; 6. Maintaining access to adjacent property; 7. Specifying both construction-related vehicle travel and oversize load haul routes and avoiding residential neighborhoods to the maximum extent feasible; and; 8. Consult with the County to develop coordinated plans that would address construction-related vehicle routing and 	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>detours adjacent to the construction area for the duration of construction overlap with neighboring projects. Key coordination meetings would be held jointly between project proponents and contractors of other projects for which the County determines impacts could overlap.</p> <ul style="list-style-type: none"> b. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Kern County Planning and Natural Resources Department, the Kern County Public Works Department-Development Review, and California Department of Transportation. c. Enter into a secured agreement with Kern County to ensure that any County roads that are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Kern County. d. Submit documentation that identifies the roads to be used during construction. The project proponent/operator shall be responsible for repairing any damage to non-County maintained roads that may result from construction activities. The project proponent/operator shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Kern County Public Work Department-Development Review and the Kern County Planning and Natural Resources Department. e. Within 30 days of completion of construction, the project proponent/operator shall submit a post-construction video log and inspection report to the County. This information shall be submitted in electronic/digital format. The County, in consultation with the project proponent/operator's engineer, shall determine the extent of remediation required, if any. <p>MM 4.17-3: To improve traffic during operation of the project, the following traffic improvements shall be implemented; costs shall be funded entirely by the project proponent and at no cost to either the</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>County of Kern or the California Department of Transportation (CalTrans):</p> <ol style="list-style-type: none"> State Route 14 northbound ramps and the Backus Road Intersections: Installation of a traffic signal and expansion of the intersection to provide one dedicated lane for the westbound right turn on the ramp, and one dedicated lane for each turning movement at the northbound ramp termini at the buildout year of 2023. State Route 14 Southbound Ramps and the Backus Road Intersections: Installation of a traffic signal by 2042. By the year 2042, the project proponent shall coordinate with both the Kern County Public Works Department and CalTrans to revisit and recalculate the cost for this mitigation. A new pavement analysis shall also be completed to calculate the required Traffic Index and cross section. Segment of Sierra Highway between Backus Road and Sopp Road: By the year 2042, the addition of one lane in each direction shall be installed. The project proponent shall coordinate with both the Kern County Public Works Department and CalTrans to revisit and recalculate the cost for this mitigation At a minimum, the project proponent shall place a 0.15-foot depth asphalt concrete overlay over the eastbound lane of Sopp Road. To avoid a fault along the roadway centerline, cold plane a 3-to-4-foot width to a depth of 0.12-feet north of the Sopp Road centerline. The overlay will extend north of the centerline repaving the cold-planed limits and providing a transition to the full overlay depth placed on the eastbound lane. After the overlay, restriping of centerline will be necessary as well as shoulder-backing on the south side 	
Impact 4.17-2: The project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Less than significant	No mitigation would be required.	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.17-3: The project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Potentially significant	Implement Mitigation Measure MM 4.17-2.	Less than significant
Impact 4.17-4: Result in inadequate emergency access.	Potentially significant	Implement Mitigation Measures MM 4.17-1 and MM 4.17-2	Less than significant.
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.17-1 through MM 4.17-3	Less than significant.
4.18 Tribal Cultural Resources			
Impact 4.18-1a: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	Potentially significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-4, see Section 4.5 <i>Cultural Resources</i> .	Less than significant.
Impact 4.18-1b: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape,	Potentially significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-5, see Section 4.5 <i>Cultural Resources</i> .	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
sacred place, or object with cultural value to a California Native American tribe that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-5, see Section 4.5 <i>Cultural Resources</i> .	Impacts would be less than significant
4.19 Utilities and Service Systems			
Impact 4.19-1: The project would require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Potentially significant	Implement Mitigation Measures MM 4.10-1 and MM 4.10-2 from Section 4.10, <i>Hydrology and Water Quality</i> . MM 4.19-1: All facilities of the water system shall be designed and constructed to comply with Kern County Development Standards and approved by the Kern County Public Works Department. MM 4.19-2: Any new wastewater package plant facility shall be constructed according to State specifications, with coordination of Kern County Public Works and Kern County Environmental Health Services Departments and shall be operated in such a way as to not contaminate the underlying unconfined aquifer.	Less than significant
Impact 4.19-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	Less than significant	No mitigation would be required.	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact 4.19-3: The project would result in a determination by the wastewater treatment provider which may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less than significant	No mitigation would be required.	Less than significant
Impact 4.19-4: The project would generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Potentially significant	Implementation of Mitigation Measure MM 4.1-3 (see Section 4.1, Aesthetics , for full mitigation measure) would be required.	Less than significant.
Impact 4.19-5: The project would comply with Federal, State, and Local management and reduction statutes and regulations related to solid waste.	Potentially significant	Implement Mitigation Measures MM 4.19-1 and MM 4.19-2.	Less than significant.
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.1-3 (see Section 4.1, Aesthetics , for full mitigation measure), MM 4.10-1, MM 4.10-2 (see Section 4.10, Hydrology and Water Quality , for full mitigation measure), MM 4.19-1 and 4.19-2.	Less than significant.
4.20 Wildfire			
Impact 4.20-1: The project would substantially impair an adopted emergency response plan or emergency evacuation plan.	Less than significant	Implement Mitigation Measure MM 4.17-2 and MM 4.17-3, (see Section 4.17, Traffic and Transportation , for full mitigation measures).	Less than significant.
Impact 4.20-2: The project would, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations	Less than significant	No mitigation would be required.	Less than significant.

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
from a wildfire or the uncontrolled spread of a wildfire.			
Impact 4.20-3: The project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	Potentially significant	Implement Mitigation Measure MM 4.15-1, see Section 4.15 , <i>Public Services</i> to see full mitigation measure.	Less than significant.
Impact 4.20-4: The project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	Potentially significant	Implement Mitigation Measure MM 4.10-1 (see Section 4.10 , <i>Hydrology and Water Quality</i> for full mitigation measure).	Less than significant.
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.10-1 (see Section 4.10 , <i>Hydrology and Water Quality</i> for mitigation measure), MM 4.15-1 (see Section 4.15 , <i>Public Services</i> for mitigation measure), and MM 4.17-2 and MM 4.17-3 (see Section 4.17 , <i>Traffic and Transportation</i> for mitigation measure).	Significant and unavoidable.

Chapter 2 Introduction

2.1 Intent of the California Environmental Quality Act

The Kern County Planning and Natural Resources Department, as lead agency, has determined that an Environmental Impact Report (EIR) must be prepared for the proposed Mojave Micro Mill Project (GPA No. 3, Map No. 213; ZCC No. 62, Map No. 213; CUP No. 71, Map No. 213; CUP No. 72, Map No. 213; PD Plan No. 3, Map No. 213; ZV No. 24, Map No. 214; ZV No. 25, Map No. 213) (project). The project proposes to develop and operate a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal through various recycling processes and a 63-acre solar field on an approximately 174 acre site in unincorporated Kern County.

The project would be located on approximately 174 acres across two (2) privately-owned parcels (APNs: 431-010-02 and 431-030-02). The project proposes to develop and operate a micro mill facility with associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes. Development would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. The proposed project would include an approximate 63-acre accessory solar array that would generate approximately 10 megawatts (MW) entirely for on-site use. Also included in the proposed project site is an outdoor storage for scrap materials and truck staging to facilitate distribution to off-site consumers. In total, the mill would be made up of 13 attached and detached buildings and 7 ancillary structures.

The primary entrance to the project site would be located off of Sopp Road, which would lead to on-site parking stalls for visitors and employees. The proposed micro mill would be located within APN 431-010-02 whereas the incidental solar array would encompass parcel APN 431-030-02 and part of parcel 431-010-02. The entire project site is currently designated by the Kern County General Plan as 8.5 (Resource Management – min. 20 acres) and the existing zoning classification for the project site is A-1 (Limited Agriculture). The proposal includes a proposed amendment to the existing land use designation from Map Code 8.5 to 7.3 (Heavy Industrial) as well as a change in zoning classification to M-3 PD (Heavy Industrial – Precise Development Combining) for the entire 174 acre project site.

This EIR has been prepared pursuant to the following:

- The California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.)
- *CEQA Guidelines* (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.)
- The Kern County CEQA Implementation Document

The overall purposes of the CEQA process are to:

- Ensure that the environment and public health and safety are protected in the face of discretionary projects initiated by public agencies or private concerns.

- Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and responsible and trustee agencies charged with managing resources (e.g., wildlife, air quality) that may be affected by the project.
- Provide a forum for public participation in the decision-making process with respect to environmental effects.

2.2 Purpose of this Environmental Impact Report

An EIR is a public informational document used in the planning and decision-making process. This project-level EIR will analyze the environmental impacts of the project. The Kern County Planning Commission and Board of Supervisors will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. The final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the project. The purpose of an EIR is to identify:

- The significant potential impacts of the project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and
- Reasonable and feasible alternatives to the project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of the project when taken into consideration with past, present, and reasonably anticipated future projects.

CEQA requires that an EIR reflect the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting mitigation measures and alternatives capable of avoiding or reducing the significant effects of the project, while still attaining most of the basic objectives of the project.

Issues to Be Resolved

CEQA Guidelines Section 15123(b)(3) requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved regarding the project:

- Determine whether the Draft EIR adequately describes the environmental impacts of the project;
- Determine preferred choice among alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified, and
- Determine whether additional mitigation measures need to be applied to the project.

2.3 Terminology

To assist reviewers in understanding this EIR, the following terms are defined:

- *Project* means the whole of an action that has the potential for resulting in a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. Within this EIR when necessary, the off-site improvement work involving the re-poling and reconductoring of Southern California Edison's (SCE) existing power and communication line routes that are proposed to power and connect to the project site are independently identified as "off-site improvements." Conversely, where necessary, all portions of the proposed project except for the off-site improvements are referred to as the "proposed project" within the "project site." Other conventions used in this EIR to distinguish among components of the project as a whole include "SCE off-site work," "fiber optic lines," connection to the Antelope Valley-East Kern (AVEK) water main, and SCE improvement work within the Edward Air Force Base (EAFB) "utility corridor."
- *Environment* refers to the physical conditions that exist in the area and that would be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is where significant direct or indirect impacts would occur as a result of the project. The environment includes both natural and man-made (artificial) conditions.
- *Impacts* analyzed under CEQA must be related to a physical change. Impacts are:
 - Direct or primary impacts that would be caused by the project and would occur at the same time and place; or
 - Indirect or secondary impacts that would be caused by the project and would be later in time or farther removed in distance but would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems.
- *Significant impact on the environment* means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.
- *Mitigation* consists of measures that avoid or substantially reduce the project's significant environmental impacts by:
 - Avoiding the impact altogether by not taking a certain action or parts of an action;
 - Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
 - Compensating for the impact by replacing or providing substitute resources or environments.

- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
 - The individual impacts may be changes resulting from a single project or separate projects.
 - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant projects taking place over time.

This EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- *Less than significant.* An impact that is adverse but that does not exceed the defined thresholds of significance. Less than significant impacts do not require mitigation.
- *Significant.* An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less than significant level.
- *Significant and unavoidable.* An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

2.4 Decision-Making Process

CEQA requires lead agencies, in this case the Kern County Planning and Natural Resources Department, to solicit and consider input from other interested agencies, citizen groups, and individual members of the public. CEQA also requires the project to be monitored after it has been permitted to ensure that mitigation measures are carried out.

CEQA requires the lead agency to provide the public with a full disclosure of the expected environmental consequences of the project and with an opportunity to provide comments. In accordance with CEQA, the following steps constitute the process for public participation in the decision-making process:

- **Notice of Preparation/Initial Study (NOP/IS).** Kern County prepared and circulated a NOP/IS for 30 days to responsible, trustee, and local agencies for review and comment beginning on October 28, 2022 and ending on November 28, 2022.
- **Draft EIR Preparation/Notice of Completion (NOC).** A Draft EIR is prepared, incorporating public and agency responses to the NOP/IS and the scoping process. The Draft EIR is circulated for review and comment to appropriate agencies and additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the *CEQA Guidelines*, Kern County will provide for a 45-day public review period on the Draft EIR. Kern County will subsequently respond to each comment on the Draft EIR received in writing through a Response to Comments chapter (Chapter 7) in the Final EIR. The Response to Comments will be provided to each agency or person who provided written comments on the EIR a minimum

of 10 business days before the scheduled Planning Commission hearing on the Final EIR and project.

- **Preparation and Certification of Final EIR.** The Kern County Planning Commission will consider the Final EIR and the project, acting in an advisory capacity to the Kern County Board of Supervisors. Upon receipt of the Planning Commission's recommendation, the Board of Supervisors will also consider the Final EIR, all public comments, and the project, and take final action on the project. At least one public hearing will be held by both the Planning Commission and Board of Supervisors to consider the Final EIR, take public testimony, and then approve, conditionally approve, or deny the project.

Notice of Preparation/Initial Study

Pursuant to Section 15082 of the *CEQA Guidelines*, as amended, the Kern County Planning and Natural Resources Department circulated an NOP/IS to the State Clearinghouse, public agencies, special districts, and members of the public for a public review period beginning October 28, 2022 and ending on November 28, 2022. The NOP/IS was also posted in the Kern County Clerk's office for 30 days and sent to the State Clearinghouse at the Governor's Office of Planning and Research to solicit Statewide agency participation in determining the scope of the EIR.

The purpose of the NOP/IS is to formally convey that the Kern County Planning and Natural Resources Department, as the lead agency, solicited input regarding the scope and proposed content of the EIR. The NOP/IS and all comment letters are provided in Appendix A of this EIR.

Scoping Meeting

Pursuant to Section 15082 (c)(1) of the *CEQA Guidelines*, for projects of statewide, regional, or area-wide significance, the lead agency is required to conduct at least one scoping meeting. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding, but not limited to, the range of actions, alternatives, mitigation measures, and environmental effects to be analyzed. Kern County hosted a scoping meeting on Friday November 18th, 2021 at the Kern County Planning and Natural Resources Department, located at 2700 "M" Street, Suite 100, Bakersfield, California.

Notice of Preparation/Initial Study and Scoping Meeting Results

During the November 18th, 2021 scoping meeting, no members of the public were present, and no testimony was given. A summary of specific environmental remarks made in written comments received during the 30-day NOP/IS public review period are provided below in **Table 2-1, Summary of IS/NOP Comments**. The NOP/IS and all comments received are included in Appendix A, along with the Summary of Proceedings from the Scoping Meeting.

IS/NOP Written Comments

The following specific environmental concerns listed in **Table 2-1: Summary of NOP/IS Comments**, were received in writing by the County in response to the IS/NOP.

Table 2-1: Summary of IS/NOP Comments

Commenter/Date	Summary of Comment
State Agencies	
CA Department of Fish and Wildlife November 28, 2022	<p>The commenter identifies potential impacts to special-status species and other biological resources. The commenter recommends the following:</p> <ul style="list-style-type: none"> • Conduct surveys for nesting Swainson's Hawk (SWHA) and nests performed by qualified wildlife biologist in appropriate time frame based upon nesting season and determine if nesting occurs within 0.5 mile radius of Project site. Consult with CDFW if active findings are present in survey or if buffer is not feasible and to compensate for loss of SWHA foraging habitat; • Conduct survey for Mohave ground squirrel (MGS) by a qualified wildlife biologist with appropriate permits and in accordance with the Mohave Ground Squirrel Survey Guidelines during the appropriate survey season. • Conduct survey for desert tortoise in adequate time frame by a qualified wildlife biologist and consult with CDFW if desert tortoises are found within Project area and if conducting ground-disturbing activities in order to comply with FESA and to consult with CDFW if desert tortoises are found within the Project area; • Conduct identification survey by qualified botanist of all Western Joshua Tree (WJT) within no-disturbance buffer. Obtain take authorization if necessary; • Consult CDFW if a Crotch Bumblebee (CBB) is taken to discuss how to avoid take or, if avoidance is not feasible, to acquire an Incidental Take Permit (ITP); • Conduct survey for Burrowing Owl (BUOW) by a qualified wildlife biologist and consult with CDFW if BUOW are found within Project area or within suggested no-disturbance buffer zone during particular time of year. If necessary, conduct burrow exclusion during non-breeding season and replace with artificial burrows, while continuing ongoing surveillance; • Conduct identification survey by qualified botanist to determine if Project area or vicinity contain suitable habitat for special-status plant species. If present, survey for special-status plants and observe no-disturbance buffer. Consult with CDFW and conduct take authorization if necessary; • CDFW recommends qualified biologist conduct habitat assessment for state species of special concern that have been documented to occur in vicinity of site, such as American badger, Townsend's big-eared bat, short-eared owl, Le Contes thrasher, and loggerhead strike. If potential habitat is present, biologist to conduct surveys. • Consult with CDFW if any active or potential desert kit fox dens are found on Project site, avoid excavation during pupping season, and alter fences to allow for kit fox movement; • Notify CDFW before any river, stream, or lake alteration; • Implement Project during non-nesting season or ensure no violation of Migratory Bird Treaty Act/Fish and Game Codes; and • Conduct pre-activity survey by qualified biologist to determine if Project area or vicinity contain active nests. If present, observe no-disturbance buffer and continue to have biologist monitor.

Commenter/Date	Summary of Comment
Native American Heritage Commission October 31, 2022	The commenter states that the proposed project should comply with Senate Bill (SB) 18 and Assembly Bill (AB) 52, contact CA Native American Tribes and their representatives that are within the geographic area of the project and conduct consultations in accordance with SB 18 and AB 52, evaluate if the project will have an adverse impact on historical resources within the project area, contact appropriate regional archaeological information center for a record search, prepare an archaeological inventory survey (if required), contact the Native American Heritage Commission, and include mitigation measures for inadvertent discoveries of archaeological resources.
Local	
Kern County Public Works Department – Floodplain Management Section November 2, 2022	The commentor provides general comments that the project site would be subject to flooding and increased stormwater runoff due to the increase in impervious surfaces. As such, the commentor recommends a plan for the disposal of drainage waters originating on site and from adjacent road rights-of-way (if required), subject to the approval of the Public Works Department.
Kern County Public Works – Building and Development – Survey November 15, 2022	The commenter states that prior to the issuance of permits, all survey monuments shall be tied out by a Licensed Land surveyor and a record of such shall be submitted to the County Surveyor. Prior to the final inspection, all survey monuments that were destroyed during construction shall be re-set and a record of such shall be submitted to the County Surveyor. Additionally, they request that all survey monuments be accessible by a Licensed Land Surveyor.
Kern County Public Works Department November 23, 2022	The commenter requests that the expected quantities and/or volumes of waste as a result of the project be included in the Draft EIR. The commenter states that any solid waste must be demonstrated as non-hazardous for disposal in a Kern County solid waste facility if approved according to the quantities and/or volumes outlined in the Draft EIR. Furthermore, the commenter states that any hazardous waste as a result of the project must be disposed in a designated county owned and operated landfill.
Kern County Fire Department (KCFD) – Fire Prevention Unit November 3, 2022	The commentor states that all new construction will require fire water flowing at a minimum of 1,500 gallons per minute for two hours with 20 pounds per square inch (PSI) residual. All fire access roads to each parcel must meet specifications set forth in Section 503.2 of the California Fire Code and the applicable Appendix and Ordinance sections. KCFD will conduct a more detailed review and provide comments when the building permit and plans are submitted to the Department.
SoCalGas – Transmission Technical Services Department December 8, 2022	The commentor states that there are no transmission facilities within the proposed project area. However, the commentor notes that the Distribution Department of SoCalGas may service the project area.

Commenter/Date	Summary of Comment
Interested Parties	
Lozeau Drury LLP – Colby Gonzalez October 31, 2022	<p>The commenter requests any and all notices prepared for the Project be addressed to Richard Drury sent to 1939 Harrison Street, Suite 150, Oakland, CA 94612. The notices requested include the following:</p> <ul style="list-style-type: none"> • Notices of any public hearing held pursuant to CEQA; • Notices of determination that an Environmental Impact Report (“EIR”) is required for the Project, prepared pursuant to Public Resources Code Section 21080.4; • Notices of any scoping meeting held pursuant to Public Resources Code Section 21083.9; • Notices of preparation of an EIR or a negative declaration for the Project, prepared pursuant to Public Resources Code Section 21092; • Notices of availability of an EIR or a negative declaration for the Project, prepared pursuant to Public Resources Code Section 21152 and Section 15087 of Title 14 of the California Code of Regulations; • Notices of approval and/or determination to carry out the Project, prepared pursuant to Public Resources Code Section 21152 or any other provision of law; • Notices of any addenda prepared to a previously certified or approved EIR; • Notices of approval or certification of any EIR or negative declaration, prepared pursuant to Public Resources Code Section 21152 or any other provision of law; • Notices of determination that the Project is exempt from CEQA, prepared pursuant to Public Resources Code section 21152 or any other provision of law; • Notice of any Final EIR prepared pursuant to CEQA; • Notice of determination, prepared pursuant to Public Resources Code Section 21108 or Section 21152.
Kern Audubon Society November 17, 2022	<p>The commenter recommends the following:</p> <ul style="list-style-type: none"> • Complete biological site evaluation performed by qualified biological consultants using the appropriate survey protocols as established by both state and federal wildlife agencies; • Perform all biological surveys during the appropriate time of year to discern species presence including the desert tortoise, Mohave ground squirrel, and Swainson’s hawk (SWHA). Survey the area for roosting birds in the surrounding Joshua trees, used by SWHA and other birds; • Evaluate Project’s potential to subsidize and support local raven populations that depredate the endangered desert tortoises of the Mojave Desert region.
Robert Stonehill November 3, 2022	The commenter requests information regarding property placement in relation to the project boundary. The commentor also requests the location of the proposed solar array.
Alvaro Gutierrez November 12, 2022	The commenter expresses concern over the proximity of project boundary in relation to property. The commenter cites biological, noise, hazards, and other environmental impacts as reasons for concern. The commenter also expresses concern over environmental risks.

Availability of the Draft EIR

This Draft EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with Section 15087 of the *CEQA Guidelines*. This Draft EIR and the full administrative record for the project, including

all studies, is available for review during normal business hours Monday through Friday at the Kern County Planning Department, located at:

Kern County Planning and Natural Resources Department

2700 “M” Street, Suite 100

Bakersfield, CA 93301-2370

Phone: (661) 862-8600, Fax: (661) 862-8601

This EIR is also available on the Kern County Planning and Natural Resources Department website: <https://kernplanning.com/planning/environmental-documents/>.

Additionally, this EIR is available at the following libraries:

Kern County Library/Beale

Local History Room

701 Truxtun Avenue

Bakersfield, CA 93301

Kern County Library

Rosamond Branch

3611 Rosamond Boulevard

Rosamond, CA 93560

2.5 Format and Content

This EIR addresses the potential environmental effects of the project and was prepared following input from the public and responsible and affected agencies, and through the EIR scoping process, as discussed previously. The contents of this EIR were based on the findings in the IS/NOP, and public and agency input. Based on the findings of the IS/NOP, a determination was made that an EIR was required to evaluate potentially significant environmental effects on the following resources:

- Aesthetics;
- Agriculture and Forestry Resources;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Energy;
- Geology and Soils;
- Greenhouse Gas Emissions;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality
- Land Use and Planning;
- Mineral Resources
- Noise;
- Population and Housing;
- Public Services;
- Recreation
- Transportation and Traffic;
- Tribal Cultural Resources;
- Utilities and Service Systems; and
- Wildfires.

Required EIR Content and Organization

This EIR includes all of the sections required by CEQA. **Table 2-2, *Required EIR Contents***, contains a list of sections required under CEQA, along with a reference to the chapter in which they can be found in this EIR document.

Table 2-2: Required EIR Contents

Requirement (CEQA Guidelines Section)	Location in EIR
Table of contents (Section 15122)	Table of Contents
Summary (Section 15123)	Chapter 1
Introduction (Section 15132)	Chapter 2
Project description (Section 15124)	Chapter 3
Significant environmental impacts (Section 15126.2)	Sections 4.1–4.20
Environmental setting (Section 15125)	Sections 4.1–4.20
Mitigation measures (Section 15126.4)	Sections 4.1–4.20
Cumulative impacts (Section 15130)	Sections 4.1–4.20
Growth-inducing impacts (Section 15126.2)	Chapter 5
Effects found not to be significant (Section 15128)	Chapters 1, 5; Sections 4.1–4.20
Significant irreversible changes (Section 15126.2)	Chapter 5
Unavoidable significant environmental impacts (Section 15126.2)	Chapter 5
Alternatives to the project (Section 15126.6)	Chapter 6
Organizations and persons consulted	Chapter 8
List of preparers (Section 15129)	Chapter 9
Bibliography (Section 15129)	Chapter 10
Acronyms (Section 15132)	Chapter 11

The content and organization of this EIR are designed to meet the requirements of CEQA and the *CEQA Guidelines*, as well as to present issues, analysis, mitigation, and other information in a logical and understandable way. This EIR is organized into the following sections:

- Chapter 1, *Executive Summary*, provides a summary of the project description and a summary of the environmental impacts and mitigation measures.
- Chapter 2, *Introduction*, provides CEQA compliance information, an overview of the decision-making process, organization of the EIR, and a responsible and trustee agency list.
- Chapter 3, *Project Description*, provides a description of the location, characteristics, and objectives of the projects, and the relationship of the projects to other plans and policies associated with the project.
- Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, contains a detailed environmental analysis of the existing conditions, projects impacts, mitigation measures, and cumulative impacts.
- Chapter 5, *Consequences of Project Implementation*, presents an analysis of the project's cumulative and growth-inducing impacts and other CEQA requirements, including significant and unavoidable impacts and irreversible commitment of resources.
- Chapter 6, *Alternatives*, describes a reasonable range of alternatives to the projects that could reduce the significant environmental effects that cannot be avoided.
- Chapter 7, *Responses to Comments*, is reserved for responses to comments on the EIR.

- Chapter 8, *Organizations and Persons Consulted*, lists the organizations and persons contacted during preparation of this EIR.
- Chapter 9, *Preparers*, identifies persons involved in the preparation of the EIR.
- Chapter 10, *Bibliography*, identifies reference sources for the EIR.
- Chapter 11, *Acronyms*, identifies commonly used terms in the EIR.
- *Appendices* provide information and technical studies that support the environmental analysis contained within the EIR.

The analysis of each environmental category in Chapter 4 is organized as follows:

- “Introduction” provides a brief overview on the purpose of the section being analyzed with regards to the project.
- “Environmental Setting” describes the physical conditions that exist at this time and that may influence or affect the topic being analyzed.
- “Regulatory Setting” provides State and federal laws and the Kern County General Plan goals, policies, and implementation measures that apply to the topic being analyzed.
- “Impacts and Mitigation Measures” discusses the impacts of the projects in each category, presents the determination of the level of significance, and provides a discussion of feasible mitigation measures to reduce any impacts.
- “Cumulative Setting, Impacts, and Mitigation Measures” provides a discussion of the cumulative geographic area for each resource area, and analysis of whether the project would contribute to a significant cumulative impact, and if so, identifies cumulative mitigation measures.

2.6 Responsible and Trustee Agencies

Projects or actions undertaken by the lead agency, in this case the Kern County Planning and Natural Resources Department, may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such agencies are referred to as “responsible agencies” and “trustee agencies.” Pursuant to Sections 15381 and 15386 of the *CEQA Guidelines*, as amended, responsible agencies and trustee agencies are defined as follows:

- A “responsible agency” is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term “responsible agency” includes all public agencies other than the lead agency that have discretionary approval power over the project (Section 15381).
- A “trustee agency” is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (Section 15386).

The various public, private, and political agencies and jurisdictions with a particular interest in the project may include, but are not limited to, the following:

Federal Agencies

- United States Fish and Wildlife Service (USFWS)
- United States Environmental Protection Agency (EPA)

- Federal Aviation Administration (FAA)
- United States Army Corps of Engineers (USACOE)
- United States Air Force – Edwards Air Force Base (EAFB)

State Agencies

- Governor’s Office of Planning and Research (OPR)
- California Air Resources Board (CARB)
- California Energy Commission (CEC)
- California Public Utilities Commission (CPUC)
- California Department of Fish and Wildlife (CDFW)
- Lahontan Regional Water Quality Control Board (RWQCB)
- California Department of Transportation (Caltrans), District 9
- California Native American Heritage Commission (NAHC)

Regional Local Agencies

- Eastern Kern County Air Pollution Control District (EKAPCD)
- Kern Council of Governments (KCOG)

Kern County

- Planning and Natural Resources Department
- Public Works Department
- Public Health Services Department, Environmental Health Services Division
- Fire Department (KCFD)
- Sheriff’s Department (KCSO)

Other additional permits or approvals may be required for the project.

2.7 Incorporation by Reference

In accordance with Section 15150 of the *CEQA Guidelines* to reduce the size of the report, the following documents are hereby incorporated by reference into this EIR and are available for public review at the Kern County Planning and Natural Resources Department. A brief synopsis of the scope and content of these documents is provided below.

Kern County General Plan

The Kern County General Plan is a policy document with land use maps and related information that are designed to give long-range guidance to those County officials making decisions affecting the growth and resources of the unincorporated Kern County jurisdiction, excluding the metropolitan Bakersfield planning area. This document, adopted on June 14, 2004, and last

amended on September 22, 2009, helps ensure that day-to-day decisions conform to the long-range program designed to protect and further the public interest as related to Kern County's growth and development and mitigate environmental impacts. The Kern County General Plan also serves as a guide to the private sector of the economy in relating its development initiatives to the public plans, objectives, and policies of the County.

Kern County Zoning Ordinance

According to the Kern County Zoning Ordinance Chapter 19.02.020, Purposes, Title 19 was adopted to promote and protect the public health, safety, and welfare through the orderly regulation of land uses throughout the unincorporated area of Kern County. Further, the purposes of this title are to:

- Provide the economic and social advantages resulting from an orderly planned use of land resources;
- Encourage and guide development consistent with the Kern County General Plan;
- Divide Kern County into zoning districts of a number, size, and location deemed necessary to carry out the purposes of the Kern County General Plan and this title;
- Regulate the size and use of lots, yards, and other open spaces;
- Regulate the use, location, height, bulk, and size of buildings and structures;
- Regulate the intensity of land use;
- Regulate the density of population in residential areas;
- Establish requirements for off-street parking;
- Regulate signs and billboards; and
- Provide for the enforcement of the regulations of Chapter 19.02.

Regional Transportation Plan

The latest Regional Transportation Plan (RTP) was prepared by the Kern Council of Governments (COG) and was adopted on August 16, 2018. The 2018 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state, and federal agencies. California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, calls for the Kern RTP to include a Sustainable Communities Strategy (SCS) that reduces greenhouse gas (GHG) emissions from passenger vehicles and light-duty trucks by 5 percent per capita by 2020 and 10 percent per capita by 2035 as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA) ensuring consistency between low income housing need and transportation planning.

Kern County Airport Land Use Compatibility Plan

The Kern County Airport Land Use Compatibility Plan (ALUCP) was originally adopted in 1996 and has since been amended to comply with Aeronautics Law, Public Utilities Code (Chapter 4, Article 3.5) regarding public airports and surrounding land use planning. As required by that law, proposals for public or private land use developments that occur within defined airport influence areas are subject to compatibility review. The principal airport land use compatibility concerns addressed by the plan are: (1) exposure to aircraft noise, (2) land use safety with respect to both people and property on the ground and the occupants of aircraft, (3) protection of airport air space, and (4) general concerns related to aircraft overflights.

The ALUCP identifies policies and compatibility criteria for influence zones or planning area boundaries. The ALUCP maps and labels these zones as A, B1, B2, C, D and E, ranging from the most restrictive (A – airport property-runway protection zone) to the least restrictive (D – disclosure to property owners only) while the E zone is intended to address special land use development. As required by law, the following affected cities have adopted the ALUCP for their respective airports: Bakersfield, California City, Delano, Shafter, Taft, Tehachapi, and Wasco.

Within the ALUCP, Section 4.20, *Joint Service Restricted R-2508 Complex*, notes the R-2508 Complex was designated to minimize flight hazards to non-military aircraft by military aircraft. Access to this airspace is greatly limited to civilian aircraft and only after obtaining prior permission. The R-2508 complex also contains internal complexes and operating areas and is the hub of a network of other major airspace ranges located in the southwestern United States. The area of R-2508 covers portions of Kern, Inyo, Mono, Los Angeles, San Bernardino and Tulare Counties and reaches into part of the State of Nevada. Over 3,200 square miles of eastern Kern County are within the complex. Within the R-2508 complex are also other designated restricted airspaces known as R-2505, R-2506, and R-2515 which are the immediate and adjacent airspace to China Lake NAWS and Edwards AFB.

2.8 Sources

This EIR is dependent upon information from many sources. Some sources are studies or reports that have been prepared specifically for the project. Other sources provide background information related to one or more issue areas that are discussed in this document. The sources and references used in the preparation of this EIR are listed in **Chapter 10, Bibliography**, and are available for review during normal business hours at the Kern County Planning and Natural Resources Department, located at 2700 “M” Street, Suite 100, Bakersfield, CA 93301-2370. This EIR is also available on the Kern County Planning and Natural Resources Department website: <https://kernplanning.com/planning/environmental-documents/>.

Chapter 3

Project Description

3.1 Introduction

This Environmental Impact Report (EIR) has been prepared by Kern County (County), the CEQA Lead Agency, to identify and evaluate potential environmental impacts associated with implementation of the Mojave Micro Mill Project (GPA No. 3, Map No. 213; ZCC No. 62, Map No. 213; CUP No. 71, Map No. 213; CUP No. 72, Map No. 213; PD Plan No. 3, Map No. 213; ZV No. 24, Map No. 213; ZV No. 25, Map No. 213) (proposed project) proposed by PSGM3 Holdings Corp. (Pacific Steel Group) (project proponent). The project would be located on approximately 174 acres across two (2) privately-owned parcels (APNs: 431-010-02 and 431-030-02). The project proposes to develop and operate a micro mill facility with associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes.

Development would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. The proposed project would include an approximate 63-acre accessory solar array on 174 total acres of privately owned land included in the proposed project site. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and 7 ancillary structures.

3.2 Project Location

The project site is located on approximately 174 acres, comprised of two (2) privately owned parcels, in the southern unincorporated area of Kern County, California. The project site is approximately five miles northeast from the unincorporated community of Rosamond and approximately eight miles southeast from the unincorporated community of Mojave in unincorporated Kern County, California (refer to **Figure 3-1: Regional Vicinity Map** and **Figure 3-2: Vicinity Map**). The project site is situated at the southeast corner of the Sopp Road and Sierra Highway intersection, approximately 1.25 miles southeast of the State Route 14 (SR-14) and Backus Road exit. Regional access to the project site is provided by SR-14, whereas local access is provided by Dawn Road two miles south of the project site or Backus Road one mile north of the project site, from Sierra Highway to the east of SR-14. **Figure 3-1** illustrates the regional location and surrounding vicinity of the proposed project and **Figure 3-2** depicts the project site boundary. Land uses in the region include a mix of undeveloped land, agriculture, residential, recreational and public facilities. Development in the area surrounding the project sites includes mixed industrial, Edwards Air Force Base, undisturbed desert land, and Union Pacific Railroad.

The primary entrance to the project site would be located off of Sopp Road, which would lead to on-site parking stalls for visitors and employees. The proposed micro mill would be located within APN 431-010-02 whereas the incidental solar array would encompass parcel APN 431-030-02 and part of parcel 431-010-02. The entire project site is currently designated by the Kern County General Plan as 8.5 (Resource Management – min. 20 acres) and the existing zoning classification for the project site is A-1 (Limited Agriculture).

Table 3-1: *Project Assessor Parcel Numbers, Existing Map Codes, Existing Zoning, and Acreage* below identifies the individual APN, acreage, and existing zoning designation. Additionally, see **Figure 3-3:** *Existing General Plan Designations*, **Figure 3-4:** *Proposed General Plan Designations*, **Figure 3-5:** *Existing Zoning Classifications*, and **Figure 3-6:** *Proposed Zoning Classifications*.

Table 3-1: Project Assessor Parcel Numbers, Existing Map Codes, Existing Zoning, and Acreage

APN	Existing Kern County General Plan Map Code Designation	Proposed Kern County General Plan Map Code Designation	Existing Zone District	Proposed Zone District	Acres
431-010-02	8.5	7.3	A-1	M-3 PD	154
431-030-02	8.5	7.3	A-1	M-3 PD	20
<i>Approximate Proposed Project Total Acreage</i>					<i>174</i>

General Plan Map Code:

8.5= Resource Management – min. 20 acres;

7.3 = Heavy Industrial

Zone Designation:

A-1 = Limited Agriculture;

M-3 PD = Heavy Industrial – Precise Development Combining

3.3 Applicant Submitted Project Objectives

State CEQA Guidelines Section 15124(b) requires that a project description include a clearly written statement of objectives. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits. The following are the applicant submitted project objectives for the proposed project:

- Provide an environmentally responsible, reliable, long-term method for disposing of junk cars and other iron and steel scrap materials.
- Provide a reliable, high quality and price-competitive supply of concrete-reinforcing rebar to serve California's growing demand for rebar.
- Reintroduce the production of reinforcing steel to California, which is currently being imported from both domestic and international sources, with the objective to reduce emissions through the adoption of cutting-edge green technologies that are revolutionizing the steel industry.
- Develop an innovative industrial use on land with ready access to infrastructure and a major transportation corridor.
- Develop a visually appealing industrial project that is consistent with the provisions of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
- Promote land use compatibility with adjacent industrial uses by developing a compatible industrial project with a secure perimeter.
- Positively contribute to the local economy through new capital investment, the creation of new employment opportunities, expansion of the tax base, economic growth and development.

- Site an industrial project in a location that minimizes conflicts with residential, conservation, and agricultural land uses.
- Incorporate clean energy and emission-reduction technologies such as on-site, accessory solar energy generation and carbon capture and utilization (CCU).

3.4 Environmental Setting

The project site is situated in the southeastern corner of the desert region in unincorporated Kern County. Kern County is California's third largest County in land area and encompasses approximately 8,161 square miles. The County's geography includes, among other features, mountainous areas, agricultural lands throughout the valley floor, and deserts. Bakersfield is the largest city in Kern County and has a current estimated population of 397,392 residents (California Department of Finance [DOF]). The County's current estimated population is 914,193 residents. The project site is approximately 12 miles southeast of the Tehachapi Mountain Range and is approximately 22 miles northeast of the Central Transverse Range. The proposed project and surrounding land are in a relatively flat-lying plain and exhibit little topographic variation.

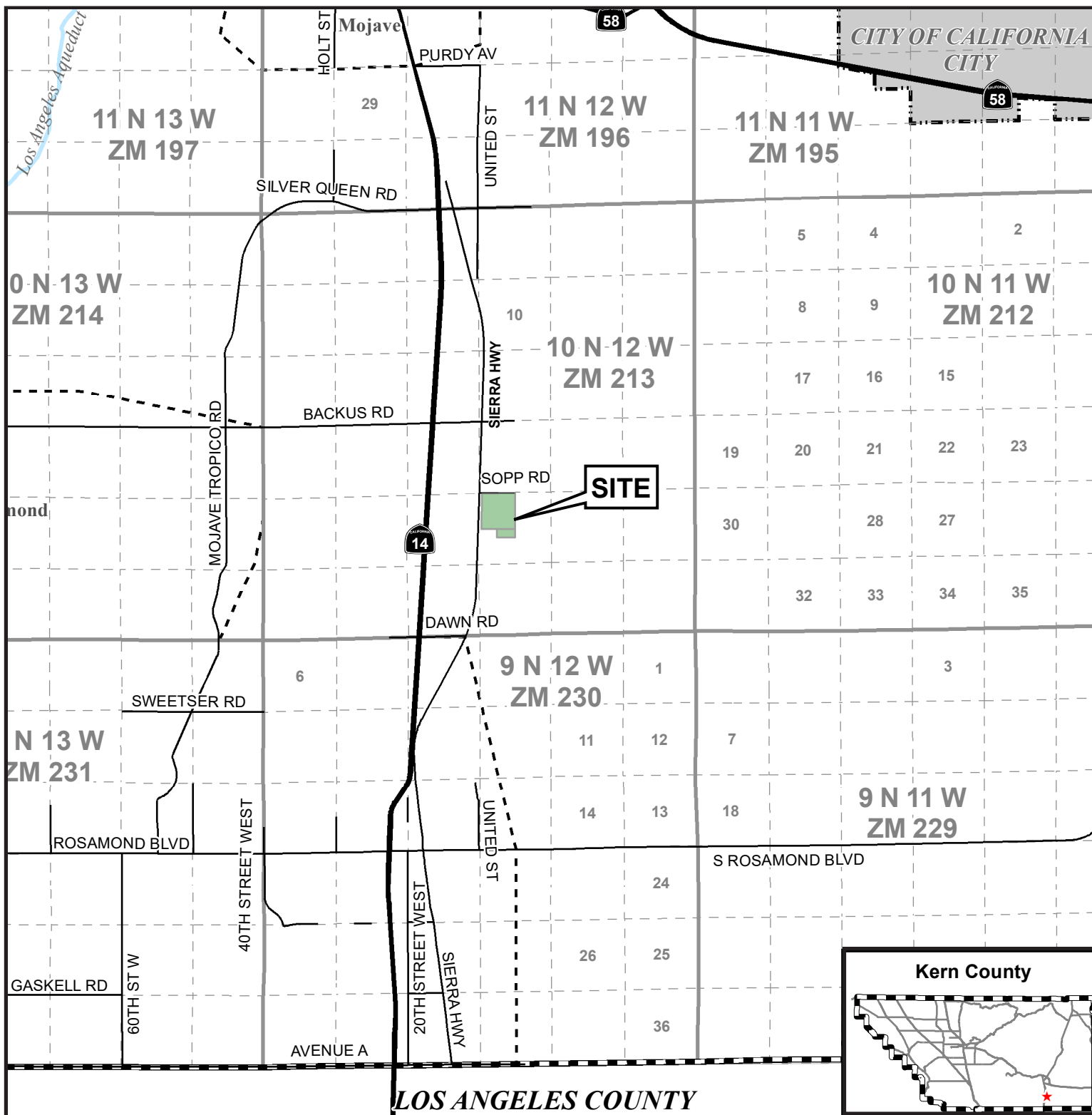
The elevation of the project site ranges between approximately 2,554 and 2,564 feet above mean sea level (AMSL). The project site is relatively flat with a gentle southeast-facing slope. Although the project site is predominantly vacant land, the northwest corner was previously used as a seasonal farming operation with outdoor agricultural storage. An approximate 2.25-acre portion of the project site at the northern boundary had historically been used for unpermitted storage by the previous property owner, however, the project site is currently vacant and previous code violations on the project site have been abated.

As shown in **Figure 3-7: Flood Zones Map**, the project site is designated as Zone "X" based upon the Flood Insurance Rate Map (FIRM) overlay as issued by the Federal Emergency Management Agency (FEMA), which indicates the project site is not in an area of flood hazard. The nearest flood hazards in the area are shown to be approximately one mile north and one mile south of the project site. The project site is not identified as a wetland area on the National Wetlands Inventory.

There are no identified State-designated Alquist-Priolo Earthquake Fault Zones on the project site and the nearest active fault is the Garlock Fault, which is located approximately 14 miles to the northwest of the project site.

Although the project site is located within the historical boundaries of Agricultural Preserve Number 24, the project site is not included in the Agriculture Preserve, nor is it designated as Prime Farmland and Unique Farmland by the Department of Conservation Farmland Mapping and Monitoring Program (FMMP). Further, there are no existing or active agricultural land use contracts or Williamson Act Contracts on the project site. The project site is not located within any critical habitat units for federally-listed species or any other designated conservation area.

The project site is not designated as a mineral resource zone. A portion of the mineral rights within the project site are owned separate from the surface rights. Based on a review of records maintained by the California Department of Conservation/California Department of Conservation Geologic Energy Management Division (CalGEM), there are no oil or gas wells identified on site.



Mojave Micro Mill Project

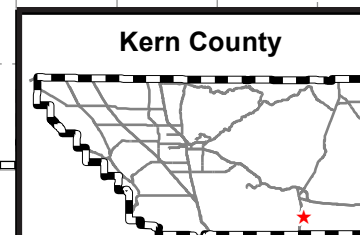
GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-1: Regional Map

PSGM3 Holdings Corp (Pacific Steel Group)

LEGEND:

- Site
- NAMED ROAD
- STATE HWY
- Arterials
- Kern County Boundary
- Township/Range
- Sections
- Water Courses
- City Limits
- Unincorporated Cities

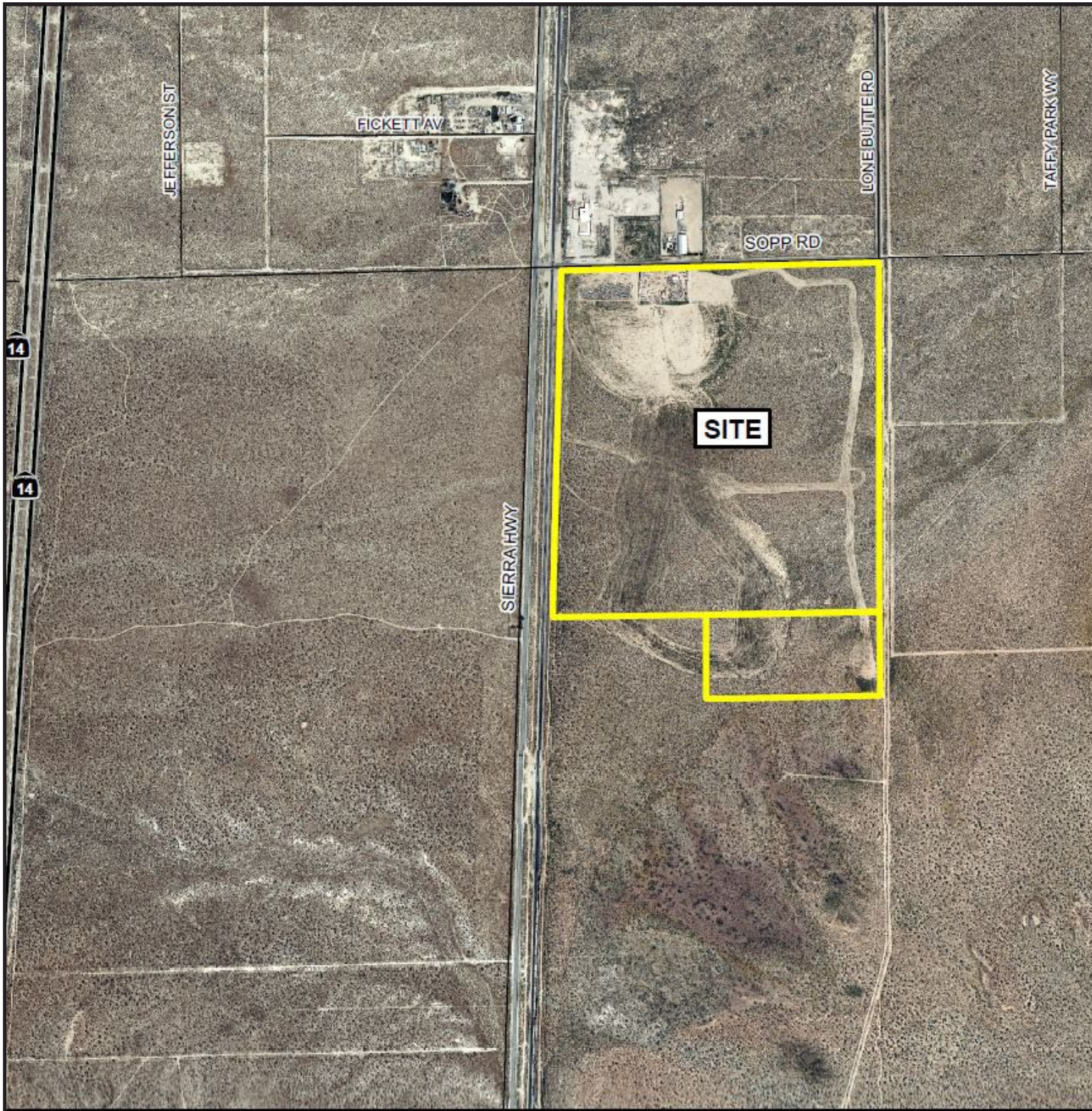


APN: 431-010-02 & 431-030-02
 Sec. 27 - T10N/R12W



**Kern County
 Planning & Natural
 Resources Department**





Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 3-2: Vicinity Map

PSGM3 Holdings Corp (Pacific Steel Group)

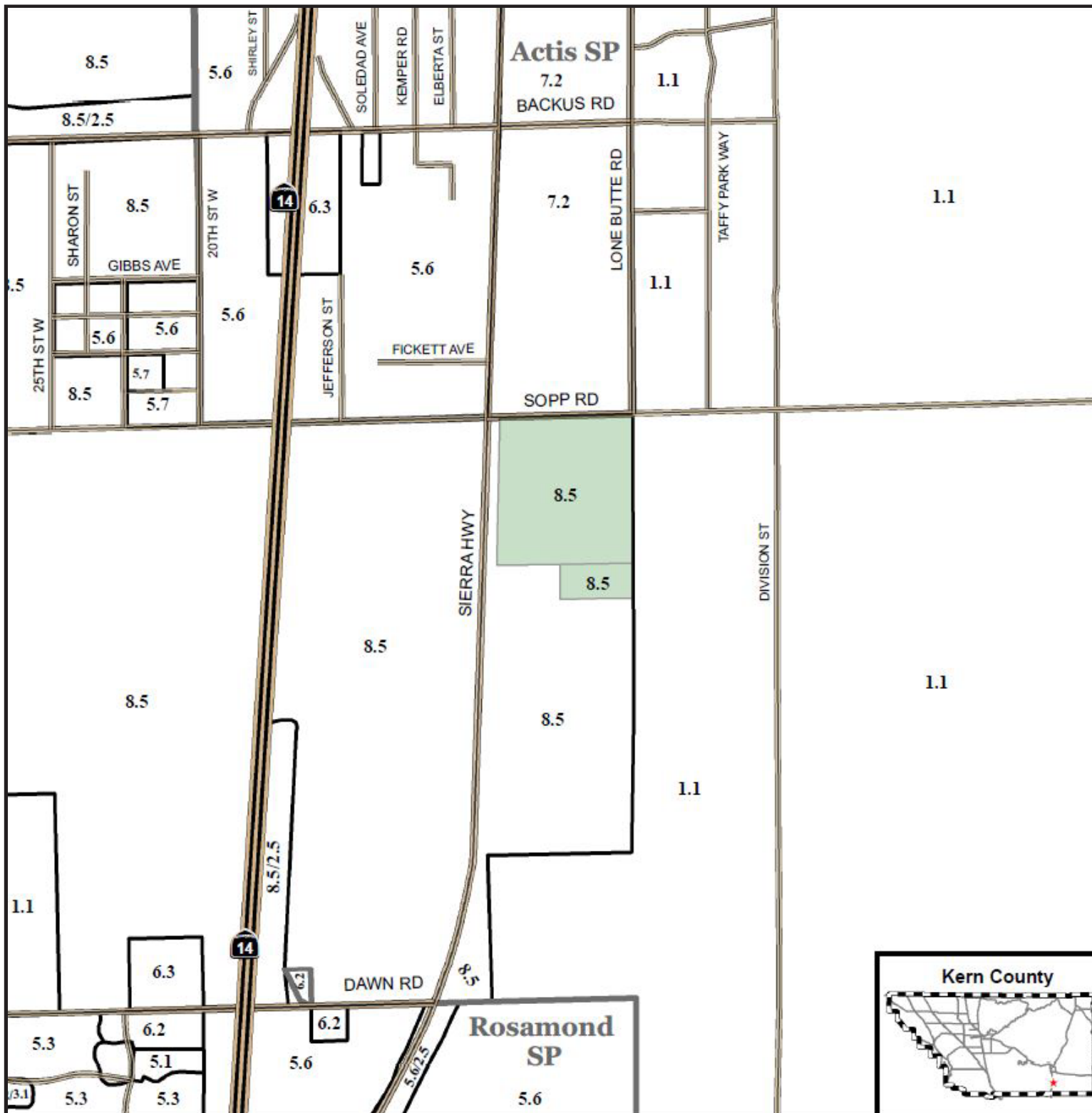
-  Site
-  STATE HWY
-  Arterials
-  Collectors
-  Dirt Roads

APN: 431-010-02 & 431-030-02
Sec. 27 - T10N/R12W



Kern County
Planning & Natural
Resources Department





Mojave Micro Mill Project

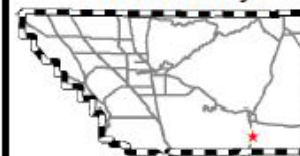
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 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-3: Existing General Plan Designations

PSGM3 Holdings Corp (Pacific Steel Group)

- Site**
- Specific Plans**
- Actis
- Rosamond
- General Plan Boundaries**
- 1.1 - STATE AND FEDERAL LAND
- 4.1 - ACCEPTED COUNTY PLAN AREAS
- 4.2 - INTERIM RURAL COMMUNITY PLAN
- 5.6 - MINIMUM 2.5 GROSS ACRES/UNIT
- 5.7 - MINIMUM 5 GROSS ACRES/UNIT
- 6.3 - HIGHWAY COMMERCIAL
- 8.5 - RESOURCE MANAGEMENT (MIN. 20- OR 80-ACRE PARCEL SIZE)
- SPECIFIC PLAN DESIGNATIONS**
- 3.1 - PARKS AND RECREATION AREAS
- 3.2/3.1 - EDUCATIONAL FACILITIES
- 5.1 - MAXIMUM 29 UNITS/NET ACRE (1502 SQ. FT. SITE AREA/UNIT)
- 5.3 - MAXIMUM 10 UNITS/NET ACRE (4366 SQ. FT. SITE AREA/UNIT)
- 5.6 - MINIMUM 2.5 GROSS ACRES/UNIT
- 6.2 - GENERAL COMMERCIAL
- 6.3 - 6.3 HIGHWAY COMMERCIAL
- 7.2 - SERVICE INDUSTRIAL
- 2.5 - Flood Hazard

Kern County

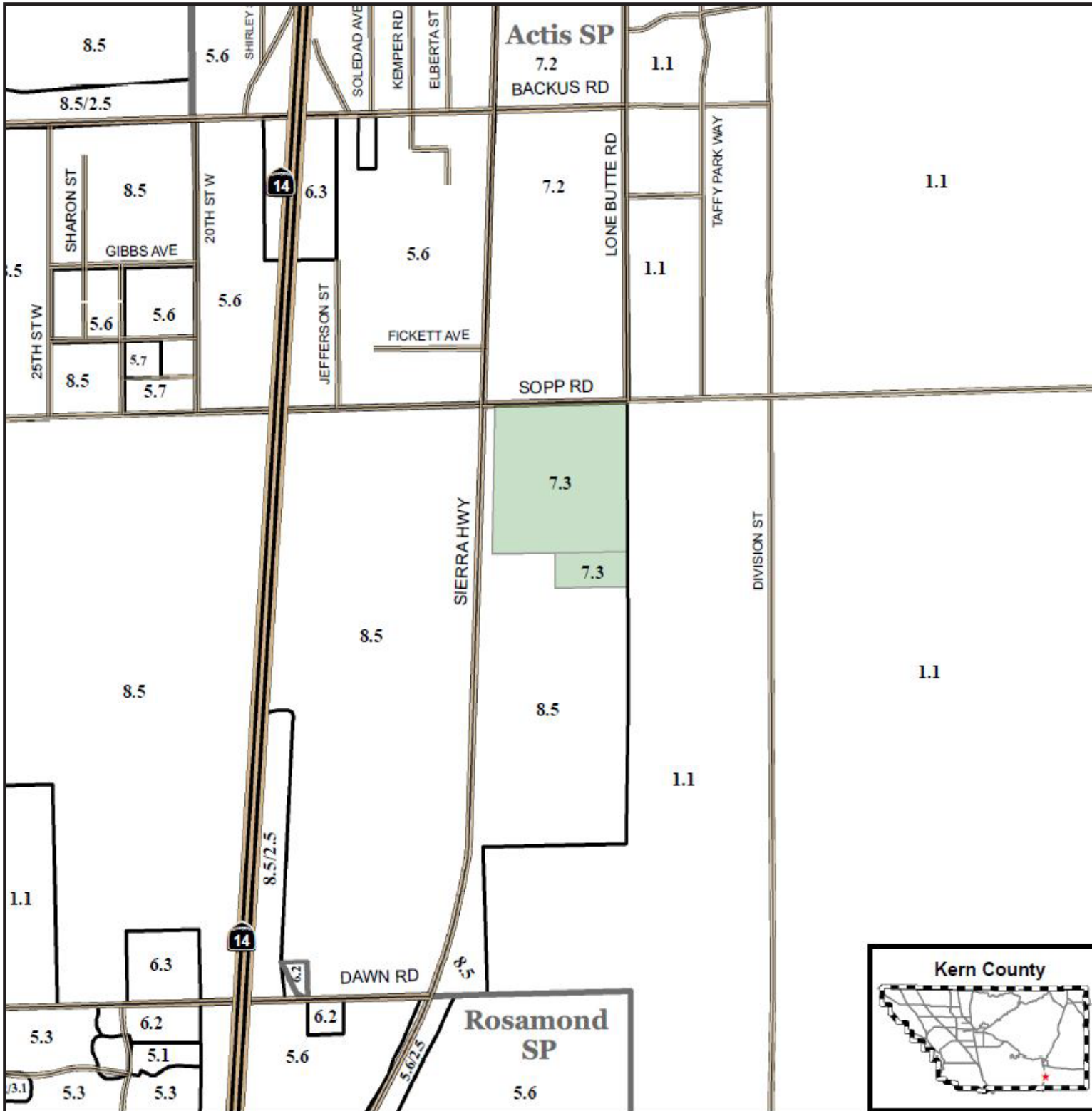


APN: 431-010-02 & 431-030-02
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Kern County
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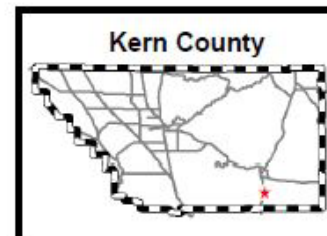
Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-4: Proposed General Plan Designations

PSGM3 Holdings Corp (Pacific Steel Group)

- Site**
- Specific Plans**
- Actis
- Rosamond
- General Plan Boundaries**
- 1.1 - STATE AND FEDERAL LAND
- 5.6 - MINIMUM 2.5 GROSS ACRES/UNIT
- 5.7 - MINIMUM 5 GROSS ACRES/UNIT
- 6.3 - HIGHWAY COMMERCIAL
- 7.3 - HEAVY INDUSTRIAL
- 8.5 - RESOURCE MANAGEMENT (MIN. 20- OR 80-ACRE PARCEL SIZE)
- SPECIFIC PLAN DESIGNATIONS**
- 3.1 - PARKS AND RECREATION
- 3.2/3.1 - EDUCATIONAL FACILITIES
- 5.1 - MAXIMUM 29 UNITS/NET ACRE (1502 SQ. FT. SITE AREA/UNIT)
- 5.3 - MAXIMUM 10 UNITS/NET ACRE (4356 SQ. FT. SITE AREA/UNIT)
- 5.6 - MINIMUM 2.5 GROSS ACRES/UNIT
- 6.2 - GENERAL COMMERCIAL
- 6.3 - 6.3 HIGHWAY COMMERCIAL
- 7.2 - SERVICE INDUSTRIAL
- 2.5 - Flood Hazard

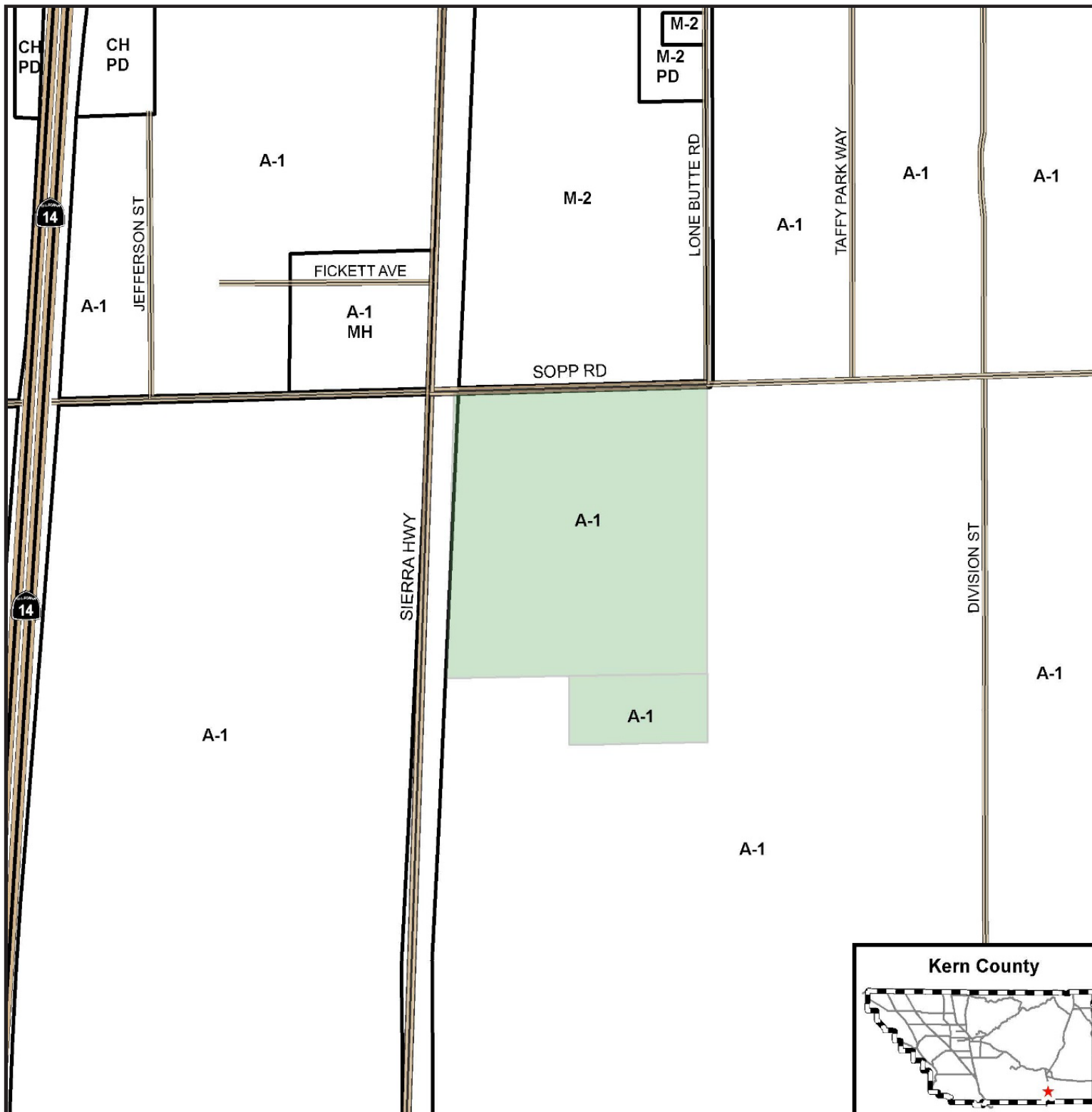


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Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-5: Existing Zoning Classifications

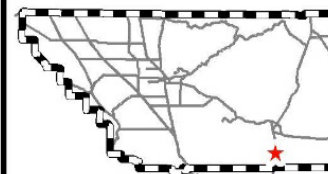
PSGM3 Holdings Corp (Pacific Steel Group)

- Site
- STATE HWY
- Arterials
- Collectors
- Dirt Roads

KERN COUNTY ZONING DESIGNATIONS

- A-1 - Limited Agriculture
- CH - Highway Commercial
- M-2 - Medium Industrial
- MH - Mobilehome Combining
- PD - Precise Development Combining

Kern County



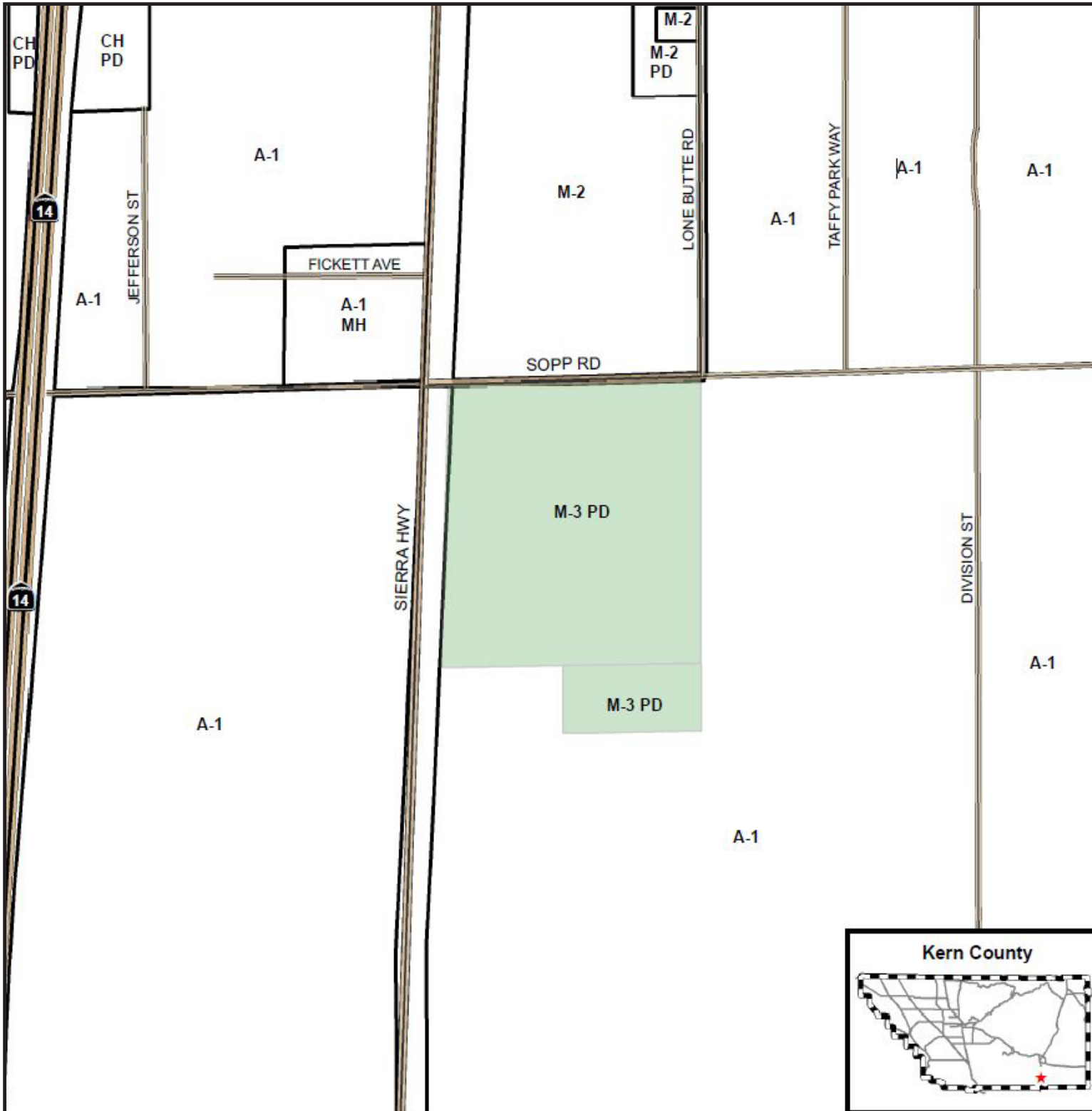
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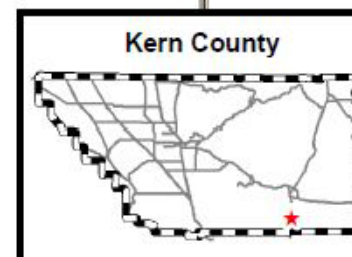
Mojave Micro Mill Project

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 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-6: Proposed Zoning Classifications

PSGM3 Holdings Corp (Pacific Steel Group)

- Site
- STATE HWY
- Arterials
- Collectors
- Dirt Roads
- KERN COUNTY ZONING DESIGNATIONS**
- A-1 - Limited Agriculture
 - CH - Highway Commercial
 - M-2 - Medium Industrial
 - MH - Mobilehome Combining
 - PD - Precise Development Combining
 - M-3 - Heavy Industrial



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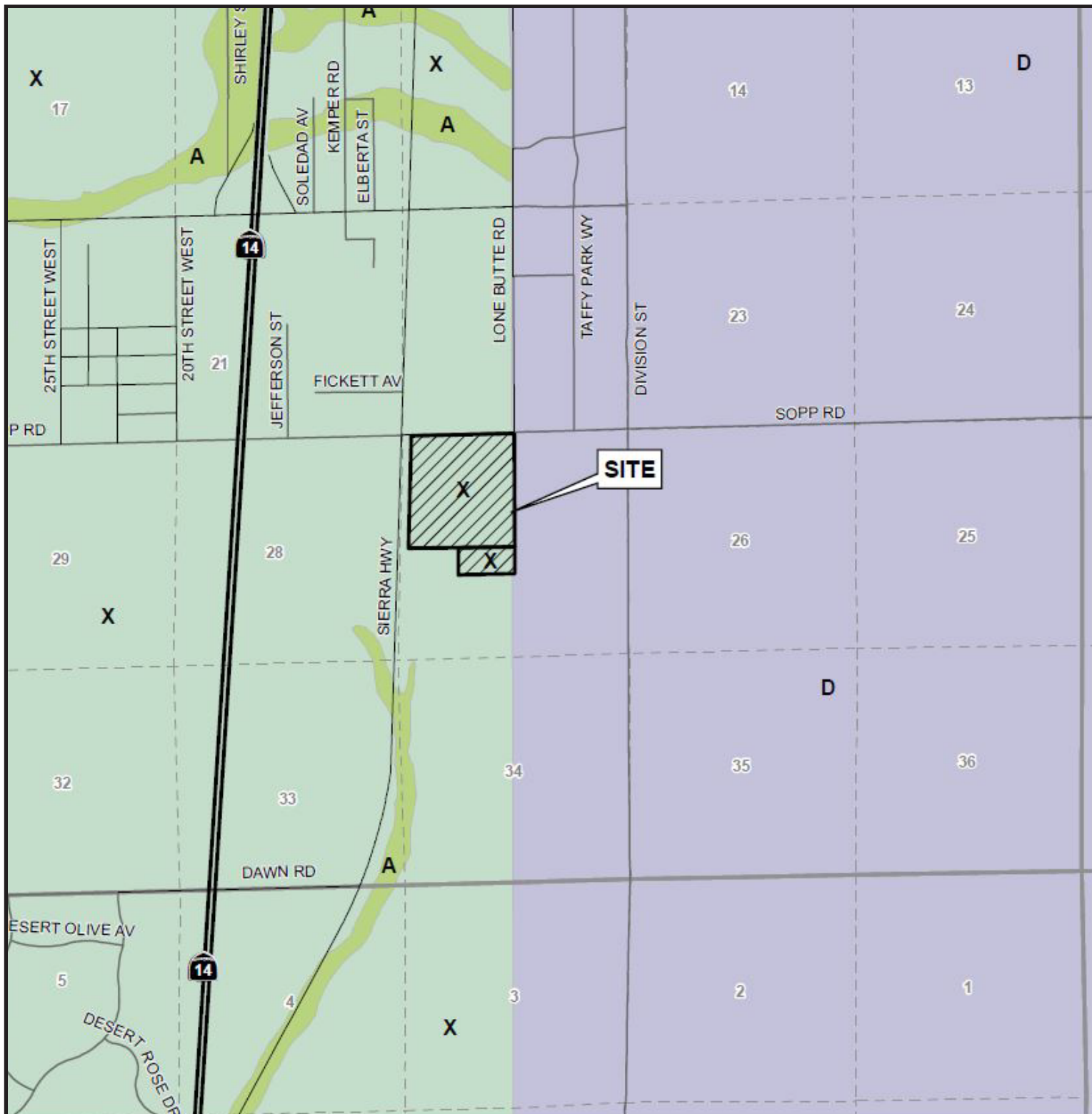


Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-7: Flood Zones Map

PSGM3 Holdings Corp (Pacific Steel Group)



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Table 3-2: Existing Project Site and Surrounding Properties, Existing Land Use, General Plan Map Code Designations, and Zoning, identifies the existing land use, the existing general plan land use designation, and the existing zoning for the project site. Additionally, such conditions are described for adjacent lands to the north, east, south, and west of the project site.

Table 3-2: Existing Project Site and Surrounding Properties, Existing Land Use, General Plan Map Code Designations, and Zoning

Location	Existing Land Use	Existing Map Code Designation	Existing Zoning Classification
Project Site	Agriculture – storage and seasonal	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)
North	Mixed Industrial	4.2/7.2 (Interim Rural Community Plan/Service Industrial)	M-2 (Medium Industrial)
East	Edwards Air Force Base; Edwards Sanborn Solar Project	1.1 (State and Federal Land)	A-1 (Limited Agriculture)
South	Vacant Agriculture Land	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)
West	Vacant Agriculture Land; Sierra Highway; Union Pacific Railroad	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)

SOURCE: Kern County, 2023

Land uses immediately surrounding the project site are varied but sparsely developed. To the west, land uses include the Union Pacific Railway and Sierra Highway, followed by SR-14 approximately 0.75 miles away; the nearest residence to the site is approximately 1000 feet northwest and across Sierra Highway, with the next cluster of residential uses located approximately 1 mile west beyond SR-14. To the east, the fully operational Edwards Solar Project sits just within the boundaries of Edwards Airforce Base (EAFB) adjacent to the site, whereas the Base itself located approximately 14 miles from the proposed project site. To the south, there are no discernable land uses, however, the unincorporated community of Rosamond is about five miles southwest. Immediately north, land is generally characterized as dispersed industrial, with medium-industrial uses including the Shemshad Food Products, Inc. for warehouse storage and residual outdoor storage for the former Desert Block Company manufacturing and distribution facility. Northwest of the site across Sierra Highway and the United Pacific Railroad are sparse residential uses, with the nearest being approximately one-third (1/3) of a mile from the project site. Approximately one mile further to the northwest of the proposed project, between Sierra Highway and SR 14, is a cluster of residences located in the unincorporated community of Actis. The remainder of the surrounding areas are sparsely developed with the vast majority of land being vacant.

The nearest airports are the Rosamond Sky Park located approximately 5.5 miles southwest of the project site and the Mojave Air and Space Port located approximately 8 miles north of the project site, however the proposed project is not located within an Airport Sphere of Influence (SOI) of any existing airport, per the Kern County Airport Land Use Compatibility Plan (ALUCP).

The proposed project would be served by the Kern County Sheriff's Office (KCSO) for law enforcement and public safety, Kern County Fire Department (KCFD) for fire protection, and Kern County Medical Emergency Service for emergency medical and rescue services. The nearest KCSO substation and KCFD fire station (Station No. 15) that would serve the proposed project are both located in the community of Rosamond, approximately 5.5 miles southwest of the project site, specifically at 3179 35th Street West and 3219 35th Street West, respectively. The nearest hospitals are the Adventist Health Tehachapi Valley Hospital at 1100 Magellan Drive and the Dignity Health Hospital at 707 West Valley Boulevard in the City of Tehachapi, approximately 22 miles northwest of the project site. The nearest schools are approximately 5 miles south of the project site, which are Rosamond High School at 2925 Rosamond Boulevard and Abraham Lincoln Alternative school at 2601 Rosamond Boulevard.

3.5 Land Use and Zoning

3.5.1 Kern County General Plan

The project site is located within unincorporated Kern County and within the administrative boundaries of the Kern County General Plan. Within the Kern County General Plan, the project site is designated Map Code 8.5 (Resources Management). The existing Kern County General Plan designations are shown in **Figure 3-3**. The proposed project would require a General Plan Amendment to change the project site's Map Code Designation to 7.3 (Heavy Industrial), as shown in **Figure 3-4**. The proposed land use designation 7.3 (Heavy Industrial) would be compatible with the proposed use on the project site.

3.5.2 Kern County Zoning Ordinance

The zoning districts are defined in Title 19 of the Zoning Ordinance of Kern County. As shown in **Figure 3-5**, the project site has an existing zone classification of A-1 (Limited Agriculture). The proposed project would include a zone classification change to the M-3 PD (Heavy Industrial – Precise Development Combining) District, as shown in **Figure 3-6**.

The proposed project would also require a Precise Development Plan that would demonstrate conformity with the proposed Precise Development Combining zoning. The proposed project also includes a Zone Variance for a reduction in the number of standard parking stalls required on site from 993 to 306 and an additional Zone Variance to allow for a structure height in excess of the maximum permitted height of 150 feet in the M-3 (Heavy Industrial) District.

Per sections 19.08.085 & 19.06.920 of the Zoning Ordinance, a Conditional Use Permit (CUP) is required for the implementation of a Carbon Capture and Utilization system (CCU).

3.6 Proposed Project

As previously noted, the proposed project would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. Additionally, the proposed project would include a 63-acre accessory solar array. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and seven (7) ancillary

structures. Project improvements would occur on 174 total acres of privately owned land. Implementation of the proposed project includes the following requests:

- General Plan Amendment No. 3, Map No. 213
 - From Map Code 8.5 (Resource Management) to 7.3 (Heavy Industrial), or a more restrictive map code designation
- Zone Change Case No. 62, Map No. 213
 - From zone classification A-1 (Limited Agriculture) to M-3 PD (Heavy Industrial – Precise Development Combining), or a more restrictive district on approximately 174 acres
- Conditional Use Permit No. 71, Map No. 213
 - To allow on-site capture of carbon dioxide (CO₂) and temporary storage for eventual transport for off-site distribution (Sections 19.08.085 & 19.06.920) on an approximate 174-acre project site.
- Conditional Use Permit No. 72, Map No. 213
 - To allow an on-site water treatment plant (Section 19.40.030.K) on an approximate 174-acre project site.
- Approval of Precise Development Plan No. 3, Map No. 213
 - To allow for the construction and operation of an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, served by a 63-acre solar array accessory to the proposed use on 174 total acres (Sections 19.40.020.E.1 & 19.40.020.H)
- Approval of Zone Variance No. 24, Map No. 213
 - To allow for a reduction in the required number parking spaces from 993 spaces to 306 spaces.
- Approval of Zone Variance No. 25, Map No. 213
 - To allow for a maximum building and structure height of 165 feet where 150 feet is permitted (Sections 19.40.080.A & 19.08.160.B) in the M-3 PD (Heavy Industrial – Precise Development Combining) District.

3.7 Project Characteristics

3.7.1 Project Facilities

The proposed project includes the construction and operation of a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes. Development would include an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, as well as a 63-acre accessory solar array on 174 total acres of privately owned land. Outdoor storage for scrap materials and staging is also included as part of the proposed project.

See **Figure 3-8: Proposed PD Plan – Statistical Information**, **Figure 3-9: Proposed PD Plan - Overall PD Plan**, **Figure 3-10: Proposed PD Plan - Block 1**, **Figure 3-11: Proposed PD Plan - Block 2**, **Figure 3-12: Proposed PD Plan - Block 3** and **Figure 3-13: Proposed PD Plan – Block 4**. Project components include the following components which are described in greater detail thereafter.

PSG MOJAVE MICRO MILL

PRECISE DEVELOPMENT PLAN NO. 3, MAP 213

860 SOPP ROAD

MOJAVE, CALIFORNIA, 93501

LEGAL DESCRIPTION

FOR APN/PARCEL ID(S): 431-010-02, 431-030-02

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA IN COUNTY OF KERN, STATE OF CALIFORNIA AND DESCRIBED AS FOLLOWS:

PARCEL 1: APN 431-010-02
THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 10 NORTH, RANGE 12 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF KERN, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF THE SAID LAND ON THE FILE IN THE BUREAU OF LAND MANAGEMENT.

EXCEPTING THEREFROM A STRIP OF LAND 200 FEET WIDE LYING EQUALLY ON EACH SIDE OF THE CENTERLINE OF THE SOUTHERN PACIFIC RAILROAD AS CONSTRUCTED ON AUGUST 26, 1952 UPON, ACROSS OR ADJACENT TO SAID LAND ABOVE DESCRIBED, AS EXCEPTED IN DEED FROM SOUTHERN PACIFIC LAND COMPANY, A CORPORATION AND SOUTHERN PACIFIC RAILROAD COMPANY, A CORPORATION, TO MINTO FARROW, RECORDED OCTOBER 7, 1952, IN BOOK 1991, PAGE 300 OF OFFICIAL RECORDS.

EXCEPT THEREFROM FIFTY PERCENT (50%) OF ALL OIL, GAS AND MINERALS INCLUDING THORIUM, GOLD, URANIUM, OR ANY OTHER RADIO ACTIVE MATERIALS WITHIN OR UNDERLYING SAID LAND, OR THAT MAY BE PRODUCED AND SAVED THERE FROM AS RESERVED BY MINTO FARROW IN THE DEED RECORDED JUNE 11, 1957 IN BOOK 2799, PAGE 153 OF OFFICIAL RECORDS.

PARCEL 2: APN 431-030-02
THE NORTH HALF OF THE NORTHEAST QUARTER OF THE SOUTH-WEST QUARTER OF SECTION 27, TOWNSHIP 10 NORTH, RANGE 12 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF KERN, STATE OF CALIFORNIA.

EXCEPT THEREFROM FIFTY PERCENT (50%) OF ALL OIL, GAS AND MINERALS INCLUDING THORIUM, GOLD, URANIUM, OR ANY OTHER RADIO ACTIVE MATERIALS WITHIN OR UNDERLYING SAID LAND, OR THAT MAY BE PRODUCED AND SAVED THEREFROM AS RESERVED BY MINTO FARROW IN THE DEED RECORDED JUNE 11, 1957 IN BOOK 2799, PAGE 153 OF OFFICIAL RECORDS.

TOPOGRAPHY

ALTA SURVEY PERFORMED BY:

AARON G. BYRD, PLS 7972
NEXUS 3D CONSULTING
220 18TH STREET
BAKERSFIELD, CA 93301
JANUARY 20, 2021

GENERAL NOTES

- FOR ALL PARKING LOTS CONTAINING TEN (10) OR MORE SPACES, AT LEAST FIVE PERCENT (5%) OF THE TOTAL INTERIOR AREA DEVELOPED TO PARKING SHALL BE LANDSCAPED. TREES SHALL BE PLANTED AND MAINTAINED THROUGHOUT THE PARKING AREA AT A MINIMUM RATION OF ONE (1) TREE PER SIX (6) PARKING SPACES PLACED AT A MAXIMUM OF SIXTY-FIVE (65) FOOT INTERVALS. MINIMUM TREE SIZE SHALL BE FIFTEEN (15) GALLON CONTAINER, AN IRRIGATION SYSTEM ADEQUATE FOR THE MAINTENANCE OF THE LANDSCAPING SHALL BE INSTALLED.
- WHERE PARKING FACILITY CONTAINING FIVE (5) OR MORE SPACE INCLUDES DIAGONAL OR PERPENDICULAR PARKING SPACES THAT ADJUT PUBLIC STREET OR ROAD, AN ORNAMENTAL FENCE, WALL, EVERGREEN LANDSCAPING OR BERM, OR ANY COMBINATION OF THE ABOVE, OF NOT MORE THAN FOUR (4) FEET IN TOTAL HEIGHT SHALL BE ERRECTED BETWEEN THE PARKING FACILITY AND THE STREET OR ROAD TO ELIMINATE HEADLIGHT GLARE.

STATISTICAL INFORMATION

EX. AND PROP. ZONING:	A-1 TO M-3
EX. USE:	VACANT
PROP. USE:	STEEL MILL
ACREAGE:	174 AC (GROSS 184.23 AC PER ALTA)
PROP. BUILDING:	SINGLE STORY MAX 11'0" HIGH, SEE BUILDING TABLE BELOW
BUILDING COVERAGE:	6.6%
LANDSCAPE AREA:	10.6 AC
PARKING SPACES PROVIDED:	246 PROVIDED (993 REQUIRED PER CODE)
SEWAGE DISPOSAL:	ONSITE SEPTIC SYSTEM
WATER SUPPLY:	ANTELOPE VALLEY - EAST KERN WATER AGENCY
DRAINAGE:	ONSITE DETENTION BASINS

BUILDING TABLE

Building Number	Building Name	Square Feet (sf)	Height
Building 1	Micro Mill Facility	499,400	Varies
Building 1A	Scrap Bay (Includes Planned Expansion)	34,500	80 feet
Building 1B	247/247S Bay	15,500	110 feet
Building 1C	Caster Bay	12,500	100 feet
Building 1D	MS Complex Structure (3 floors)	22,680	95 feet
Building 1E	Ladle Maintenance Bay	8,700	50 feet
Building 1F	Rolling Mill Bay	61,000	50 feet
Building 1G	Spooler Bay	13,200	35 feet
Building 1H	Service Bay	12,700	40 feet
Building 1I	Finished Goods Bay	112,600	50 feet
Building 1J	Roll Shop	18,700	35 feet
Building 1K	Test Bay	1,300	22 feet
Building 1L	Stock Bay	93,000	50 feet
Building 1M	Fabrication Bay	93,000	45 feet
Building 2	Storeroom and Vehicle Maintenance Building	27,385	25 feet
Building 3	Office Building (Includes Planned Expansion)	10,500	21 feet
Building 4	Locker Room	4,400	18 feet
Building 5	Slag Processing Office Building	4,000	18 feet
Building 6	Containerized Power Control Room (PCR)	5,500	18 feet
Building 7	Guard Shack/Scale House	900	18 feet
Building 8	Trucker Restroom Facility	36	18 feet
Building 9	Scale Classifier (3 floors)	3,600	45 feet
Building 10	Water Pre-Treatment Building	9,000	30 feet

④ SITE COMPONENTS

Site Components
1 Ground Mounted Solar
2 On-site Substation
3 Fume Treatment Plant
4 Water Treatment Plant
5 Slag Processing Plant
6 Dolomite and Lime Silos
7 Staging and Spare Parts Storage
8 On-site Access Corridors
9 Perimeter Fencing
10 On-site Parking
11 Road Improvements
12 Landscaping
13 New Pavement, Curb and Gutter, and Sidewalk
14 Carbon Capture
15 Water Storage Tanks
16 Pre-Treatment



VICINITY MAP

SCALE: NTS

Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 3-8: Proposed PD Plan – Statistical Information

PSGM3 Holdings Corp (Pacific Steel Group)

SHEET INDEX

NUMBER	SHEET DESCRIPTION
1	TITLE SHEET
2	KEY MAP
3	SITE PLAN
4	SITE PLAN
5	SITE PLAN
6	SITE PLAN

LEGEND

	PROP. BUILDING
	PROP. ASPHALT PAVEMENT
	PROP. HEAVY-DUTY CONCRETE PAVEMENT
	PROP. HEAVY-DUTY CONCRETE W/ TRAPROCK SECTION
	PROP. BASIN
	PROP. SOLAR PANEL AREA
	PROP. LANDSCAPED AREA
	PROP. MATCH LINE
	INGRESS/EGRESS ARROW
	EX. ASPHALT PAVEMENT
	EX. CONTOURS

ABBREVIATIONS

AC	ASPHALT CONCRETE
CONC	CONCRETE
EG	EXISTING GRADING
ELEC	ELECTRIC
EX	EXISTING
FFE	FINISHED FLOOR ELEVATION
FG	FINISH GRADE
FT	FEET
KC	KERN COUNTY
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
PROP.	PROPOSED
R/W	RIGHT OF WAY
TYP	TYPICAL
UPRR	UNION PACIFIC RAILROAD
W/	WITH

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GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
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ZV No. 25, Map No. 213

Figure 3-9: Proposed PD Plan – Overall PD Plan



Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 3-10: Proposed PD Plan – Block 1

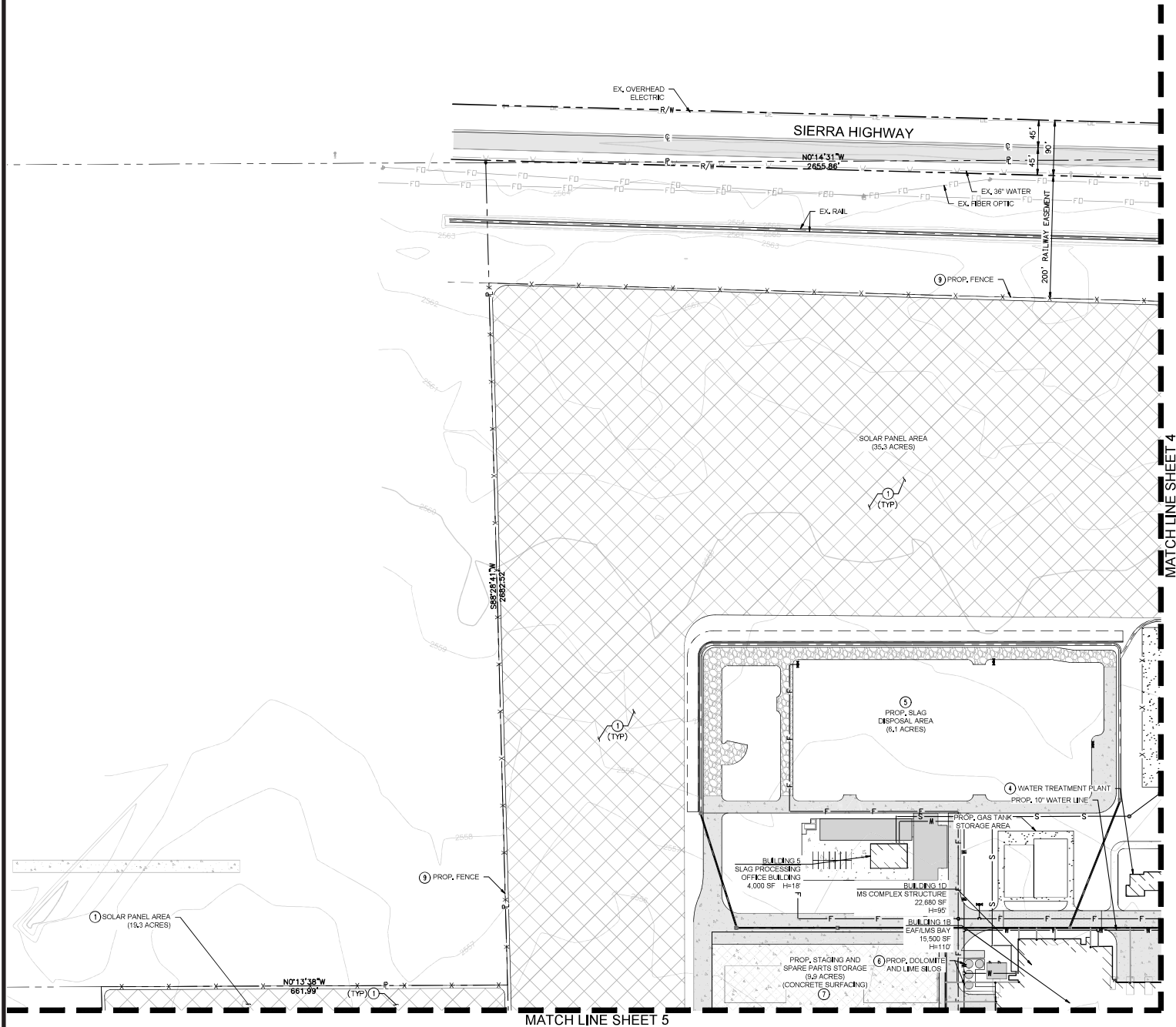
PSGM3 Holdings Corp (Pacific Steel Group)

LEGEND

	PROP. BUILDING
	PROP. ASPHALT PAVEMENT
	PROP. HEAVY-DUTY CONCRETE PAVEMENT
	PROP. HEAVY-DUTY CONCRETE W/ TRAPROCK SECTION
	PROP. BASIN
	PROP. SOLAR PANEL AREA
	PROP. LANDSCAPED AREA
	PROP. MATCH LINE
	INGRESS/EGRESS ARROW
	EX. ASPHALT PAVEMENT
	EX. CONTOURS

SITE COMPONENTS

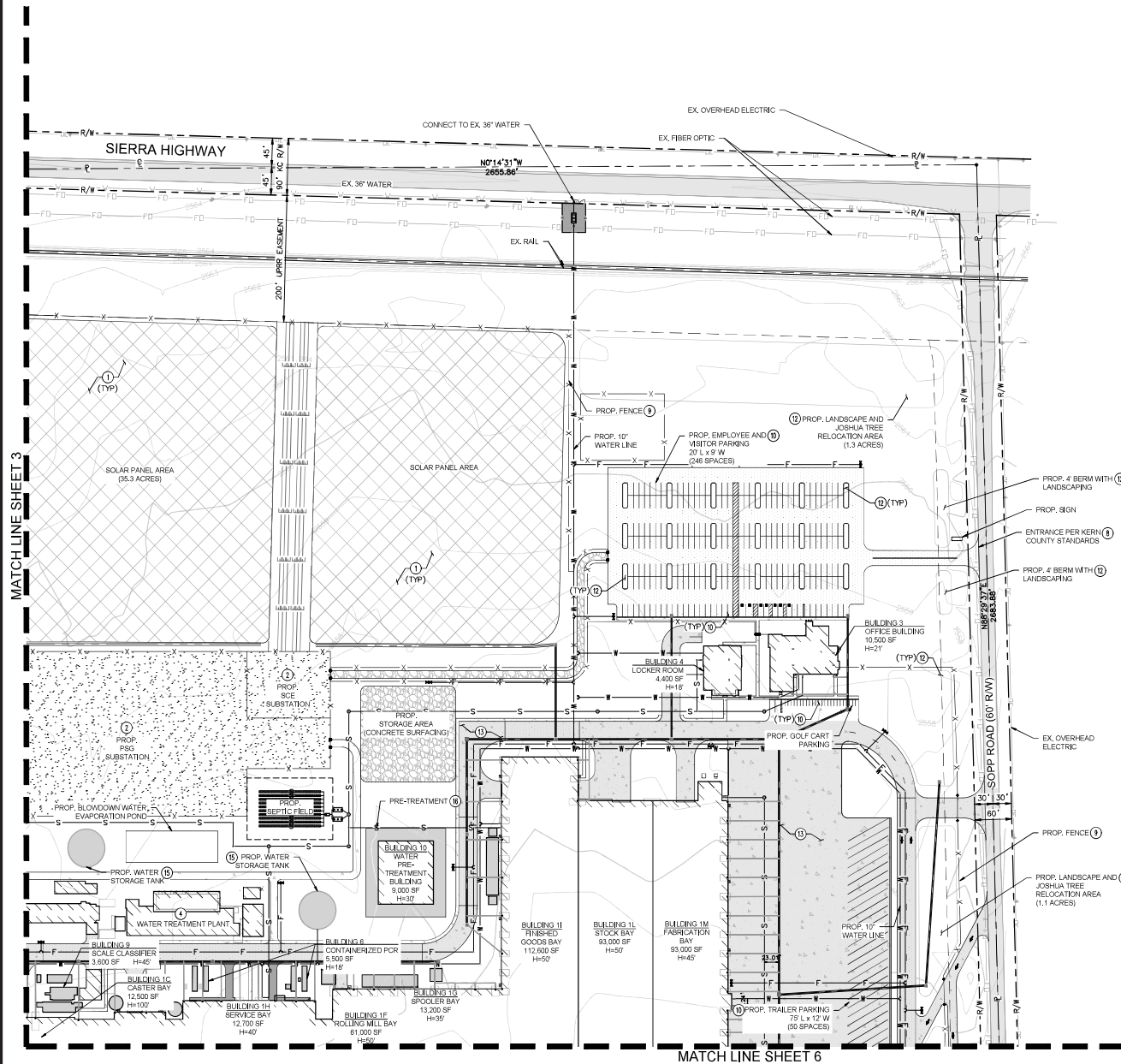
- ① GROUND MOUNTED SOLAR
- ② WATER TREATMENT PLANT
- ③ SLAG PROCESSING PLANT
- ④ DOLOMITE AND LIME SILOS
- ⑤ STAGING AND SPARE PARTS STORAGE
- ⑥ PERIMETER FENCING



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ZV No. 25, Map No. 213



Mojave Micro Mill Project

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ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 3-12: Proposed PD Plan – Block 3

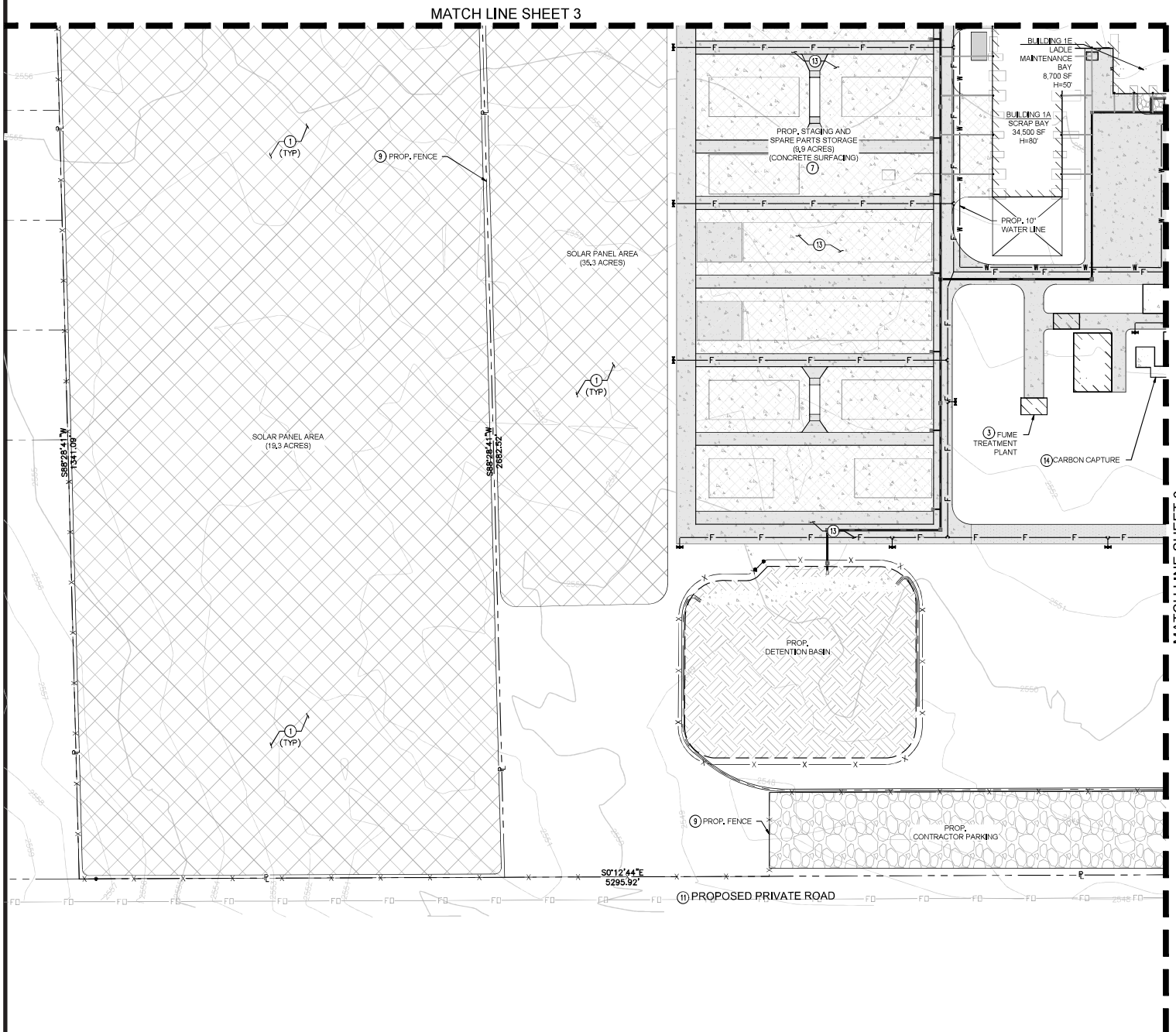
PSGM3 Holdings Corp (Pacific Steel Group)

LEGEND

	PROP. BUILDING
	PROP. ASPHALT PAVEMENT
	PROP. HEAVY-DUTY CONCRETE PAVEMENT
	PROP. HEAVY-DUTY CONCRETE W/ TRAPROCK SECTION
	PROP. BASIN
	PROP. SOLAR PANEL AREA
	PROP. LANDSCAPED AREA
	PROP. MATCH LINE
	INGRESS/EGRESS ARROW
	EX. ASPHALT PAVEMENT
	EX. CONTOURS

SITE COMPONENTS

- ① GROUND MOUNTED SOLAR
- ② FUME TREATMENT PLANT
- ③ STAGING AND SPARE PARTS STORAGE
- ④ PERIMETER FENCING
- ⑤ ROAD IMPROVEMENTS
- ⑥ NEW PAVEMENT, CURB AND GUTTER, AND SIDEWALK
- ⑦ CARBON CAPTURE



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GPA No.3, Map No. 213

ZCC No. 62, Map No. 213

CUP No. 71, Map No. 213

CUP No. 72, Map No. 213

PD Plan No. 3, Map No. 213












ZV No. 24, Map No. 213

ZV No. 25, Map No. 213

Figure 3-13: Proposed PD Plan – Block 4

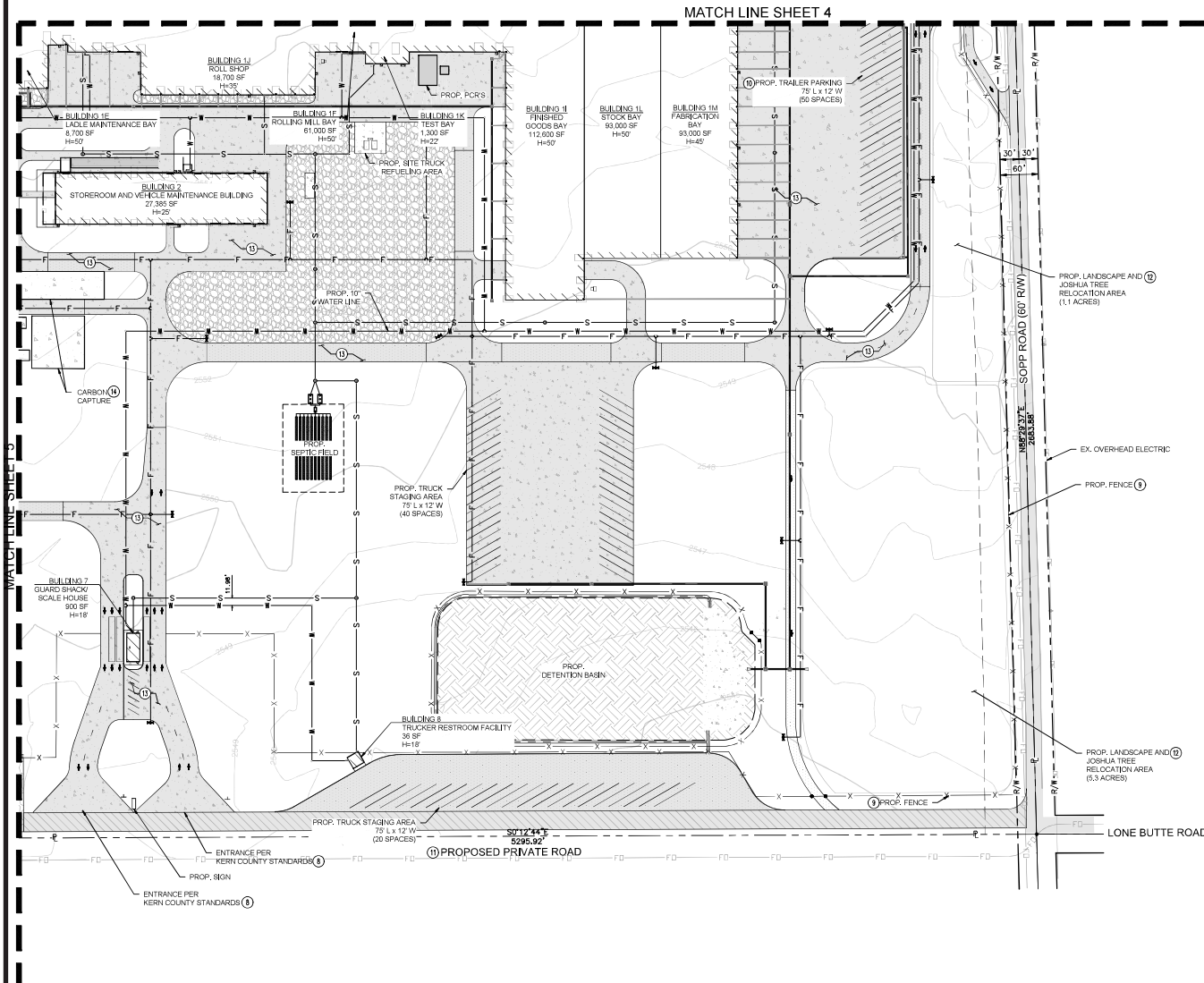
PSGM3 Holdings Corp (Pacific Steel Group)

LEGEND

-  PROP. BUILDING
-  PROP. ASPHALT PAVEMENT
-  PROP. HEAVY-DUTY CONCRETE PAVEMENT
-  PROP. HEAVY-DUTY CONCRETE W/ TRAPROCK SECTION
-  PROP. BASIN
-  PROP. SOLAR PANEL AREA
-  PROP. LANDSCAPED AREA
-  PROP. MATCH LINE
-  INGRESS/EGRESS ARROW
-  EX. ASPHALT PAVEMENT
-  EX. CONTOURS

SITE COMPONENTS

- (8) ON-SITE ACCESS CORRIDORS
- (9) PERIMETER FENCING
- (10) ON-SITE PARKING
- (11) ROAD IMPROVEMENTS
- (12) LANDSCAPING
- (13) NEW PAVEMENT, CURB AND GUTTER, AND SIDEWALK
- (14) CARBON CAPTURE



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Micro Mill Facility - The approximate 489,200 square-foot facility includes 13 attached and detached buildings, as follows:

Raw Material Handling

- 24,300 square foot scrap bay (approximately 80 feet high) for metal scrap storage areas;

Melt Shop Process

- 22,700 square foot melt shop (MS) Complex structure (52 feet high);
- 15,500 square foot electric arc furnace (EAF)/ladle metallurgy station (LMS) bay (approximately 116 feet high) with 3 bridge cranes (76 feet high);
- 12,500 square foot caster bay (approximately 110 feet high) with a 76-foot bridge crane;
- 8,700 square foot ladle maintenance bay (approximately 50 feet high);

Rolling Mill Process

- 61,000 square foot rolling mill bay (approximately 55 feet high);
- 18,700 square foot roll shop (approximately 40 feet high);
- 61,000 square foot service bay (approximately 40 feet high);
- 12,700 square foot spooler bay (approximately 40 feet high);
- 112,600 square foot finished goods bay (approximately 55 feet high);
- 1,300 square foot test bay (approximately 22 feet high);

Fabrication Shop Process

- 93,000 square foot stock bay (approximately 50 feet high); and
- 93,000 square foot fabrication bay (approximately 50 feet high).

Ancillary Buildings – The micro mill facility would be supported by eight (8) ancillary structures that would serve the operation of the micro mill facility, as follows:

- 27,385 square foot storeroom and vehicle maintenance building (approximately 40 feet high);
- 10,500 square foot office building (approximately 21 feet high);
- 9,000 square foot Water pre-treatment building
- 4,400 square foot locker room (approximately 18 feet high);
- 4,000 square foot slag processing office building (approximately 18 feet high);
- 5,500 square foot Containerized Power Control Room (PCR) (approximately 18 feet high);
- 900 square foot guard shack/scale house (approximately 18 feet high); and
- 36 square foot Trucker Restroom Facility (approximately 18 feet high)

Additional Site Components – Other notable components of the project site are as follows:

- Approximately 63 acres of ground-mounted solar panels;
- Substation to support ground-mounted solar panels;
- Fume Treatment Plant (approximately 165 feet high);
- Air separation system
- Carbon Capture System and temporary storage
- Scrap handling equipment
- A water treatment plant that includes a settling basin, cooling towers, pump pads, and heat exchangers;
- Slag Processing Plant;
- Dolomite and lime silos (approximately 40 feet high);
- Staging and spare parts storage;

- Numerous AC power unit substations throughout the project area in order to power the various buildings;
- On-site access corridors;
- 6 foot high perimeter security fencing
- On-site parking area including approximately 300 auto parking spaces, 17 truck stalls, and 50 trailer stalls;
- Road improvements along Sopp Road and future private road south of Lone Butte Road and Sopp Road corner;
- Landscaping; and
- New pavement, curb and gutter, and sidewalk.

Micro Mill Facility

Raw Material Handling

Recycled scrap metal for the proposed project would be purchased from outside suppliers and transported into the facility by truck. Scrap metal to be received would include un-shredded and shredded scrap largely from crushed automobiles but also may include old appliances, machinery, sheet metal, rectangular bundles, and miscellaneous scrap metal. Un-shredded scrap metal would be processed by suppliers off-site to meet industry-standard size and cleanliness, arriving in a form either suitable for direct use in the steelmaking process or in larger sizes that would require cutting by a torch cutter, located in the scrap storage area, prior to its use in the process. The shredded and un-shredded scrap metal would either be stored at the 24,300-square-foot scrap bay, or if the proposed scrap bay is full, it would be stored at the proposed overflow scrap storage piles and then moved into the proposed scrap storage piles and then moved into the proposed scrap bay by front-end loader. Once the scrap metal is inside the proposed scrap bay, magnet cranes would be used to load it onto the primary conveyor feed system for transport to the proposed electric arc furnace (EAF). Approximately 1,200 tons per day (tpd) would be processed within the micro mill facility, with an estimated maximum of 1,550 tpd.

In addition to the recycled scrap metal, the new micro mill facility would use raw materials in the steelmaking process, as an automated system, including imported carbon (petroleum coke or bio carbon) and fluxing agents (lime, dolomite, etc.). Fluxing is the process of adding fluxing agents to the molten steel to help protect the steel from atmospheric contamination and facilitates the removal of impurities. The carbon and fluxing agents would be delivered to the project site by truck and moved into storage silos via a blower system. The carbon and fluxing agents would be pneumatically transferred from these silos to the proposed EAF and proposed ladle metallurgy station (LMS), as needed. The carbon and fluxing agent silos would be equipped with fabric filter bin vents. The fabric filter bin vents are pulse jet style industrial dust collectors typically used to vent displaced air and harmful products in bins, silos or any other device or process that must contain or control dust particles.

Alloy aggregates will also be used in the proposed EAF and LMS for refining steel metallurgy. Alloys would be transported by truck to the project site in aggregate form and unloaded into storage bins. The alloys would be transferred by front-end loaders or forklift to the melt shop for use in the proposed EAF or LMS as needed. As part of the steel making process, Ferro Silicon 75 (FeSi75), Ferro Silicon Manganese (FeC₅H₅MnSi), Silicon Carbide (SiC), Calcium Carbide (CaC₂), Fluorspar (CaF₂), and Metallurgical carbon alloys will be used. Alloys such as Ferro Vanadium

(FeV), Ferro Chrome (FeCR), and Calcium Silicon (CaSi) may also be used as part of the steel making process.

Melt Shop Process

Melt Shop (MS)

The melt shop (MS) process includes use of the EAF, LMS, casting operations, ladle and tundish preheaters, and refractory repair. Scrap metal is pre-heated by the EAF exhaust heat and then fed into the EAF where residual molten steel is kept to further the melting process (also referred to as the “Hot Heel” practice), then chemical and electrical energy would be used to melt the entire batch of scrap metal. The melted steel is then transferred to the LMS via a ladle. The main emission control device for these proposed operations is the fume treatment plant, as discussed further below, which captures emissions from the EAF and LMS.

Emissions from other processes within the melt shop are emitted through the caster roof distribution system and captured by the fume treatment plant. The following subsections describe each process that occurs during the melt shop process:

Electric Arc Furnace (EAF)

The steel making process begins with scrap metal being transported to the EAF, as discussed above, which is part of the 15,500-square-foot EAF/LMS bay. The EAF would be equipped with both electrodes and oxy-fuel burners. During the first use of the EAF after downtime, loading of scrap metal would be accomplished using charge buckets, which are transported into position over the EAF using overhead cranes. Once in position, the charge bucket would open, allowing scrap to fill the EAF. After the first batch of steel is made, scrap for subsequent batches would be fed to the EAF using a continuous conveyor (i.e., the endless charging system [ECS]). The conveyor would allow the continuous feeding of scrap metal to the EAF without opening the furnace, which would result considerable energy savings. In addition, the section of the ECS closest to the EAF would be enclosed to allow for pre-heating of the scrap metal using the off-gasses from the EAF.

Once the EAF is filled with scrap metal, the furnace electrodes are lowered and energized. The energy from the electrodes is transferred to the scrap metal to raise the temperature to approximately 3,000 degrees Fahrenheit (°F). A direct evacuation control (DEC) system would capture the EAF emissions and vent the emissions through a large duct to the fume treatment plant. All off-gasses are captured by the fume treatment plant, EAF canopy, caster canopy, and DEC systems.

During the melting process and refining processes that would take place in the EAF and the LMS, raw materials such as fluxing agents, metallurgic coal or coke, and oxygen would be added to the molten steel in order to achieve the desired product chemistry and properties and promote the formation of slag (a product of steelmaking, produced during the separation of the molten steel from impurities in the EAF, and is a complex solution of silicates and oxides that solidifies upon cooling). Flux, in metallurgy, is any substance introduced in the smelting of ores to promote fluidity and to remove objectionable impurities in the form of slag. Slag is a molten, floating layer that covers the surface of the metal bath and is a byproduct of the melting and refining processes. Limestone and dolomite are commonly used for this purpose in smelting iron ores. Once the desired steel properties are reached in the EAF, the molten steel is poured (i.e., “tapped”) into a refractory-

lined transport vessel referred to as a “ladle.” The molten steel is then transferred to the LMS via a ladle car.

The slag formed in the EAF would be emptied by tipping the EAF to the side and allowing the hot slag to be poured into a pile within the EAF/LMS bay. As the slag cools, some limited combustion of residual coke in the slag may occur. The slag would be subsequently removed from the pit using a front-end loader, quenched using process water, and transported to an outdoor storage pile before being processed on-site.

Ladle Metallurgy Station (LMS)

The ladles filled with molten steel would be transferred from the EAF to the LMS via the ladle car. At the LMS, the steel would be subjected to additional heating by electrical energy in order to maintain its molten state. The molten steel would be further refined with the injection and mixing of raw materials such as fluxing agents, carbon, and alloys into the molten steel. Once the molten steel reaches the desired temperature and composition (dependent on the physical properties of the desired product), the ladle would transport the molten steel to the continuous casting machine.

Emissions from the LMS would be captured by the ladle ducts connected to the fume treatment plant. Emissions not captured by the ladle furnace ducts would be captured by the melt shop canopy or the caster canopy.

MS Complex structure

The processes performed in the EAF and LMS, as described in detail above, are controlled in the 22,700-square-foot MS Complex structure, which would house the necessary transformers, hydraulics, programmable logic controller (PLCs), and personnel to run the processes.

Casting Operations

After reaching the desired temperature of approximately 3,000°F and composition in the LMS, the ladle is transported to a continuous casting machine within the 12,500-square-foot caster bay. During casting, steel flows out of the bottom of the ladle via a slide gate into a tundish. A tundish is a holding vessel used to ensure continuous casting while ladles are switched out. Emissions from the process would be emitted through the caster canopy and captured by the fume treatment plant.

From the tundish, the steel flows into a single mold. In the mold, the steel is water-cooled to approximately 2,000°F and formed into bars, referred to as billets.

Ladle and Tundish Preheaters

Refractory materials would line the ladles and tundishes which must be dried completely prior to steel production. Additionally, the ladles and tundishes must be preheated prior to the transfer of molten steel in order to prevent heat losses. Electrical ladle and tundish preheaters and dryers would be installed. The tundish would also use a refractory material that does not require curing.

Refractory Repair

Refractory is made up of a layer of refractory bricks (with manganese and calcium oxide bases) and would be used in the EAF, ladles, and tundishes. For the EAF, the refractory would be changed only when the furnace is replaced. For the ladles and tundishes, occasional refractory repairs and replacements would periodically be required. This would involve the use of organic binding agents

(binder) to hold the refractory bricks in place. Emissions from the binder would be routed to the ladle maintenance bay canopy. When the refractory is replaced or repaired, spent refractory would be recycled or disposed of, along with other various wastes generated in the steel production process. The work of performing ladle maintenance including refractory repairs would be made in the 8,700-square-foot ladle maintenance bay.

Induction Furnace

An induction furnace is located between the caster and the rolling mill for temperature elevation and stabilization prior to entering the first stand.

Rolling Mill Process

The rolling mill process is a metal forming process in which metal stock is passed through one or more pairs of rolls to reduce the thickness and to make the thickness of the metal uniform. Roll stands, holding pairs of rolls, are grouped together into rolling mills that can quickly process steel, into rebar. The following subsections describe each process that occurs during the rolling mill process:

Rolling Mill

After continuous casting, the steel is conveyed through a series of rolling mill stands within the 61,000-square-foot rolling mill bay that reduce the cross-sectional area and hot-form final rolled steel reinforcing bar. The rolled steel is then sheared to length, cooled on a natural convection cooling bed, bundled and stored or fed directly into spooler machines which roll the reinforcing bar into a spool. As production for a particular size rebar has been completed, the rolling mill stands are taken to the 18,700-square-foot roll shop where employees would replace worn parts and insert a new set of mill rolls in each stand to be able to produce the next size product.

The 61,000-square-foot service bay would include the utility systems to feed the rolling mill. These utilities include electrical and automatic with programmable logic controllers, switchgear and motor control centers, an air oil system pumps and tank for lubrication of the rolls, grease unit pumps and tanks for roller bearings, lube oil system with pumps and tanks for oil in the rolling mill gearboxes, a hydraulic system include hydraulic fluid tank and pump to pressurize hydraulic lines, and air compressors and tanks.

Cooling Beds

The products that exit the rolling mill would be water quenched for tempering (used to improve hardness, strength, toughness, as well as decrease brittleness in fully hardened steel) and directed to the cooling bed for time and space to cool in the ambient air.

Spooler

The products that exit the rolling mill, if not directed to the cooling bed, are instead directed to the spooling machines. There would be two spoolers that would roll the reinforcing bar into spooled packages.

Finishing and Transportation

After the products have cooled, a shear blade would cut the products to customer-requested lengths. Automated bundling systems would prepare products for movement by overhead crane to storage areas or directly to trucks.

Fabrication Process

Since all rebar must be cut to length and often bent before it can be “placed” in a construction project, the proposed project would include an on-site 245,000 ton per year “cut and bend” facility with equipment provided from consolidated locations. Typically, reinforcing steel is exported off site to a separate fabrication shop, many of which are at various locations on the West Coast.

The on-site location of the fabrication shop eliminates the need for the fabrication shop to maintain an independent inventory, reduces scrap (because of the mill’s capability to cut the custom lengths) and ensures that what scrap is generated would be recycled. The following subsections describe each process that occurs during the fabrication process:

Stock Bay

The 93,000-square-foot stock bay is the first bay of the fabrication shop that serves as a temporary rebar stock and feeding area for fabrication equipment.

Fabrication Bay

After the rebar is fed into the fabrication equipment, it would be fabricated to customers specific requirements within the 93,000-square-foot fabrication bay. The finished product would be loaded on trucks for shipment.

Ancillary Buildings

Storeroom and Vehicle Maintenance Building

The 27,385-square-foot storeroom and vehicle maintenance building would be used as a place where onsite equipment and vehicles can be serviced. The equipment that would be serviced here includes trailers, trucks, carts and forklifts. All maintenance conducted in this building would consist of general wear and tear maintenance such as oil changes, tire rotations, light repair/replacement, engine servicing, coolant and filter maintenance, etc. Autobody repairs would be made off site. Vehicles and equipment would be brought here on a routine basis as well as when problems arise. The storeroom and vehicle maintenance building would also include maintenance, repair, and spare parts. Items such as spare mill rolls, safety supplies, bearings, pumps, cylinders, fasteners, electrical and plumbing components. All storage of parts and consumable items would be stored on racks and in bins as appropriate.

Power Control Rooms (PCR)

A majority of the machines and electricity used on the project site will use alternating current (AC) power provided by the local utility (i.e., Southern California Edison). AC power at 66 kilovolts (KV) from the local utility would be distributed to the various buildings various substations installed on the project site. There are several power control rooms (PCRs), totaling 5,500 square-feet, located around the project site that would receive power from the main substation and

transform that power to usable voltage for the specific area the PCR is located. PCR's consist of transformer, motor control centers and programmable logic controllers for the operation of the facility equipment.

Office Building, Locker Room, Guard Shack/Scale House, and Trucker Restroom Facility

The project site would also include other buildings not part of the micro mill process, including: 1) a 10,500- square-foot office building, which would include administrative offices for the micro mill facility; 2) a 4,400-square-foot locker room, which would include showers, bathroom facilities, and lockers for the micro mill facility employees; 3) a 900-square-foot guard shack/scale house which would be constructed at the trailer entrance of the project site off of the proposed private road along the eastern boundary, and 4) a 36-square-foot trucker restroom facility that would be provided along the proposed private road, near the entrance to the project site. Water and sewage disposal for operational systems, as well as on-site bathroom facilities would be provided by connection to the Antelope Valley Eastern Kern Water Storage District and engineered on-site septic systems, respectively.

Water Pre-Treatment Building

The project site would also include a 9,000-square-foot Water Pre-Treatment Building. This building houses the equipment that would take the initial source water (i.e., water to initially fill the water treatment plant system) and make-up water (replaces water lost through the process) from the Antelope Valley-East Kern Water Agency (AVEK) water main and treat using an Ultrafiltration and Reverse Osmosis (UF/RO) process.

Additional Site Components

Solar Array and Substation

The proposed project would include 63 acres dedicated to ground-mounted solar panels. The proposed 63-acre solar array is intended to generate 10-megawatt hours (MWh) of electricity for on-site use to power the EAF and the LMS. Additional energy sourced from SCE would be required to power the remaining portions of the facility. A substation would be installed on the project site to support the ground-mounted solar panels. SCE would also connect to the same substation, but PSG will not be able to export power to the grid once operations commence, due to SCE constraints. Once SCE constraints are resolved, PSG would export any excess energy generated.,

Carbon Capture System

The proposed project would install a Carbon Capture System (CCS) to capture the CO₂ from the combustions of the steel making process in the Electrical Arc Furnace.

The process would consist of the following stages:

- Heat recovery from EAF primary fumes.
- Fumes filtration system to remove the dust before entering the unit for carbon capture.
- Fumes cooling system to cool the fumes to 70°C.
- Fumes buffering in a gasholder to keep the carbon capture in a steady state and efficient operations during the tapping of the EAF.
- Fumes compression system to keep the carbon capture operation efficient

- CO₂ Removal system based on a solvent that is resistant to the presence of oxygen, limiting the need for refill and for disposal of residues.
- Selective Catalytic Reduction to reduce nitrogen oxides (NO_x) in the waste gas stream.
- CO₂ Liquification system, complete with compression, de-hydration and purification unit that allows the removal of impurities in the product and storage. The liquefied CO₂ is then stored for future transportation via trucks.

Heat Recovery Unit

The fumes that have been initially cooled in the water-cooled duct are routed through a gate, a valve capable of operating at high temperature to the waste heat recovery unit. At the exit of the heat exchange system there is a dust catcher, where the coarse dust that is collected.

Fumes filtering

The fumes leaving the heat exchanger are then filtered in with a pulse jet bag house system. The dusts are collected from the bottom to the baghouse and transported by a screw conveyor to a dust silo.

Fumes cooling

Once the dust-free fumes exit the filter, it is necessary to lower their temperature for the CO₂ capturing process. This cooling operation is accomplished using a finned tubes water-cooled heat exchanger, effectively reducing the temperature to 70°C.

Fumes buffering

The cooled fumes from the cooler are directed into a buffer storage system to ensure a consistent concentration of CO₂ within the fumes. This buffer storage is achieved through a metallic gas-holder, which maintains the filtered cold off-gases inside a variable volume tank. The gas-holder operates at a pressure of 50 mbar, providing a slight overpressure that eliminates preventing the ingress of external air into the carbon capture system.

Fume compression

To improve the efficiency of carbon capture, it is vital to elevate the pressure of the fumes. This is achieved by compressing the gas to 6 bar g, which not only increases efficiency but also reduces the size of the absorption equipment. The heat generated during compression is recovered by heating up the off gases leaving the absorption column. Given the favorable temperature and cleanliness of the gas, the project may include a selective catalytic reaction-based system for reducing NO_x emissions.

CO₂ Removal System

The CO₂ Removal System is located downstream of the gas compressor and consists of a CO₂ absorption column and a stripping column. Fumes containing 3 percent to 10 percent CO₂ are directed to the absorption column, where they are decarbonated by counter-current contact with cold lean absorbing solution. The decarbonated gas exits with about 0.5 percent CO₂ and undergoes fumes expansion and then directed to the fume treatment plant. The CO₂-rich solution from the absorption column is heated in the rich/lean solution heat exchanger and sent to the stripping

column for CO₂ stripping using stripping steam. The lean solution circulates between the columns and is cooled before returning to the absorption column.

Selective Catalytic Reduction

After removing carbon, the exhaust gas goes through a selective catalytic reduction process to reduce nitrogen oxides (NO_x) in the waste gas stream.

CO₂ Liquification

The separated carbon dioxide from the stripper column is directed to a purification system. During this process, the gas is also dried and purified from other impurities, primarily nitrogen and oxygen. Ultimately, the carbon dioxide is delivered in the form of liquefied gas, ready to be loaded onto trucks for transport and delivery to end users.

Fume Treatment Plant

Emissions captured in the melt shop are vented to the fume treatment plant and captured by the furnace exhaust system. Before being vented to the fume treatment plant, an activated bonding agent would be injected to mitigate pollutants. Dust collected by the fume treatment plant would be transferred to a dust silo controlled with a bin vent filter. The dust would then be shipped off-site by truck for recycling.

Water Treatment Plant

Water that has direct contact with contaminants in the steel making process (contact water) would be treated on-site. Water that has run through the steel making process then flows to a settling basin where settleable matter is dropped out. An oil skimmer also removes oils from the water in the basin. Water is pumped to a sand filter for further treatment. Water is stored in a clarified water tank where chemical dosing units are used to balance the water's chemistry. Cooling towers would be used to reduce the temperature of the system, then collect water in the basin before pumping cooled water back to the process.

Note that cooling water, which does not come into contact with contaminants (non-contact water) is used to control temperatures of the steel making process. This water is in an enclosed system as it runs through the building. Cooling towers to reduce the temperature of the system, then collect water in the basin and is chemically balanced and strained before pumping cooled water back to the process. In addition, a system for the pre-treatment of raw water and post-treatment of process water will also be installed.

Slag Processing Plant

The function of the slag (mainly composed by lime (Calcium Oxide/CaO)) is to refine the steel from Sulphur (desulfurization) and absorb the oxides, formed as a result of deoxidation (also known as killing process).

After the slag is removed from the melt shop, quenched, and stored in an outdoor storage pile, the slag is processed by an on-site Slag Processing Plant. As part of the proposed project, a slag processing area would be developed. At the Slag Processing Plant, large pieces of slag would first be reduced in size by a ball drop crushing process. Slag would be processed through a system consisting of conveyors, hoppers, a jaw crusher, and a double deck screen.

In addition to the transportation by the conveyor system, loaders would also transport slag to the various piles. The processed slag stored in the piles would be transported off-site by truck to be sold to consumers, disposed of, or recycled. EAF slag is widely used in the transportation industry, construction, and cement manufacturing as well as wastewater and water treatment. This makes slag an important substitute for natural resources, leading to significant minimization in natural resource utilization.

The Slag Processing Plant also includes the 4,000-square-foot slag processing office building where the Slag Processing Plant would be operated.

Dolomite, Carbon and Lime Silos

Silos would be provided onsite that would provide storage for fluxing agents and carbon (i.e., dolomite, lime, and petroleum/bio carbon) used during the melt shop process.

Staging and Spare Parts Storage

Approximately 6 acres of the project site would be dedicated for staging and storage of spare parts for the micro mill facility.

Paved/Unpaved Roads

Vehicle traffic would occur on paved and unpaved roads located throughout the facility. On-site roads would be used by various vehicles, including haul trucks, trailers, Taylor trucks (forklifts), loader trucks, Euclid/roll-off trucks, inert gas (nitrogen (N), argon (Ar), oxygen (O)) trucks, forklifts/loaders, water trucks, and small forklifts.

Utilities and Miscellaneous

Cooling Towers

Non-contact cooling towers and contact cooling towers would be used to remove heat from the cooling water used in the proposed operations. The contact cooling tower's water would come into direct contact with the steel during the rolling mill process to provide cooling which may increase the solid content in water. It is expected that cooling tower blowdown water would be treated with a reverse osmosis system. Any remaining blowdown is expected to be used in the process.

The cooling water, which does not come into contact with contaminants (non-contact water) would be used for controlling temperatures of the steel making process. This water is in an enclosed system as it runs through the building. Cooling towers reduce the temperature of the system, then collect water in the basin and is chemically balanced and strained before pumping cooled water back to the process.

Fuel Storage Tank

The scrap and slag handling equipment (e.g., front end loaders) utilize diesel as part of their operation. An 8,000-gallon diesel fuel tank and a 500-gallon gasoline fuel tank is used to supply fuel for this equipment. There will also be additional mobile equipment used for operations, which will use a 2,000-gallon diesel fuel tank and a 250-gasoline fuel tank.

Other Miscellaneous Equipment

Operations at the proposed micro mill would include additional pieces of equipment such as comfort heaters, hot water heaters, parts washers, blast cleaning equipment, and hand-held tools.

Air Separation System

The air separation system process initiates with the intake of atmospheric air, which comprises approximately 78 percent nitrogen (N), 21 percent oxygen (O), and trace amounts of other gases. The system is formed by multiple adsorption columns, each filled with specialized adsorbent materials. During the adsorption phase, atmospheric air is directed into one group of columns, while the other set undergoes desorption. Within the adsorption columns, the adsorbent material selectively captures nitrogen gas molecules (N₂), allowing oxygen (O) and other gases to pass through, resulting in the separation of oxygen-enriched gas, that is stored in a tank to be used at the EAF.

Offsite Improvements

SCE is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at Sopp Road. See **Figure 3-14: Existing and Proposed Offsite Improvements**.

SCE estimates that the existing 66 kV line from Rosamond Substation to the corner of Sopp Road and Division Street will need to be reconducted (totaling approximately 13 miles), with all existing transmission poles requiring replacement with new poles installed for the section from the corner of Sopp Road and Division Street to the Project Site. This will consist of the installation of new poles and circuits.

There will be two fiber optic lines connected to the plant. One fiber optic cable will be installed by SCE who will be the electricity provider for the project site. The fiber op it would tie into the existing telecommunications line from approximately Tehachapi Willow Springs Road following the route of Backus Road and routing around the north side of Exit 61 of SR-14 to Sierra Highway. The other fiber optic cable will be for PSG business and industrial use, and it will be connected from an existing AT&T fiber at Sopp road.

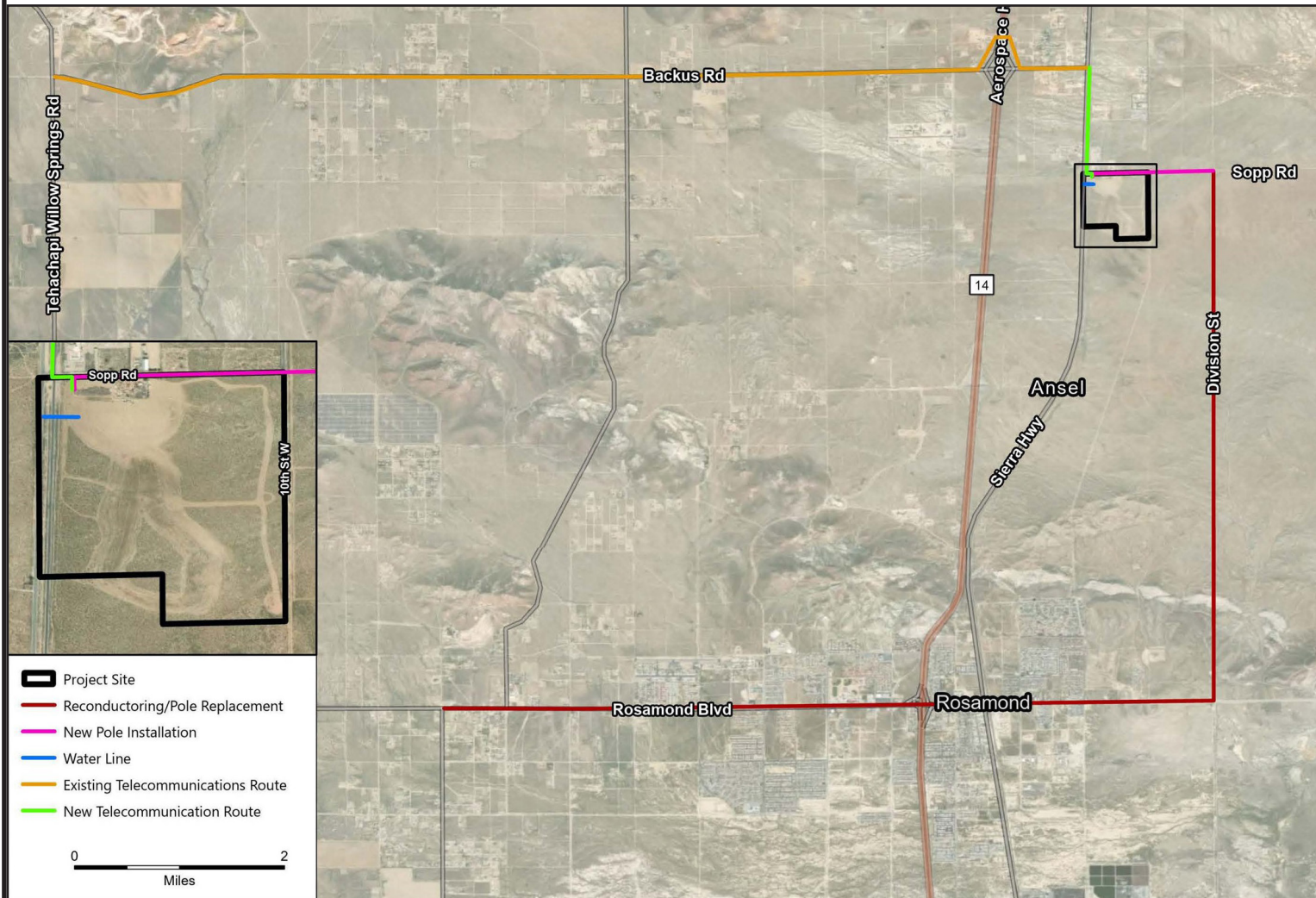
The Antelope Valley-East Kern Water Agency (AVEK) water main is located on the eastern side of Sierra Highway, approximately 200' feet from the boundary of the project site. For operations, a new water line would be installed from the project site, underneath the railroad, connecting to the 360-inch main AVEK line via an existing 10-inch turnout that is currently capped with a blind flange. For construction, water will be trucked to the project site and the project proponent will also use the existing water well at the plant. Two trucks per day were assumed during the construction phase.

Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-14: Existing and Proposed Offsite Improvements

PSGM3 Holdings Corp (Pacific Steel Group)



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**Kern County
 Planning & Natural
 Resources Department**



Project Site Access and Parking

Access to the project site is currently provided by Sopp Road. The proposed private on-site road along the eastern perimeter of the project site would be constructed to County standards and as requested by the Kern County Public Works Department. Regional access to the project site is provided by SR-14, via exit at Backus Road located approximately one mile north of the project site, which lead to Sierra Highway.

As indicated on **Figure 3-11**, the primary point of ingress and egress for employees and visitors is proposed from Sopp Road near the northwestern corner of the project site. Points of ingress and egress dedicated for delivery trucks and trailer would be from the proposed private on-site road along the eastern project boundary, identified by proposed monument signage, and guard shack/scale house.

At the northern extent of the site, a parking lot providing 306 parking spaces for employees and visitors would be accessed from the driveway off Sopp Road. At the eastern extent of the site, a parking area providing 50 spaces for trailer parking as well as golf cart parking would be accessed from the private on-site road along the eastern project boundary. A truck staging area providing parking for 17 trucks would also be accessed from the private on-site road.

Site Security

Site security would include a 6-foot high chain link security fence enclosing the entire developed area; security and overhead lighting for parking areas; and a security guardhouse at the new eastern perimeter road designated for truck entry. All lighting will be implemented under the Kern County Zoning Ordinance Chapter 19.81 Outdoor Lighting – Dark Skies ordinance.

The project site would be regularly illuminated at night due to the 24-hour manufacturing schedule. The proposed guardhouse would be adjacent to truck scales and signage as indicated on the site plan. Employee and visitor access would be provided near the northwestern corner of the project boundary. All visitors that need to enter the operational locations inside the security fence would require prior security clearance and safety training. Security fencing and temporary pole lighting would also be installed during project construction. It is assumed temporary lights would be provided by a temporary SCE distribution line.

Landscaping

Landscaping would be provided in three distinct areas: 1) in the northwest corner of the project site, west of the proposed employee and visitor parking; 2) along the northern boundary of the project site, north of the trailer parking areas; and 3) in the northeast corner of the project site and would extend along the private on-site road near the trailer entrance of the project site.

3.7.2 Construction Activities

Grading of the proposed project is anticipated to start in Q2 of 2024. Construction is proposed for completion in one phase with operation proposed to start Q2 of 2026. The typical construction activities would occur from 6 AM to 5 PM Monday through Saturday. Nighttime crews will work at night and on Sundays when required and approved by Kern County. Peak construction is anticipated to employ up to 515 construction workers.

The project frontage along Sopp Road and other roads deemed necessary for use during peak construction would be maintained or improved as required by the Kern County Public Works Department and applicable development standards, including but not limited to any required signing and marking would be constructed for the new pavement delineations.

3.7.3 Project Operations and Maintenance Activities

Within the 174-acre site, the proposed project would result in an approximate total-building coverage of 7 percent, or roughly 550,921 total-square feet, in addition to approximately 63 acres dedicated for ground mounted solar panels to provide solar generated electricity to the direct current (DC) link feeding directly to the EAF and LMS. The following discussion provides additional operational details, which supplements **Figure 3-15: Micro Mill Factory Process Flow Chart**.

Proposed Hours and Days of Operation

The primary reinforcing steel manufacturing operations would operate three (3) eight- (8-) hour shifts per day with the potential to operate seven days per week. The fabrication operations would consist of two (2) eight- (8-) hour shifts Monday through Friday. Thirty PSG truck drivers, on day shift and afternoon shift, would transport fabricated rebar from the site to construction projects primarily in Southern California with a small percentage of fabricated rebar being transported to the Northern California and south across the border into Mexico.

Anticipated administrative office hours would be from 7:00 a.m. to 5:00 p.m. There would be designated parking spots for visitors close to the entrance of the Administration Office.

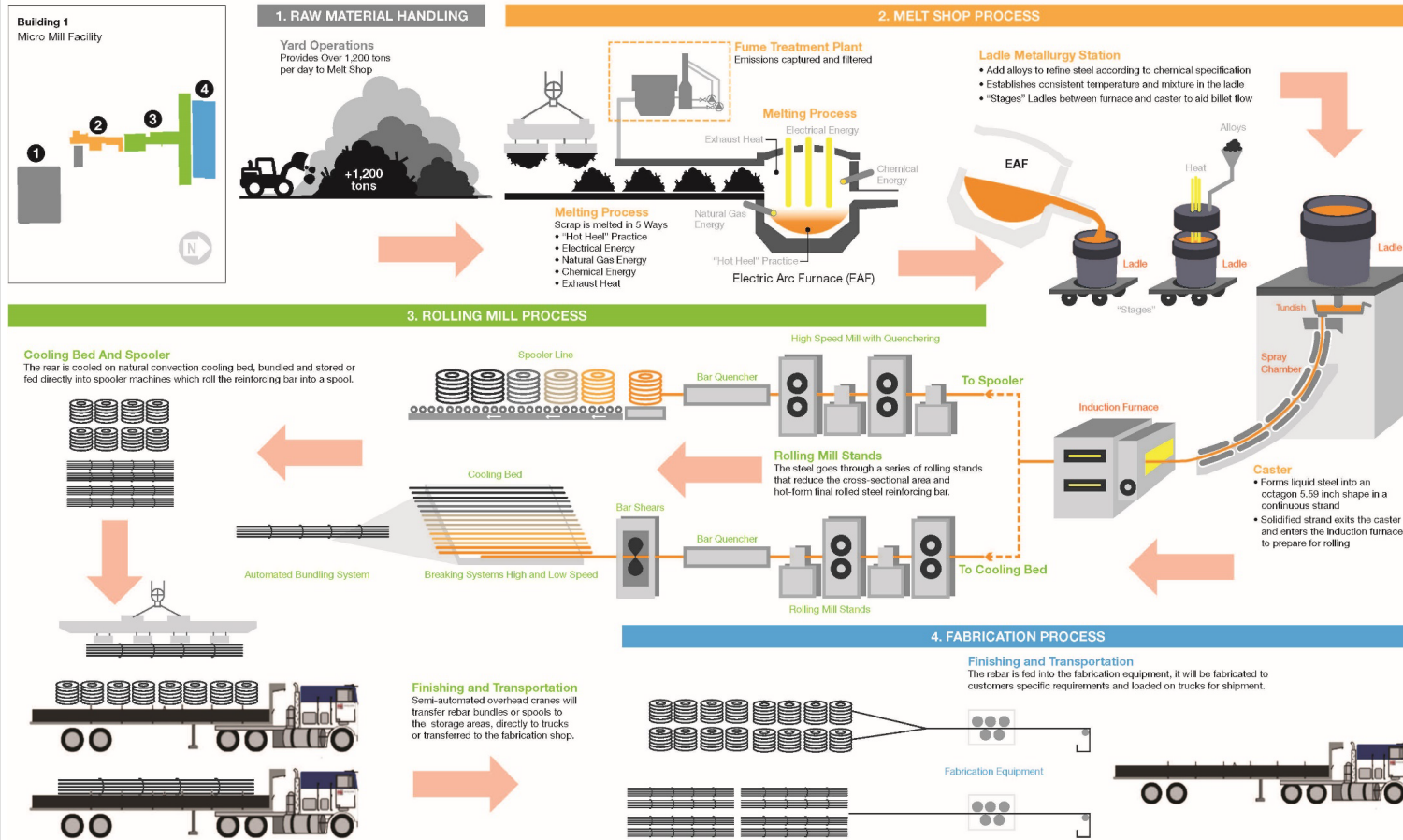
Employees

The micro mill facility would employ approximately 417 hourly and salaried employees. In addition, the proposed project would employ approximately 23 third-party employees for security on-site and slag processing services. In total, the proposed project would employ approximately 440 employees.

Delivery and Shipping Truck Activity

It is expected the location would receive approximately 101 trucks per day delivering raw materials and supplies. Outbound product and co-product delivery truck trips are expected to be approximately 76 per day.

Micro Mill Factory Process Flow Chart



Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 3-15: Micro Mill Process Flow Chart

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02
Sec. 27 - T10N/R12W



**Kern County
Planning & Natural
Resources Department**

Operational Water Use

The proposed project would be served with potable water provided by Antelope Valley – Eastern Kern (AVEK) Water Agency. Water use would be required as part of the rebar production process, including used to quench slag produced as a byproduct of the rebar production process, to cool steel once it is molded, and as part of tempering the rebar. Industrial water required for these processes, in addition to domestic water demand, would consume approximately 717 acre-feet per year. The micro mill's process water is circulated through a water treatment plant, with any water consumption within this specific process attributed to evaporation.

Domestic water demand would also be generated from the office building, locker room building, guardhouse and trucker restroom facilities, equating to approximately 301 acre-feet per year. Total annual water consumption for all uses would be approximately 1,018 acre-feet per year.

Operational Sewage Disposal

On-site sewage disposal would be served by an engineered, on-site septic system sited and permitted by Kern County Environmental Health Division of Public Health.

3.8 Entitlements Required

The Kern County Planning and Natural Resources Department as the Lead Agency (per CEQA Guidelines Section 15052) for the proposed project has discretionary responsibility for the proposed project. The anticipated approvals needed for the proposed project include a general plan amendment, zone change, conditional use permits, a precise development plan, and zone variances. Construction and operation of the proposed Micro Mill facility may require additional local, State, and federal entitlements, as well as discretionary and ministerial actions and approvals, including those listed below.

Federal

- U.S. Fish and Wildlife Service (USFWS), Section 10 Incidental Take Permit and Habitat Conservation Plan (if required)

State

- Lahontan Regional Water Quality Control Board (RWQCB)
 - Water Quality Certification (401 Permit)
 - Waste Discharge Requirements
 - National Pollutant Discharge Elimination System (NPDES) Construction General Permit
- California Department of Fish and Wildlife (CDFW)
 - Section 1600 et seq. (Lake and Streambed Alteration Agreement) (if required)
 - Section 2081 Permit (Incidental Take Permit) (if required)
 - Western Joshua Tree Conservation Act Incidental Take Permit (if required)
- California Department of Transportation (Caltrans)
 - Oversized Loads Permit (if required)

Local

Kern County

- Consideration and Certification of Final EIR
- Adoption of 15091 Findings of Fact and 15093 Findings and Statement of Overriding Considerations
- Approval of proposed Mitigation Monitoring and Reporting Program
- Approval of Amendments to the Kern County General Plan
- Approval of Zone Change
- Approval of Conditional Use Permits
- Approval of Precise Development Plan
- Approval of Zone Variances
- Approval of Kern County Grading Permits
- Approval of Kern County Building Permits
- Fire Safety Plan
- Environmental Health Permits

Eastern Kern Air Pollution Control District (EKAPCD)

- Approval of Fugitive Dust Control Plan
- Authority to Construct (ATC)
- Permit to Operate (PTO)
- Any other permits as required

The preceding discretionary actions/approvals are potentially required and do not necessarily represent a comprehensive list of all possible discretionary permits/approvals required. Other additional permits or approvals from responsible agencies may be required for the proposed project.

3.9 Cumulative Projects

CEQA requires that an EIR evaluate a project's cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of other related past, present, and reasonably foreseeable future projects. As set forth in the *CEQA Guidelines*, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, Title 14, Section 21083(b), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to the *CEQA Guidelines*:

“Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.*
- (b) The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Section 15355).*

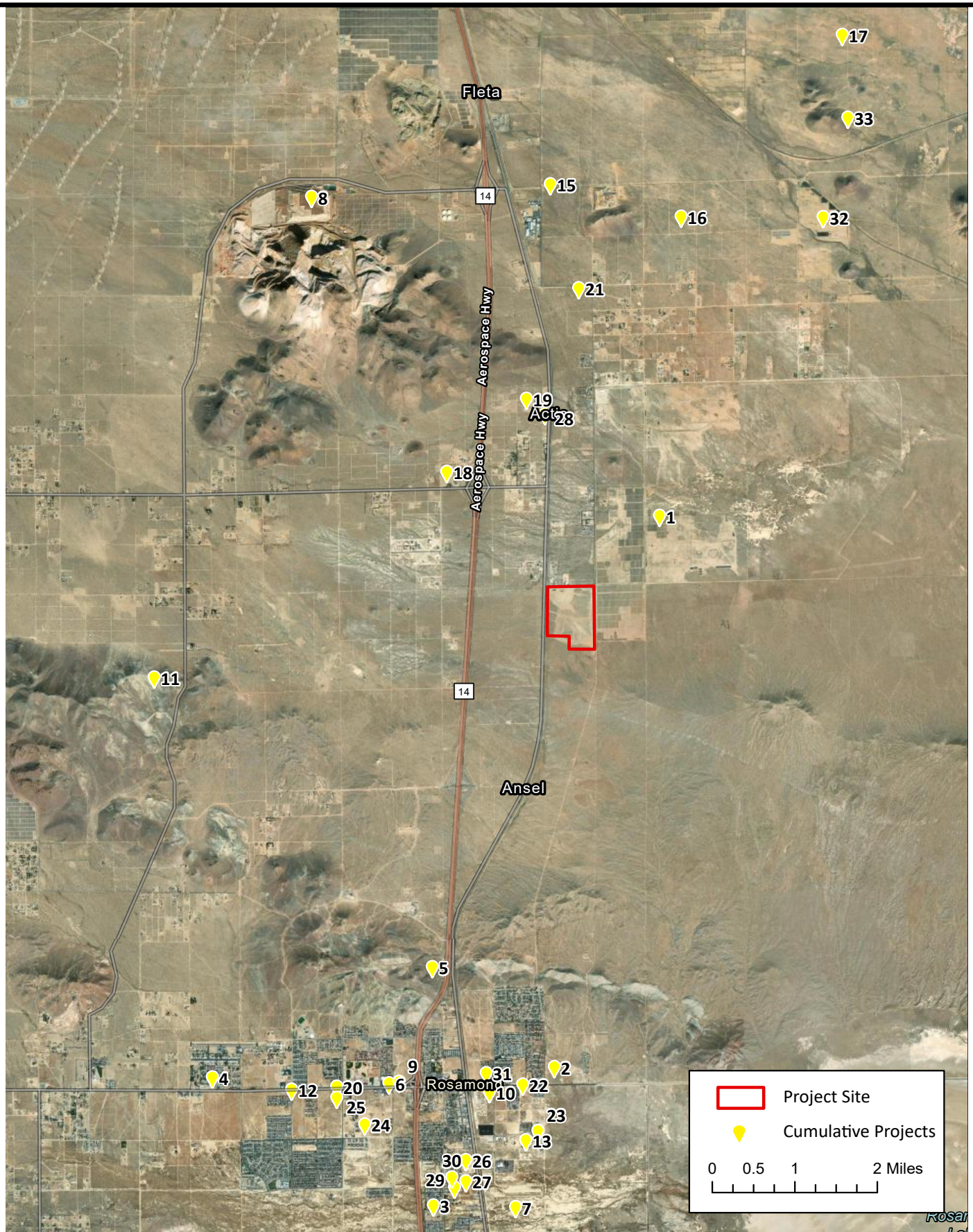
In addition, as stated in *CEQA Guidelines*, it should be noted that:

“The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project’s incremental effects are cumulatively considerable.” (CCR, Title 14, Division 6, Chapter 3, Section 15064[h][5]).

Cumulative impact discussions for each environmental topic area are provided at the end of each technical analysis presented in Chapter 4 of this EIR. As previously stated, and as set forth in the *CEQA Guidelines*, related projects consist of “closely related past, present, and reasonably foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area” (CCR, Title 14, Division 6, Chapter 3, Section 15355).

The geographic scope for the cumulative impact analysis is the western portion of Antelope Valley. The central portion of the Antelope Valley is entirely within Kern County with the eastern portion border San Bernardino County and the southern portion bordering Los Angeles County. The valley is formed by the Tehachapi Mountains to the northwest and San Gabriel Mountains to the southwest. The western Antelope Valley is triangularly shaped and is about 35 miles from west to east and 40 miles from north to south at its widest points. This geographic scope is selected because of its relatively uniform terrain, soil conditions, climate, habitat value, low population and development density relative to areas east of SR-14, and the region’s common groundwater basin and water supply considerations. However, when appropriate (as determined by the impact being analyzed), a smaller or larger geographic scope was selected.

Table 3-3: Cumulative Projects List, shows the related projects considered in the cumulative analysis and focuses on similar projects within the aforementioned region but closer proximity to the proposed project. Additionally, **Figure 3-16: Cumulative Project Map**, illustrates the location of the projects within the proposed project’s vicinity.



Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 3-16: Cumulative Projects Map

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02, Sec. 27 - T10N/R12W



Kern County
 Planning & Natural
 Resources Department



Table 3-3: Cumulative Projects List

Project Name	Map Label Number	Location	Project Description	Permit Request	Project Site APN	Acreage/ Square Feet	Project Status
Edwards Air Force Base Solar Project*	1	NW Corner Edwards Air Force Base	Solar energy facility anticipated to produce between 100MW to 750MW	Franchise Agreement	Multiple	4,876	Completed/ Constructed
Investment Concepts, Inc.**	2	NE Corner of Rosamond Blvd and United St	Conditional Use Permit 118 Multi Unit apartment complex	Conditional Use Permit 35	471-112-06	13.34	Applied
Dewalt Corporation for Rosemond 5 Properties, LLC**	3	¼ mile South of 20 th St West and Marie Avenue	A proposal to construct an 89-unit multifamily project	TTR 7362; ZV 17; 18	473-022-23	16.4	Approved
Dewalt Corporation**	3	1701 20th St	Precise development plan to facilitate development of 87 duplex structures (174 units)	Sec 29/T9N/R12W	473-022-23	16.4	Approved
Investment Concepts, Inc.**	4	¼ miles west of Rosamond Boulevard and 40 th Street W	Conditional use permit for an apartment complex	CUP 2	252-161-49	2.51	Approved
Kern County Planning Department**	4	Northeast corner Sedona Street and Rosamond Blvd	Kern County Housing Element Implementation 2022; Zone Change to R-3; Site No. 6	ZCC 159	252-161-49	2.52	Approved
Westpark, LLC – Howard Field**	5	1.5 miles SW of Dawn Road and SR 14	Proposed Hotel Development	GPA, ZCC, PD	471-022-07	460	Applied
Halferty Development Company, LLC**	6	SW corner of Rosamond Boulevard and 25th Street West	Precise development plan for mixed commercial, retail development	PD16	251-181-145; 251-181-152	18.61	Approved
BHT Developers, LLC**	7	1 1/4 mile south of Rosamond Boulevard and 15th St W	Auto Auction Facility	CUP	473-023-042; 473-023-059; 473-023-067; 473-040-061	172	Applied

Golden Queen Mining Company, LLC**	8	2 miles southwest of Silver Queen Road and SR 14	Proposed addendum to an EIR approved for a surface mining and reclamation plan	CUPs	429-190-069	44.18	Approved
Intertex Property Advisors, Inc.**	9	SE Corner of Rosamond Boulevard and 25th St W	Precise development plan for Auto Service Station, Motel, Retail, and Restaurants.	PD	251-120-010	49.41	Applied
R.E. McCollum LLC**	10	SW Corner of Rosamond Boulevard and 15th St W	Precise development plan for self-storage facility	PD	258-090-02	28.93	Applied
CalPortland Company**	11	West side of Mojave Tropico Road; 2 miles south of Backus	New mining and Reclamation; 15MM Tonnes of volcanic tuff Gem Hill - Nov 2021 NOP Circulating; portions of five APNs	CUP 45	345-294-17; Multiple	58.14	Approved
FH II LLC dba Frontier Communities**	12	1000 ft south of Rosamond Blvd and 35th Street West	Change in zoning to allow for 120 Unit SFR Development	ZCC 121	472-100-63	30.15	Approved
Garro Karakoulouian**	13	1/4-mile SE of Orange St and 15th St W	Conditional Use Permit to allow an auto dismantling & recycling facility	CUP	258-160-26	5	Applied
SSI Rosamond Solar, LLC**	14	1/2 Mile east of Patterson Road and SR 14	Solar Array Accessory to Water Treatment Facility	CUP 36	471-040-01	163.9	Approved
True North Renewable Energy, LLC by QK**	15	South side of Silver Queen Road; 9 miles northeast of Rosamond and 4 miles southeast of Mojave	GPA and SPA to Kern County General Plan and Willow Spring Specific Plan to designate the site as Solid Waste Disposal Facility and CUP to allow a renewable energy facility on 117 acres.	GPA/SPA/CUP	429-101-30 through 429-101-37	117	Approved
Capella Solar Energy Project by Heliogen SR1, LLC**	16	Approximately 2 miles east of SR 14; South side of Silver Queen Road	A change in zone classification from A-1 to A; A Conditional Use Permit to allow 5 MW modular commercial concentrating solar power plant and a 330 ft tall power tower; and a Street	ZCC/CUP/Vacation	429-060-13 through 429-060-19	142	Processing

			Vacation of Farlin Street which runs thru center of property on 142 acres.				
Enterprise Solar Storage, LLC**	17	Nestled between SR 14 and SR 58 West; south of Mojave Air and Space Port	600-megawatt (MW) photovoltaic (PV) solar facility with battery energy storage capacity of up to 4,000 megawatt-hours (MWh) on approximately 2,658 acres across 152 privately owned parcels	GPA/ZCC/CUP /Vacation	428-171-07; Multiple	2,658	Processing
Castellanos Truck Parking and Storage**	18	1/4 west of SR 14 and Backus Road Intersection	General Plan Amendment, Zone Classification Change, Precise Development plan to allow a Truck Parking and Storage Facility	GPA/ZCC/PD	430-053-08	9.55	Applied
Babkan Safarian & Denise Rodriquez**	19	1 mile NE of SR 14 and Backus Road Intersection	General Plan Amendment, Zone Classification Change to allow vehicle & cargo container storage	GPA/ZCC	430-141-27	2.54	Applied
Irvine Carrillo**	20	Southwest corner of Rosamond Blvd and 30th Street west	Precise Development Plan for commercial development	PD	472-100-15	5.58	Applied
Antonio & Jeanette Vergara**	21	Southwest corner of Reed Ave and Lone Butte	Conditional Use Permit for construction materials recycling facility	CUP	429-010-02	39.09	Applied
Carl Wood**	22	Southeast corner of Rosamond Blvd	Precise Development Plan for new retail development	PD	258-170-16 & 258-170-17	4.77	Applied
Walter DeBoer, BRPH**	23	Southwest corner of Orange Street and 10th Street West	Modification to Precise Development Plan for change of occupancy to manufacturing	PD MOD	258-160-42	9.32	Applied
Silvia Valdez**	24	Northwest corner of Orange St and Clark St	Conditional Use Permit for installation of mobilehome greater than 10 years old	CUP	251-191-13	2.52	Applied
Aaron Rivani by Cindy Parra**	25	Southwest corner of Rosamond Blvd and 30th Street west	Zone Classification Change from A-1 (Limited Agriculture) to R-1 (Low-density Residential)	ZCC	472-100-16	5.58	Applied

Kern County Planning Department**	26	Generally, NW corner of Sierra Highway and Marie Ave	Kern County Housing Element Implementation 2022; Zone Change to R-3; Site No. 4	ZCC 42	258-120-12; 258-130-16; 258-150-02; 258-130-23	8.89	Approved
Kern County Planning Department**	27	Southwest corner of Marie Ave and Sierra Highway	Kern County Housing Element Implementation 2022; Specific Plan Amendment to 5.1/2.5 and Zone Classification Change to R-3; Site No. 9	SPA 20, ZCC 125	473-031-03	4.92	Approved
Kern County Planning Department**	28	1.5-mile NNW of project site; west side of Sierra Hwy	Kern County Housing Element Implementation 2022; Zone Change to R-3; Site No. 2	ZCC 65	430-030-10	6.97	Approved
Kern County Planning Department**	29	600 feet southeast from Marie Ave and 20th St W	Kern County Housing Element Implementation 2022; Zone Change to R-3; Site No. 7	ZCC 123	473-031-09	2.5	Approved
Kern County Planning Department**	30	Southwest corner of Marie Ave and 20th St W	Kern County Housing Element Implementation 2022; Zone Change to R-3; Site No. 5	ZCC 122	473-031-27	2.09	Approved
Matthew McCormick**	31	400 feet northwest from 15th St W and Rosamond Blvd intersection	Conditional Use Permit for single family residence in C-2 (General Commercial) District	CUP	251-025-09	0.15	Applied
Sanborn Solar, LLC**	32	1.5 miles SE of Mojave; 7.5 miles NE of Rosamond	300 MW Solar Facility with 3 GW of energy storage on approx. 2,006 acres.	SPA, ZCC, CUP	Multiple	2,006	Approved
Bellefield Solar Project by 50LW 8me LLC**	33	SW of Hyundai-Kia proving ground	1,500 MW solar photovoltaic power generating facility with approximately 1,500 MWh storage on approximately 8,371 acres	GPA, SPA, ZCC, CUP	Multiple	8, 371	Approved

NOTES:

* Indicates that the cumulative project is located within 1 mile of the proposed project.

** Indicates that the cumulative project is located within 6 miles of the proposed project.

Section 4.1

Aesthetics

4.1.1 Introduction

This section of the EIR discusses impacts associated with the potential for the project to degrade the existing visual character or quality of the project site and its surroundings through changes in the existing landscape. Potential effects are evaluated relative to important visual features (e.g., scenic highways, scenic features) of the existing visual landscape and its users. Degradation of the visual character of a site is addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment, and the project-related modifications that would alter the visual setting. Visual simulations were created by Kimley-Horn and these illustrate various representative views of the project site after buildout of the proposed project. The locations of the four (4) visual simulations are shown in **Figure 4.1-1: Key Observation Point (Kop) Locations**, and the visual simulations are shown further below. The terms and concepts are used in the discussion below are used to describe and assess the aesthetic setting and impacts from the project.

Visual Concepts and Terminology

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Depending on the extent to which a project's presence would alter the perceived visual character and quality of the environment, a visual or aesthetic impact may occur.

The following terms and concepts are used in the discussion below to describe and assess the aesthetic setting and impacts from the project:

- **Glare** – The introduction of features with reflective surfaces has the potential to result in visual impacts. Reflected light can cause glint (a quick reflection) and glare (reflection that lasts for a longer duration), which depending on the intensity and duration, can create hazards for pilots, air traffic control personnel, motorists, and other potential receptors. Glare can also draw greater attention to objects in a landscape and contribute to visual effects. For the purposes of the EIR discussion, any light reflected off project facilities is referred to as glare.
- **Viewshed** – defined as the surrounding geographic area from which the project is likely to be seen, based on topography, atmospheric conditions, land use patterns, and roadway orientations. “project viewshed” is used to describe the area surrounding a project site where a person standing on the ground or driving a vehicle can view the project site.
- **Key Observation Point (KOP)** – one or a series of points on a travel route or at a sensitive use area, such as a residence, where the view of a project would be the most revealing.
- **Scenic highway** – any stretch of public roadway that is designated as a scenic corridor by a federal, State, or local agency.
- **Sensitive receptors or sensitive viewpoints** – viewer responses to visual settings are inferred from a variety of factors, including distance and viewing angle, type of viewers, number of

viewers, duration of view, and viewer activities. The viewer type and associated viewer sensitivity are distinguished among project viewers in recreational, residential, commercial, military, and industrial areas. Viewer activities can range from a circumstance that encourages a viewer to observe the surroundings more closely (such as recreational activities), to discouraging close observation (such as commuting in heavy traffic). Residential viewers typically have extended viewing periods and are generally considered to have high visual sensitivity. For this reason, residential views are typically considered sensitive. Viewers from public parks, recreational trails, and/or culturally important sites also have high visual sensitivities; therefore, such locations are considered sensitive viewpoints. Viewers in commercial, military, and industrial areas are not typically focused on the views and the areas do not promote enjoyment of views; therefore, viewers in these locations are assumed to have low sensitivity.

- **Scenic Quality** - Scenic quality refers to the visual appeal of a landscape relative to desired scenic values and the abundance or scarcity of similar qualities in the region. Scenic quality can be measured by evaluating the presence or absence of scenic features and the intrusion of other features that detract from the scenic features.
- **Scenic Vista** – an area identified or known for high scenic quality. Scenic vistas may be designated by a federal, State, or local agency. Scenic vistas can also include an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing.
- **Viewing distance zones** – the landscape is subdivided into three distance zones based on relative visibility from travel routes or observation points. The three zones are: foreground, middleground, and background. The foreground zone includes areas less than ¼ mile away, the middleground zone includes areas ¼ mile to 3 miles away, and the background zone includes areas beyond 3 miles.
- **Viewers and Viewer Sensitivity.** Viewer sensitivity refers to responses to visual changes in a landscape that can be inferred from a variety of factors, including distance and viewing angle, type of viewers, number of viewers, duration of view, and viewer activities. The viewer type and associated viewer sensitivity are distinguished among project viewers in recreational, residential, commercial, military, and industrial areas. Viewer activities can be stationary or mobile and involve varying circumstances that encourage close observation of a landscape (i.e., recreational activities) or discouraging close observation of a landscape (i.e., commuting in traffic). Residential viewers have extended viewing periods and are generally considered to have high visual sensitivity. For this reason, residential views are typically considered sensitive; however, CEQA does not require an analysis of impacts on private views. Viewers from public parks, recreational trails, and/or culturally important sites may also have high visual sensitivities; therefore, such locations are considered sensitive VPs. People located in commercial, military, and industrial areas are not typically focused on views and such areas do not promote typical scenic values; therefore, viewers in these locations are assumed to have low sensitivity. In general, residents and others participating in recreational activities (e.g., hikers, equestrians, tourists) are expected to be more concerned with scenery and landscape character. Local motorists who commute daily through the same landscape may have a moderate concern for scenery and landscape character, while regional motorists or people who

work within highly urbanized areas are expected to have a lower concern for scenery and landscape character.

- **Visual sensitivity** – the overall measure of an existing landscape’s susceptibility to adverse visual changes. When viewing the same landscape, people may have different responses to that landscape and any proposed visual changes, based upon their values, familiarity, concern, or expectations for that landscape and its scenic quality. Because each person’s attachment to and value for a particular landscape is unique, visual changes to that landscape inherently affect viewers differently. Nonetheless, generalizations can be made about viewer sensitivity to scenic quality and visual changes.

Residents and recreational users (e.g., hikers, equestrians, tourists, etc.) are expected to be highly concerned with scenery and landscape character. Local motorists who commute daily through the same landscape may have a moderate concern for scenery, while people who work within highly urbanized areas may generally have a lower concern for scenic quality or changes to existing landscape character.

The visual sensitivity of a landscape is affected by the viewing distances at which it is seen. The visual sensitivity of a landscape also is affected by the travel speed at which a person is viewing the landscape (high speeds on a highway, low speeds on a hiking trail, or stationary at a residence).

The same feature of a project can be perceived differently by people depending on the distance between the observer and the viewed object. When a viewer is closer to a viewed object in the landscape, more detail can be seen, and there is greater potential influence of the object on visual quality because of its form or scale (relative size of the object in relation to the viewer). When the same viewed object is viewed at background distances, details may be imperceptible but overall forms of terrain and vegetation are evident, and the horizon and skyline are dominant. In the middle ground, some detail is evident in the foreground and landscape elements are seen in context with landforms and vegetation patterns in the background. The same levels of sensitivity apply in this case as with close-up and further away views—views from cars at high speeds would be less sensitive to changes than views at low speeds because more details can be drawn from the landscape at lower speeds.

4.1.2 Environmental Setting

Regional Character

The project site is located within the western Antelope Valley, in the southeastern portion of Kern County. The project site is located approximately 5 miles north of the unincorporated community of Rosamond and is within the western Mojave Desert. The project site is approximately eight miles southeast from the unincorporated community of Mojave in Kern County.

The Antelope Valley encompasses approximately 2,400 square miles in northern Los Angeles County, southern Kern County, and western San Bernardino County. The region is on the south side of the Tehachapi Mountains, and is dominated by desert vegetation. Topography in the Antelope Valley is relatively flat, with elevations gradually rising towards the northwest, providing open, expansive views of hills and mountains that surround the valley. Land uses in the Antelope

Valley include a mix of undeveloped land, agriculture, solar and wind energy production facilities and transmission facilities, low-density residential development, and other uses.

The aesthetic features of the Antelope Valley include the southeastern flank of the Tehachapi Mountains, characterized by terrain that gradually slopes from northwest to southeast. Existing development in the project vicinity includes industrial warehousing, rural access roads, scattered rural residences, producing and non-producing water wells, off-highway vehicle use, cattle ranching and maintenance facilities, mining, wind and solar energy, and meteorological towers.

The Pacific Crest National Scenic Trail (commonly known as the Pacific Crest Trail, or PCT) is designated as a National Scenic Trail and located approximately 13 miles northwest of the project site. Forest, parkland, and preserve areas in the vicinity of the project site include the Angeles National Forest located approximately 31 miles south; Tehachapi Mountain Park is approximately 25 miles northwest; Tomo-Kahni State Historic Park is located approximately 18 miles northwest, Red Rock Canyon State Park is approximately 30 miles north; and the Antelope Valley California Poppy Reserve located approximately 20 miles to the southwest.

Local Character

The nearest populated areas to the project site in Kern County are the unincorporated communities of Rosamond, Mojave, and Edwards. Rosamond is approximately 5 miles south of the project site and Mojave is approximately 8 miles north, while Edwards is approximately 11 miles east. Existing development in the area includes rural access roads, scattered rural residences, producing and non-producing water wells, off-highway vehicle use, and wind and solar energy.

The project site can be accessed by Sopp Road from the north and bordered by Lone Butte Road to the east and Sierra Highway to the west; there are no bordering roads to the project site from the south. Most of the surrounding area is undeveloped. However, there are two light industrial developments on the northern side of Sopp Road and one light industrial development and two residences that are catercorner (northwest) of the project site.

Elevations at the project site are between approximately 2,554 and 2,564 feet above mean sea level (amsl). As described in more detail in Section 4.4, *Biological Resources*, the primary land cover of the biological study area (BSA) is red brome or Mediterranean grass grasslands with greatly diminished habitat values. However, some areas within the BSA contain native vegetation communities that provide suitable habitat for certain native flora and fauna, including special status plant and wildlife species. Western Joshua tree was recorded within the BSA and is currently a candidate threatened species by the CDFW under the California Endangered Species Act (CESA). Additionally, there are no mapped or observed jurisdictional aquatic features within the project site.

Scenic Highways

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there are no Designated State Scenic Highways within Kern County (see Section 4.1.3, *Regulatory Setting*, below for more information on the State Scenic Highway Mapping System). The closest Eligible Scenic Highways are State Route 58, located approximately 11 miles north of the project site. Additionally, State Route 14 is considered an Eligible Scenic Highway but that designation starts approximately where it meets State Route 58 which is about

11 miles north of the project site. Prominent views along State Route 14 and State Route 58 add to the scenic elements in the landscape for motorists and include panoramic views of the open Mojave Desert landscapes and surrounding mountains, including the Tehachapi Mountains, San Gabriel Mountains, and southeastern extent of the Sierra Nevada mountains. In addition to the State Scenic Highway Mapping System, the Kern County General Plan Circulation Element designates scenic routes and defines a scenic route as any freeway, highway, road, or other public right-of-way, which traverses an area of exceptional scenic quality and must be officially set as a Scenic Route by the Kern County Board of Supervisors or the State of California. The closest designated scenic route is State Route 2, located approximately 49 miles southeast of the project site.

Lighting Environment

The project site does not currently contain any substantial sources of lighting. Minimal offsite fixed lighting in the area immediately surrounding the project site includes light industrial buildings, which contain small lighting fixtures installed on building exteriors, and main driveways or gates. Lighting fixtures related to the adjacent Edwards Air Force Base solar project may also contribute to the existing lighting environment. These sources of lighting also produce a limited amount of nighttime lighting. The main source of nighttime lighting, although insubstantial, is from motorists passing through the area with headlights on.

Solar Panel Glare Potential

The proposed project includes an accessory, 63-acre solar array surrounding the western and southern portions of the facility. The proposed solar array would be comprised of multiple solar panels. A solar panel comprises numerous solar cells. A solar cell differs from a typical reflective surface in that its surface is microscopically irregular and designed to trap the rays of sunlight for the purposes of energy production. The intent of solar technology is to increase efficiency by absorbing as much light as possible (which further reduces reflection and glare).

A common misconception about solar photovoltaic (PV) panels is that they inherently cause or create “too much” glare, posing a nuisance to neighbors and a safety risk for pilots. In certain situations, the glass surfaces of solar PV systems can produce glint (a momentary flash of bright light) and glare (a reflection of bright light for a longer duration); however, light absorption, rather than reflection, is central to the function of a solar PV panel so that it may absorb solar radiation and convert it to electricity. Solar PV panels are constructed of dark-colored (usually blue or black) materials and are covered with anti-reflective coatings. Modern PV panels reflect as little as two percent of incoming sunlight, which is similar to water and less than soil and wood shingles. Some of the concern and misconception is likely due to the confusion between solar PV systems and concentrated solar power (CSP) systems. CSP systems typically use an array of mirrors to reflect sunlight to heat water or other fluids to create steam that turns an electric generator (Palmer and Laurent, 2014).

Despite their low potential to create glare, PV panels can reflect sunlight skyward toward the light source, creating a potential glare impact for aircraft in the area. The effect is similar to what a motorist experiences when the sun is low in the sky and the car passes between the sun and a glass-fronted building that has been treated with an anti-reflective coating. If the motorist is heading directly toward the building, the glare would be in the motorist’s eyes. Otherwise, the motorist

would have to rotate his or her head to observe the glare off to the side. Because aircraft typically travel at a higher rate of speed than vehicles, the effect is momentary, lasting only as long as the angle between the sun, water body, and aircraft is maintained. Unless an aircraft were descending at an angle sloped directly at the solar array with the sun directly behind the aircraft, any glare that might occur from solar panels would be below the pilot's horizon. In the project area, effects on eastbound motorists would likely be greatest in the early evening hours, when the sun is at its lowest arc in the western horizon. Glare would have its greatest impact on westbound travelers in the early morning hours, when the sun is rising in the east.

4.1.3 Regulatory Setting

Federal

U.S. Department of the Interior, National Park Service, National Trails System Act

The National Trails System Act of 1969 seeks to preserve scenic and natural qualities along trails. The National Trails System Act assigns management responsibility for trails to various federal resource agencies, depending on which agency holds jurisdiction over the land on which the trail is located in a given area. The PCT was created under the National Trails System Act to provide for outdoor recreation opportunities and the conservation of significant scenic, historic, natural, or cultural qualities (National Park Service, 2016). PCT's southern terminus is on the U.S. border with Mexico, just south of Campo, California, and its northern terminus on the Canada–US border on the edge of Manning Park in British Columbia; its corridor through the U.S. is in the states of California, Oregon, and Washington. As stated previously, the PCT is located approximately 13 miles northwest of the proposed project site. Views of the project components from the PCT would be limited given their distance from the PCT, and intervening topography between viewers along the PCT and the project components would partially obscure views of the project components.

State

California Scenic Highway Program

Caltrans manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are designated or eligible for designation as scenic highways. A highway may be designated as scenic based on certain criteria, including how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in Sections 260 through 263 of the Streets and Highways Code.

As described in Section 4.1.2, *Environmental Setting*, there are no Designated State Scenic Highways within Kern County and the project site is not located directly adjacent to any eligible State Scenic Highway. The closest Eligible Scenic Highways are State Route 58, located

approximately 11 miles north of the project site. Additionally, State Route 14 is considered an Eligible Scenic Highway but that designation starts approximately where it meets State Route 58 which is about 11 miles north of the project site (Caltrans, 2021).

Local

Construction and operation of the micro mill, solar facility, and ancillary structures would be subject to policies and regulations contained within the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to aesthetics. The policies, goals, and implementation measures in the Kern County General Plan related to aesthetics that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the proposed project. These measures are not listed below, but as stated in Chapter 2, *Introduction*, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Kern County General Plan

The Land Use, Open Space, and Conservation Element of the Kern County General Plan evaluate the visual and aesthetic setting of Kern County and assess the potential for visual impacts. The Kern County General Plan Energy Element sets forth policies to encourage orderly energy development in visually sensitive areas.

The Kern County General Plan Circulation Element also provides a discussion regarding Scenic Routes. A Scenic Route is defined in the Kern County General Plan as any freeway, highway, road, or other public right-of-way which traverses an area of exceptional scenic quality. A roadway can only be designated as a scenic route by direct action of the Kern County Board of Supervisors or the State of California. A route may not be selected as scenic until a visual assessment of the route has been conducted to determine if the route meets the current scenic highway criteria as mentioned above and to what extent development has encroached on the scenic views. The County also has to prepare and adopt a plan and program for the protection and enhancement of adjacent roadside viewshed land. As such, goals, policies and implementation measures regarding Scenic Routes in the Circulation Element are focused on the need for the County to further develop their Scenic Route program and measures to protect scenic resources, which are not applicable to the proposed project.

The Kern County General Plan acknowledges the three routes identified as part of the California Scenic Highways Master Plan that are designated “Eligible State Scenic Highway” within the County. Route 1, which begins north of Mojave and continues to the Inyo County Line, consists of State Route 14 and State Highway 395. Route 2 consists of State Route 58 between Mojave and Boron. Route 3 consists of 5 miles of State Route 41 in northwest Kern County. The project site would not be visible from any of these Routes. The Kern County General Plan provides general goals and policies for design features of development projects in order to reduce their impacts to scenic resources.

As State Route 58 and State Route 14 are not officially designated, they are not considered scenic highways for this analysis; therefore, no policies regarding development within Scenic Routes would be applicable to the project. However, the Kern County General Plan provides general goals

and policies for design features of development projects in order to reduce their impacts to scenic resources. The policies and implementation measures in the Kern County General Plan for aesthetic resources applicable to the proposed project are provided below.

Chapter 1: Land Use, Open Space, and Conservation Element

1.10.7 Light and Glare

Policies

- Policy 47: Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.
- Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.

Implementation Measures

- Measure AA: The County shall utilize CEQA guidelines and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.

Kern County Development Standards

The Kern County Development Standards have specific regulations pertaining to lighting standards, including the requirement that lighting must be designed so that light is reflected away from surrounding land uses so as not to affect or interfere with vehicular traffic, pedestrians, or adjacent properties

Kern County Zoning Ordinance

Chapter 19.80.030 – Development and Performance Standards – Commercial and Industrial Districts

- Standard J: All exterior lighting shall be directed away from adjacent properties and roads. When lighting will be visible from a residential district or adjacent public roads, the lighting will be visible from a residential district or adjacent public roads, the lighting standards shall be equipped with glare shields or baffles and shall not exceed forty (40) feet in height above grade.

Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting)

In November 2011, Kern County approved a Dark Skies Ordinance. The purpose of this ordinance is to maintain the existing character of Kern County by requiring a minimal approach to outdoor lighting, recognizing that excessive illumination can create a glow that may obscure the night sky and excessive illumination or glare may constitute a nuisance. The ordinance provides requirements for outdoor lighting within specified unincorporated areas of Kern County in order to accomplish the following objectives:

- Objective 1: Encourage a safe, secure, and less light-oriented night-time environment for residents, businesses and visitors.
- Objective 2: Promote a reduction in unnecessary light intensity and glare, and to reduce light spillover onto adjacent properties.
- Objective 3: Protect the ability to view the night sky by restricting unnecessary upward projections of light.
- Objective 4: Promote a reduction in the generation of greenhouse gases by reducing wasted electricity that can result from excessive or unwanted outdoor lighting.

Kern County Development Standards

The Kern County Development Standards have specific regulations pertaining to lighting standards including the requirement that lighting must be designed so that light is reflected away from surrounding land uses so as not to affect or interfere with vehicular traffic, pedestrians, or adjacent properties.

4.1.4 Impacts and Mitigation Measures

This section describes the impact analysis relating to aesthetics for the proposed project. It describes the methods used to determine the impacts of the project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, where applicable.

Methodology

The project's potential impacts to aesthetics have been evaluated using a variety of resources. In general, the potential aesthetic, light, and glare impacts associated with development projects are evaluated on a qualitative basis. This visual impact assessment is being utilized to identify and assess any potential long-term adverse visual impacts on aesthetics and visual resources that might result from implementation of the project during construction and operation. This assessment is based on the approved visual assessment practices employed by the FHWA (FHWA, 2015), the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and other federal regulatory agencies. This method includes:

- Defining the project and its visual setting by assessing the project proponent's submitted project application materials, including plans and descriptions, and reviewing Google Earth Pro aerial photographs and street-level photography, Kern County Geographic Information System (GIS) topographic and land use data, and U.S. Geological Survey (USGS) topographic data;
- Conducting a field visit of the project site and vicinity to document the following:
 - Project site's visual characteristics.
 - Project vicinity's visual characteristics.

- Establish a visual characteristic baseline.
- Location of visual (sensitive) receptors in the vicinity.
- Establishing three Key Observation Points (KOPs) within vicinity from which to evaluate potential visual impacts resulting from implementation of the proposed project.
 - KOPs that are the most representative and important VPs identified during the field survey to evaluate potential visual impacts that would result from the project.
- Preparing visual simulations of post-development views from the KOPs.
- Assessing the project's impacts to sensitive views by applying the visual quality rating system to each of the visual simulations.
- Proposing methods to mitigate or reduce any potentially significant visual impacts identified.

The evaluation of project impacts is based on professional judgment, analysis of the Kern County General Plan goals and policies related to visual resources, and the significance criteria established by CEQA *Guidelines*, Appendix G. More detailed information on the methodology behind the selection of KOPs and rating visual quality is provided below.

Selection of Key Observation Points (KOPs)

KOPs were selected to represent views that would be experienced from sensitive viewpoints. KOPs are single viewpoints that appropriately reflect the impact implementation of the project would have on one or more sensitive receptors. Sensitive receptors near the project site fall into the following categories: motorists, employees, and residents. KOPs were identified based on review of available land use data, preliminary viewshed analysis, and a review of aerial maps.

The process of identifying KOPs focused on selecting viewpoints that could be used to accurately represent views from a broader range of viewpoints, particularly viewpoints from area sensitive receptors. Sensitive receptors near the project site include motorists, and viewers of the project site from rural residences along local roads.

The familiarity with the view also influences how much attention is spent on the visual environment. Regular motorists may be highly familiar with the view and sometimes pay less attention; however, these motorists tend to be much more sensitive to changes in that view. People who are less familiar with the view may spend more time looking at the surrounding land, but would not notice changes in the view. The majority of existing motorists are likely to be residents driving to and from home.

The project site is located in a dispersed industrial area. As described in **Section 4.1.2, *Environmental Setting***, scattered residences are found surrounding the project site. Among these residents, those with direct views of the project site from their homes would tend to be the most sensitive to changes in the view. These residents tend to have much more familiarity with the existing viewshed and a heightened sensitivity to any visual changes within the landscape.

Four (4) KOPs were selected for visual simulation to create post-development views. The evaluated KOPs are mapped on **Figure 4.1-1, *Key Observation Point (KOP) Locations***, and described below in **Table 4.1-1, *Key Observation Points***. The KOPs selected for simulation were chosen because

they represent views residents, motorists, and recreational users would experience from their adjacent homes and local roadways, respectively, when viewing the project site.

Table 4.1-1: Key Observation Points







KOP	Location	Representative Sensitive Viewers
1	From State Route 14 looking east toward the project site.	Motorists on State Route 14 as they pass the project site.
2	From Sierra Highway looking east towards the project site.	Motorists on Sierra Highway as they pass the project site.
3	From the intersection of Sopp Road and Sierra Highway looking southeast towards the project site.	Residents and motorists at Sopp Road and Sierra Highway located near the project site.
4	From the intersection of Sopp Road and Lone Butte Road looking southwest towards the project site.	Motorists on Sopp Road near the project site.

Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 4.1-1: Key Observation Point (KOP) Locations

PSGM3 Holdings Corp (Pacific Steel Group)

-  Site
-  STATE HWY
-  Arterials
-  Collectors
-  Dirt Roads
-  Key Observation Point (KOP)

APN: 431-010-02 & 431-030-02
Sec. 27 - T10N/R12W



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Simulation Preparation

Visual simulations of the proposed project from the identified KOPs were prepared to provide a representation of the pre- and post-project visual conditions as well as context for qualitative description of the aesthetic changes that would result from implementation of the proposed project. Photographs were taken during a site visit in April 2023 and simulations were prepared by Kimley-Horn using the assumptions and methodologies listed below in **Table 4.1-2: Visual Simulation Methodology and Assumptions**, below.

Table 4.1-2: Visual Simulation Methodology and Assumptions

Photography from Key Observation Points	<ul style="list-style-type: none"> • Photos were taken on a clear sunny day in April 2023. • Apple iPhone 12 Pro Max with a 5.1 mm camera.
Visual simulation assumptions	<ul style="list-style-type: none"> • Building height and architectural design. • Building color. • Silo design and height. • Fume Treatment Plant stack • Pad elevation. • Parking lot. • Landscaping plantings. • Solar modules would be up to 9 feet in height. • Modules on single axis tracking system were used to show the worst-case visual impact. • Solar module setbacks from property line ranges from 20-30 feet.
Methods	<p>Following data gathering phase, the process begins with a determination of proposed camera locations and/or station points with the County. Upon review and approval of camera locations by the County, Kimley-Horn coordinated the timing of the site photography and schedules the initial site visit with County staff and/or project planner. This includes identification of reference points with GPS coordinates and specific fields of vision for each view. Concurrently, the modeling team develops an exact computer model of the proposed micro mill and solar modules to illustrate elevations. Natural and finished buildings and solar pads, including existing and surrounding contextual elements such as streets, terrain, pads, and adjacent buildings (where applicable), were used as a reference. Upon completion of the 3D modeling phase realistic materials, maps, and textures are then applied. The next phase is assembly, during which the modeling is inserted into photographs taken during the field study using a full frame camera and camera match technology. 3D pads and boundary outlines are used to situate the micro mill and solar modules to the proposed positions as shown on the cad provided. During this process, a computer model camera is aligned with the onsite photography to depict the project setting within each view. Lastly, a proposed landscape concept is applied (where applicable) and final artistic touches are made to ensure accuracy, and that the look and feel is consistent with the vision of the project.</p>

A comparison of existing views from the KOPs with visual simulations depicting visible project features, aided in determining project-related impacts. The simulations present a representative sample of the existing landscape setting contained within the project site, as well as an illustration of how the project may look from the identified KOPs. Solar arrays are visually similar regardless of the manufacturer, but building characteristics will vary, project-to-project. Therefore, the proposed accessory solar array shown in the visual simulations are not necessarily identical to those that would be developed on the site but would be similar and provide a valid comparison to evaluate project impacts to aesthetics.

Rating Visual and Scenic Quality

“Visual quality” is a measure of a landscape or view’s visual appeal. While there are a number of standardized methods for rating visual quality, the “Scenic Quality Rating Criteria” method utilized by the BLM is believed to be superior because it allows the various landscape elements that comprise visual quality to be easily quantified and rated with a minimum of ambiguity or subjectivity. Scenic quality refers to the visual appeal of a landscape relative to desired scenic values and the abundance or scarcity of similar qualities in the region. Scenic quality can be measured quantitatively by evaluating the presence or absence of scenic features and the intrusion of features that detract from the scenic features.

According to this method, visual and scenic quality can be rated according to the presence and characteristics of seven key components of the landscape. These components include landform, vegetation, water, color, adjacent scenery, scarcity and cultural modifications.

1. The **landform** component of the visual quality rating criteria takes into account the fact that topography becomes more interesting visually as it gets steeper or more massive, or more severely or universally sculptured. Outstanding landforms may be monumental, (as found in Yosemite Valley), or they may be exceedingly artistic and subtle (such as certain badlands, pinnacles, arches, and other extraordinary formations).
2. The **vegetation** component of the rating criteria gives primary consideration to the variety of patterns, forms, and textures created by plant life. Short-lived displays are given consideration when they are known to be recurring or spectacular. Consideration is also given to smaller scale vegetation features that add striking and intriguing detail elements to the landscape (e.g., gnarled or wind beaten trees, Joshua trees, etc.).
3. The **water** component of the rating criteria recognizes that visual quality is largely tied to the presence of water in scenery, as it is that ingredient which adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration in selecting the rating score for the water component.
4. The **color** component of the visual quality rating criteria considers the overall color(s) of the basic components of the landscape (e.g., soil, rock, vegetation, etc.). Key factors that are used when rating the color of scenery are variety, contrast, and harmony.
5. The **adjacent scenery** component of the rating criteria takes into account the degree to which scenery outside the view being rated enhances the overall impression of the scenery under evaluation. The distance of influence for adjacent scenery normally ranges from 0 to 5 miles, depending upon the characteristics of the topography, the vegetation cover, and other such factors. This factor is generally applied to views that would normally rate very low in score, but the influence of the adjacent high visual quality would enhance the visual quality and raise the score.
6. The **scarcity** component of the visual quality rating criteria provides an opportunity to give added importance to one or all of the scenic features that appear to be relatively unique or rare within a region. There may also be cases where a separate evaluation of each of the key factors does not give a true picture of the overall scenic quality of an area. Often, it is a number of not so spectacular elements in the proper combination that produces the most pleasing and memorable scenery – the scarcity factor can be used to recognize this type of area and give it the added emphasis it should have.
7. The **cultural modifications** component of the visual quality rating criteria takes into account any man-made modifications to the landform, water, vegetation, and/or the addition of man-made

structures. Depending on their character, these cultural modifications may detract from the scenery in the form of a negative intrusion, or they may complement and improve the scenic quality of a view.

Based on the above criteria, views are rated numerically and a total score of visual quality can be tabulated. Based on the BLM's rating system, there are a total of 32 points possible. Views that score a total of 19 points or more are typically considered very high in visual quality. Views that score a total of 15 to 19 points are typically considered to have a high level of visual quality. Views that score a total of 12 to 15 points are typically considered to have an above average level of visual quality. Finally, views that score a total of 11 points or less are typically considered to have average visual quality. See **Table 4.1-3: Visual Quality Rating System**, for the point values associated with the various criteria.

An important premise of this evaluation method is that views with the most variety and most harmonious composition have the greatest scenic value. Another important concept is that man-made features within a landscape do not necessarily detract from the scenic value. In fact, certain man-made features that complement the natural landscape may actually enhance the visual quality. In making this determination, it is therefore important to assess project effects relative to the "visual character" of the project setting. Visual character is qualitatively defined by four primary components: form, line, color, and texture.

Projects that create a high level of contrast to the existing visual character of a project setting are more likely to generate adverse visual impacts due to visual incompatibility. Conversely, projects that create a low level of contrast to the existing visual character are less likely to generate adverse visual impacts due to inherent visual compatibility. On this basis, project modifications are quantified and evaluated for impact assessment purposes.

By comparing the difference in visual quality ratings from the baseline ("before" condition) to post-project ("after" condition) visual conditions, the severity of project related visual impacts can be quantified. However, in some cases, visual changes caused by projects may actually have a beneficial visual effect and may enhance scenic quality. The following designations are used to rank the significance of project impacts according to the pre- and post-project differences in numerical visual quality scores:

- **Potentially Significant Impact:** Any impact that could potentially lower the visual quality of an identified sensitive viewpoint by 2 points or more, and for which no feasible or effective mitigation can be identified.
- **Less-than-Significant Impact with Mitigation Incorporated:** Any impact that could potentially lower the visual quality of an identified sensitive viewpoint by two points or more, but can be reduced to less than two points with mitigation incorporated. Therefore, specific mitigation measures are provided to reduce the impact to a less-than-significant level.
- **Less-than-Significant Impact:** Any impact that could potentially lower the visual quality of an identified sensitive viewpoint by one point or less. In visual impact analysis, a less than significant impact usually occurs when a project's visual modifications can be seen but do not dominate, contrast with, or strongly degrade a sensitive viewpoint.
- **No Impact:** The project would not have an impact from an identified sensitive viewpoint. In visual impact analysis, there is no impact if the project's potential visual modifications cannot be seen from an identified sensitive viewpoint.

Table 4.1-3: Visual Quality Rating System

Key Factors	Rating Criteria and Score		
Landform	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing such as glaciers.	Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional.	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.
	If true Score 5	If true Score 3	If true Score 1
Vegetation	A variety of vegetative types as expressed in interesting forms, textures, and patterns.	Some variety of vegetation, but only one or two major types.	Little or no variety or contrast in vegetation.
	If true Score 5	If true Score 3	If true Score 1
Water	Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape.	Flowing, or still, but not dominant in the landscape.	Absent, or present but not noticeable.
	If true Score 5	If true Score 3	If true Score 1
Color	Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water or snow fields.	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element.	Subtle color variations, contrast, or interest; generally mute tones.
	If true Score 5	If true Score 3	If true Score 1
Influence of Adjacent Scenery	Adjacent scenery greatly enhances visual quality.	Adjacent scenery moderately enhances overall visual quality.	Adjacent scenery has little or no influence on overall visual quality.
	If true Score 5	If true Score 3	If true Score 1
Scarcity	One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc.	Distinctive, though somewhat similar to others within the region.	Interesting within its setting but fairly common within the region.
	If true Score 5*	If true Score 3	If true Score 1
Cultural Modifications	Modifications add favorably to visual variety while promoting visual harmony.	Modifications add little or no visual variety to the area, and introducing no discordant elements.	Modifications add variety but are very discordant and promote strong disharmony.
	If true Score 5	If true Score 3	If true Score 1

NOTES:

* A rating greater than 5 can be given but must be supported by written justification

SOURCE: BLM 1986

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on aesthetic resources.

A project would have a significant impact on aesthetics if it would:

- a. Have a substantial adverse effect on a scenic vista;
- b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or
- d. Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

Project Impacts

Impact 4.1-1: The project would have a substantial adverse effect on a scenic vista.

Scenic vistas are areas identified or known for high scenic quality. Scenic vistas may be designated by a federal, State, or local agency. Scenic vistas can also include an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing.

There are no local areas that are designated as scenic vistas within the vicinity of the project site. However, the PCT, an important regional recreational facility and long-distance hiking and equestrian trail, is located approximately 13.5 miles northwest of the proposed project site in the foothills of the Tehachapi Mountains. While implementation of the project would add new manmade elements to views from some areas of the PCT, the distance of the project site from the PCT trail, along with intervening topography, would result in limited distant views of project components. Distance from the PCT combined with intervening topography and the existing visual setting including solar, wind, and transmission facilities would likely result in the project producing no noticeable impact to views from the PCT. Therefore, impacts to scenic vistas would be less than significant and no mitigation would be required.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE, and design elements would be similar to those of existing poles and circuits. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) to

industry standards. Beyond construction, these structures would be operated and maintained by SCE. SCE would comply with any existing adopted best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction. These off-site improvements are small parts of the overall project and the necessary upgrades along existing routes would not traverse or adversely affect any known scenic vistas. Therefore, the described off-site improvements would have less than significant impact.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.1-2: The project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.

There are currently no designated State Scenic Highways throughout the County; however, the California Scenic Highways Master Plan designates three State Highways in Kern County as “Eligible State Scenic Highway(s):” (1) Route 1 consists of State Route 14 and State Highway 395 from north of Mojave and continues to the Inyo County line; (2) Route 2 consists of State Route 58 between Mojave and Boron; and (3) Route 3 consists of 5 miles of State Route 41 in northwest Kern County. The proposed project is not in the vicinity of any designated State Scenic Highways. There is the portion of State Route 14 that is listed above as an eligible State Scenic Highway and provides regional access approximately 7.5 miles north of the project site. As there are no designated State Scenic Highways within Kern County and given the distance of the project site to the eligible State Scenic Highway the project would not result in substantial change to a scenic resource including a State Scenic Highway. Therefore, impacts would be less than significant, and no mitigation would be required.

Off-site Improvements

As discussed previously, the reconductoring of SCE’s existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits intended to improve energy transmission to the site. The existing transmission corridors and similarly, the proposed improvement routes, would not be installed along any State designated scenic highways or affect any trees, rock outcroppings or historic buildings within a State Scenic Highway as there are none that exist along the existing route. Nonetheless, SCE would adhere to existing best management practices within their rights of way under the County’s jurisdiction, or adhere to minimization measures applicable to the affected utility corridor within the boundaries of Edwards Air Force Base, including those regulations that relate to scenic resources. (see Appendix B). Therefore, impacts in this regard would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.1-3: The project would, in nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.

As described in Chapter 3, *Project Description*, and above in Section 4.1.2, *Environmental Setting*, existing development in the project vicinity includes various roads and a highway, scattered rural residences, a small amount of light industrial development, electrical transmission infrastructure, and solar energy facilities. As the project is located within a nonurbanized area, the analysis below focuses on whether development of the project would substantially change the existing visual character or quality of public views of the site and its surrounding.

Construction

Construction activities associated with the project would create temporary changes in views of the project site. Construction activities would introduce heavy equipment, including backhoes, compactors, tractors, and trucks, into the viewshed of all viewer groups. During construction, there would be multiple crews working within the project site building the overall proposed micro mill facility, which includes the 63-acre solar array, ancillary buildings, and other project components. The influx of construction vehicles, equipment, and worker vehicles would create visible contrast within the rural and primarily undeveloped (with the exception of the residence and residential accessory structures) setting of the project site. Vehicles, equipment, and construction activity would be on site on a temporary basis in nature with peak construction anticipated to last approximately 24 months and would be limited to active areas of construction as opposed to the entirety of the project site at the same time. The aboveground elements and activities associated with construction would be visible and noticeable from public areas surrounding the project for a relatively short distance (approximately 0.5 miles) due to the relative flatness of the topography, except where views are obstructed by vegetation, and structures.

It should be noted that local viewers are accustomed to seeing heavy machinery associated with the construction of solar facilities in the area, such as the developed Edwards Air Force Base solar project that abuts the eastern boundary of the project site. In addition, the visual effects associated with the presence of construction vehicles, equipment, and workers in the project area landscape would be limited in duration, as discussed above, and would be spatially limited at any given time to the active area of construction. Therefore, impacts to existing visual character or quality of the project site and surrounding area during construction of the project would be less than significant.

Operation

In order to determine whether the project would substantially degrade the existing visual quality of the project site, this analysis compares the existing visual setting with visual simulations of the post-construction visual conditions. As described above, four (4) KOPs were selected for visual simulation. These KOPs are representative of views that would be experienced from numerous sensitive receptor locations.

Visual simulations are provided in **Figures 4.1-2 through 4.1-4**. KOPs are described in **Table 4.1-2: Visual Simulation Methodology and Assumptions**. Impacts associated with operation of the project would vary by viewer location and are discussed below by KOP. The rating system and impacts methodology are discussed in the “Rating Visual Quality” section above.

The micro mill facility would consist of the micro mill, ancillary buildings, an accessory 63-acre solar array, and other project components. The actual micro mill will consist of a 489,200 square-foot building that will house various project processes which include raw materials handling, melt shop processing, rolling mill processing, and fabrication shop processing and will include the slag processing office building, Containerized Power Control Room (PCR), a guard shack/scale house, and a trucker restroom facility. Additionally, the total square-footage of the accessory buildings will be approximately 61,721 square feet. The ancillary buildings will consist of a storeroom and vehicle maintenance building, an office building, and a locker room. In summation, the approximate total of building square-footage will be approximately 550,921 square feet and will include a 63-acre solar array on 174 acres.

The proposed project will consist of a variety of buildings that will vary in height. The tallest proposed structure would be the Fume Treatment Plant stack and will be approximately 165 feet high. The second tallest proposed structure will be the electric arc furnace (EAF)/ladle metallurgy station (LMS) which will be approximately 15,500 square feet in size and approximately 116 feet high and will include three (3) bridge cranes, approximately 76 feet high. Third tallest to the EAF/LMS, is the caster bay which is approximately 12,500 square feet in size and approximately 110 feet high with a 76-foot-high bridge crane. Aside from these three structures, the height of the remaining structures and project components will drop to a range of approximately 55 feet to 7 feet. These structures and project components would introduce industrial-looking elements into the landscape that could be visible to sensitive viewers if viewers are located in proximity to these features.

In addition to the proposed structures and project components, the proposed 63-acre solar array will consist of solar modules made up of individual panels that would use tracker technology. Each module would be up to 9 feet tall and have approximately 41 inches of clearance between the bottom and the ground.

The degree of visual change and impacts on scenic quality that would result from the project can be measured by subtracting the score for the project conditions from the score for existing conditions. The difference in the scenic quality scores represents the degree of visual change and impacts on existing scenic quality. Lower values indicate greater impacts, while values near zero indicate little to no impact. A summary of scenic quality ratings at the KOPs for existing conditions and proposed project conditions based on the visual simulations, as well as the score differences, are provided in

Table 4.1-4 through **Table 4.1-7** which discuss the characteristics of each KOP and changes in the visual environment.

KOP 1

Figure 4.1-2: KOP 1 -Existing and Simulated Views from State Route 14 looking to East Towards the Project Site, shows view from State Route 14, in between Sopp Road to the north and the Dawn Road to the south. This KOP reflects views to the project site that would be experienced by motorists along the roadway(s) adjacent to the project site. At KOP 1, the project site is located approximately 0.78 miles from State Route 14. The pre-development views from KOP 1 shows that the landscape is relatively flat and covered with low-lying desert vegetation in the foreground, middle ground, and background. The background mostly consists of sparse, low-lying mountains with distant hilltops that are viewable from KOP 1. Power transmission lines can be seen from KOP 1 but are at a distance that would be easily overlooked while driving on State Route 14. The foreground and middle ground views consist of undeveloped land that contain an unpaved road that runs approximately east to west plus a barbed wire fence along State Route 14 that runs approximately north to south. Visible development from KOP 1 can be seen in the middle ground and mostly consists of the existing Edwards Air Force Base Solar Project, scattered residences, and limited light industrial development.

The post-development view from KOP 1 (see **Figure 4.1-2**) would include changes and modifications that would be located in the background of the landscape. The micro mill facility and 63-acre solar array would be visible from KOP 1 and would contrast with the surrounding natural environment. However, the micro mill and solar array would not greatly contrast with the surrounding built environment considering the existing solar array and light industrial development in the area. Additionally, the micro mill facility would be painted with muted earth tones, mostly consisting of light to dark brown to fit the color of the surrounding area, and landscaping shall be incorporated into the design that where feasible, accommodates relocated on-site western Joshua trees as well as matches the surrounding desert vegetation. As discussed in **Table 4.1-4: Visual Quality Rating Analysis – KOP 1**, below, the predevelopment score is 9, and the post-development score is 7. Since the difference in scores would be 2 points, visual impacts from KOP 1 would be potentially significant.

Table 4.1-4: Visual Quality Rating Analysis – KOP 1

Sensitive Receptor: Motorists driving along State Route 14. Pre-development and post-development conditions are depicted in Figure 4.1-2.				
Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Landform	1	1	0	Less than Significant
<i>Explanation:</i> Relatively flat terrain covered with low-lying desert shrubs. An unpaved road runs east to west with sloping and mountainous terrain in the background. Existing powerlines and residences and light industrial building in the background.				
Though the proposed project site is relatively flat and would not change, the view from KOP 1, post development would change substantially. From KOP 1, the micro mill and solar array can be seen clearly. However, the proposed project would integrate into the surrounding area given the existing light industrial and solar development.				
<i>Detail:</i> The proposed micro mill and solar array would be approximately 0.75 miles from the location on State Route 14 where KOP 1 was taken. The micro mill would block some of the view of the surrounding mountain peaks, while the solar array would not. Much of the view that the micro mill will change will be limited and confined to the area of development.				
Vegetation	3	1	2	Potentially Significant
<i>Explanation:</i> Low, mounded desert shrub vegetation and Joshua Trees; similar species present in the visible landscape.				
Desert shrub vegetation would be removed from the solar sites in the middle ground. Additionally, Joshua Trees on the project site would be removed and or transferred to a different location on the project site, if feasible.				
<i>Detail:</i> Both the pre- and post-development views depict low, mounded desert shrub vegetation covering the valley floor. Removal of vegetation in the middle ground would be noticeable but changes and contract would be minimized by viewing distance from the roadway.				
Water	1	1	0	Less than Significant
<i>Explanation:</i> No water is present on the site or in the vicinity.				
The project would introduce two detention basins and settlement ponds. However, these would not be viewable from KOP 1.				
<i>Detail:</i> There are no natural water features on the project site or within the project vicinity. The project is proposing to build two detention basins and settlement ponds to the project site, however these will not be viewable from the KOP 1 location.				

Sensitive Receptor: Motorists driving along State Route 14.

Pre-development and post-development conditions are depicted in **Figure 4.1-2**.

Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Color	1	1	0	Less than Significant
<p><i>Explanation:</i> Shades of brown, yellow, and muted green on the Antelope Valley floor across the foreground and middle ground (associated with soil and vegetation). Grey associated with soil and distant mountains.</p> <p>The buildings associated with the micro mill would be a light brown color with yellow accents. The solar arrays would display a dark black horizontal band of panels in the middle ground which would contrast with the earth tones in the foreground and be darker the visible sky.</p> <p><i>Detail:</i> Muted earth tones of brown, green and yellow dominate the foreground and middle ground. The proposed buildings for the micro mill would be painted a light brown color, accented by yellow and would match the surrounding colors. The dark solar arrays would be in contrast to the lighter earth tones of soils and vegetation. The colors of the panels would be similar to those of the vertical and horizontal lines of the existing powerlines, power poles, and sky. Background colors would not be substantially altered.</p>				
Adjacent Scenery	1	1	0	Less than Significant
<p><i>Explanation:</i> The foreground scenery mostly consists of desert vegetation, an unpaved road, and a barbed wire fence. The middle ground consists of a variety of buildings and vertical powerlines, including residences and light industrial development, while the background is features a handful of small mountains and hills.</p> <p>The closest mountains would remain visible, with a small amount being obstructed by the micro mill buildings. Scenery of the midground would be changed.</p> <p><i>Detail:</i> The proposed project would not obstruct views of the foreground scenery but would display prominently in the middle ground. However, the micro mill buildings would be situated in an area with a similar type of development and the solar array would not obstruct views of the foreground, middle ground, and background. Additionally, the micro mill buildings would obstruct a small portion of the mountains from KOP 1.</p>				

Sensitive Receptor: Motorists driving along State Route 14.Pre-development and post-development conditions are depicted in **Figure 4.1-2**.

Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Scarcity	1	1	0	Less than Significant
<i>Explanation:</i> The available view is broad. There are no unique aspects from this view. Similar views exist throughout the region. Views would be slightly modified by industrial development in the middle ground.				
<i>Detail:</i> Existing views offered from KOP 1 point of view are typical of the area and also contain substantial utility infrastructure connecting to the existing substation. Visible features are not particularly unique or unusual. Alteration of the landscape to accommodate the project would not result in visually significant impacts to view scarcity.				
Cultural Modifications	1	1	0	Less than Significant
<i>Explanation:</i> Cultural modifications include transmission lines, roadway, residences, and light industrial development. Project development would add a micro mill and associated buildings and low-profile solar arrays.				
<i>Detail:</i> Existing cultural modifications are particularly prominent and consist of utility infrastructure including vertical power poles, scattered residences, and light industrial buildings. The proposed project would add a micro mill and associated buildings with solar arrays. The proposed development would be consistent with the surrounding cultural modifications and, therefore, would be less than significant.				
Totals:	9	7	2	Potentially Significant

Existing



Proposed



Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

**Figure 4.1-2: KOP 1 - Existing and Simulated Views
from State Route 14 Looking to the East Towards the
Project Site**

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02, Sec. 27 - T10N/R12W



**Kern County
Planning & Natural
Resources Department**

KOP 2

Figure 4.1-3: KOP 2 -Existing and Simulated Views from Sierra Highway Looking Northeast towards the Project Site, shows views from Sierra Highway in between Sopp Road to the north and Dawn Road to the south looking northeast toward the project site. KOP 2 reflects views that motorists traveling along Sierra Highway in between Sopp Road to the north and Dawn Road to the south would experience as they pass the project site. The pre-development views from KOP 2 depicts typical desert vegetation that can be seen in most of the surrounding area. This consists mostly of grey and brown shrubs with perennial grasses. In the foreground, a railway track that runs approximately north to south exists as well as a single railroad mile post posting reading “389”. In the middle ground and background, an existing solar development can be seen with accompanying infrastructure which consist mostly of power lines, though they are viewable in the background. Additionally, in the middle ground, buildings associated with the light industrial development near the project site can be seen. In addition to the previously mentioned solar development, view of the background also includes views of the mountains and hills that sparsely inhabit the area.

The post-development view from KOP 2 (see **Figure 4.1-3**) depicts the micro mill facility and a portion of the 63-acre solar array, as well as the proposed seven-foot fence that will surround the project site. Specifically, the water treatment plant, the Containerized Power Control Room, the gas tank storage area, the truck refueling area, the slag disposal area, septic field, the water tank, a storage area, the finished goods bay (55 feet high), the spooler bay (40 feet high), the rolling mill bay (55 feet high), and the service bay (40 feet high) can be seen from KOP 2. The top height of the structures that can be seen from KOP 2 would be approximately 55 feet. Much of the view from KOP 2 consists of the micro mill facility and the components that were previously described. Additionally, much of the foreground consists of a portion of the 63-acre solar array. In combination, the micro mill facility and its components and a portion of the solar array will obstruct the view of the existing viewshed. This would include the existing light industrial development in the middle ground, the mountains and hills in the background, the existing solar development in the middle ground, but would not include the desert vegetation and the railway track in the foreground. As discussed in **Table 4.1-5: Visual Quality Rating Analysis – KOP 2**, the pre-development score is 10, and the post-development score is 7. Since the difference in scores would be 3 points, visual impacts experienced from KOP 2 would be potentially significant.

Table 4.1-5: Visual Quality Rating Analysis – KOP 2

Sensitive Receptor: Motorists on Sierra Highway as they pass the project site and local residents. Pre-development and post-development conditions are depicted in Figure 4.1-3 .				
Rated Feature	Pre-development Score	Post-development Score	Difference in Scores	Impact Significance
Landform	1	1	0	Potentially Significant Impact
<p><i>Explanation:</i> Relatively flat terrain. Only the background consists of any variation in topography with sparse hills and mountains.</p> <p>Much of the foreground would not change. The middle ground would also remain relatively flat; however, the previously mentioned buildings would add some variation in height. Additionally, views of the background would be blocked by the proposed buildings.</p> <p><i>Detail:</i> The pre-development view is dominated in the foreground and middle ground by relatively flat terrain; only the background has any topographic variation with sparse hill and mountains. The micro mill facility and portion of the solar array would be prominent and would block views in middle ground and background and change view of landforms.</p>				
Vegetation	3	1	2	Potentially Significant Impact
<p><i>Explanation:</i> Low and mounded desert shrub vegetation and Joshua Trees cover the foreground.</p> <p>Vegetation removal would occur on the project site including the removal and or transferring of existing Joshua Trees. Most vegetation would be obscured as a result of the micro mill building and solar array.</p> <p><i>Detail:</i> Vegetation in the foreground would remain visible and would not be removed. However, vegetation in the middle ground where the micro mill buildings and solar array would be located, would be removed and would include removing and relocating Joshua Trees.</p>				
Water	1	1	0	No Impact
<p><i>Explanation:</i> No water is visible on site or in the surrounding area.</p> <p>The project would introduce two detention basins and settlement ponds. However, these would not be viewable from KOP 2.</p> <p><i>Detail:</i> There are no natural water features on the project site or within the project vicinity. The project is proposing to build two detention basins and settlement ponds to the project site, however these will not be viewable from the KOP 1 location.</p>				

Sensitive Receptor: Motorists on Sierra Highway as they pass the project site and local residents.
Pre-development and post-development conditions are depicted in **Figure 4.1-3.**

Rated Feature	Pre-development Score	Post-development Score	Difference in Scores	Impact Significance
Color	1	1	0	Potentially Significant Impact
<p><i>Explanation:</i> Shades of brown, yellow, and muted green on the Antelope Valley floor across the foreground and middle ground (associated with soil and vegetation). Grey associated with soil and mountains in the background.</p> <p>The buildings associated with the micro mill would be a light brown color with yellow accents. The solar arrays would display a dark black horizontal band of panels in the middle ground which would contrast with the earth tones in the foreground and be darker the visible sky.</p> <p><i>Detail:</i> Muted earth tones of brown, green and yellow dominate the foreground and middle ground. The proposed buildings for the micro mill would be painted a light brown color, accented by yellow and would match the surrounding colors. The dark solar arrays would be in contrast to the lighter earth tones of soils and vegetation. The colors of the panels would be similar to those of the vertical and horizontal lines of the existing powerlines, power poles, and sky. Background colors would not be substantially altered.</p>				
Adjacent Scenery	1	1	0	Less than Significant
<p><i>Explanation:</i> The foreground of consists of desert vegetation with a railway track that runs approximately north to south. The middle ground consists of more desert vegetation along with light industrial development to the north of the project site. The background consists of solar development with powerlines and sparse mountains and hills.</p> <p>Most of the existing elements in the viewshed would be removed or blocked from view once the micro mill buildings and solar array are built.</p> <p><i>Detail:</i> Most of the existing viewshed and adjacent scenery would be substantially changed and blocked from view from the micro mill buildings and solar array. However, the proposed structures would fit into the existing light industrial and solar development in the area.</p>				
Scarcity	2	1	1	Potentially Significant Impact
<p><i>Explanation:</i> There are no particularly unique or unusual aspects in the view. Existing elements in the foreground and background are not unique. However, the existence of Joshua Trees adds some uniqueness.</p> <p>The middle ground and background would be substantially altered. Views of the Joshua Trees would be reduced, while views of the mountains and hills would be significantly reduced.</p> <p><i>Detail:</i> The view from Sierra Highway is mostly typical of views available throughout the area with the exception of the Joshua Trees in the middle ground. The micro mill buildings and solar array would alter views in the middle ground and background.</p>				

Sensitive Receptor: Motorists on Sierra Highway as they pass the project site and local residents.Pre-development and post-development conditions are depicted in **Figure 4.1-3**.

Rated Feature	Pre-development Score	Post-development Score	Difference in Scores	Impact Significance
Cultural Modifications	1	1	0	No Impact
<p><i>Explanation:</i> Cultural modifications include light industrial development, a railway track, powerlines, and an existing solar development. Project development would add micro mill buildings and a solar array.</p> <p><i>Detail:</i> The viewshed in the area has been modified to include light industrial development, a solar development, a railway line, and powerlines. The micro mill buildings and solar array would introduce cultural modifications that would dominate the viewshed.</p>				
Totals:	10	7	3	Potentially Significant

Existing



Proposed



Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 4.1-3: KOP 2 - Existing and Simulated Views from Sierra Highway Looking Northeast towards the Project Site

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02, Sec. 27 - T10N/R12W



**Kern County
Planning & Natural
Resources Department**

KOP 3

Figure 4.1-4: *KOP 3 -Existing and Simulated Views from Sierra Highway and Sopp Road Looking Southeast Towards the Project Site*, shows views of the project site from the intersection of Sierra Highway and Sopp Road and from the vantage point of local residences and motorists. The pre-development view of KOP 3 shows the proposed project site as being relatively flat with mountain peaks and hills in the background. The existing vegetation consists of typical desert vegetation which includes a collection of Joshua Trees that can be seen in the foreground and middle ground. Much of the foreground is made up of various types of development. This includes light industrial, a railway line, power lines, and paved roads. The majority of the middle ground has been developed with a solar array beyond the project site and within the boundaries of the Edwards Air Force Base, while the background development consists of power lines. The existing color pallet is mostly made up of brown and green with accents of gray.

The post-development view will bring a substantial change to the existing viewshed. Much of the foreground will remain the same, even after post-development. In the middle ground, the viewshed will be dominated by the micro mill buildings, including the parking lot and the solar array. The color of the building will be a light brown, with yellow accents, while the solar panels will be colored black. As a result of the micro mill buildings, most of the background where the mountains and hills are will be blocked by the micro mill buildings. Only hills to the east of the project would remain visible from Sopp Road. As discussed in **Table 4.1-6: Visual Quality Rating Analysis – KOP 3**, the pre-development score is 13, and the post-development score is also 7. Since the difference in scores would be 6 points, visual impacts experienced from KOP 3 would be potentially significant.

Table 4.1-6: Visual Quality Rating Analysis – KOP 3

Sensitive Receptor: Local motorists and residents located near the project site. Pre-development and post-development conditions are depicted in Figure 4.1-4.				
Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Landform	3	1	2	Less than Significant
<p><i>Explanation:</i> Much of the foreground and middle ground is relatively flat. However, the background does consist of mountains and hills that dominate the view to the southeast of the project site.</p> <p>From KOP 3, the middle ground view will be dominated by the micro mill buildings and solar array. The project would not change the view of the foreground, but would change most of the view of the middle ground and background.</p> <p><i>Detail:</i> The existing view is made up mostly of relatively flat terrain in the foreground and middle ground, while mountains and hill can be seen in the background. Post-development will change views of the middle ground and background, but not the foreground. This will block the flat terrain in the middle ground and some of the mountains and hills in the background.</p>				
Vegetation	3	1	2	Potentially Significant Impact
<p><i>Explanation:</i> The viewshed is dominated by typical desert vegetation with Joshua Trees inhabiting some of the middle ground.</p> <p>Vegetation in the foreground and the background will not be removed, however, the micro mill buildings and solar array will block most of the view of the desert vegetation. Most of the middle ground vegetation will be replaced by the micro mill buildings and solar array and some of the Joshua Trees will be removed/relocated.</p> <p><i>Detail:</i> The foreground and background vegetation would not be removed, but most of the background vegetation would be blocked by the micro mill buildings and solar array. Much of the middle ground vegetation will be removed for the construction of the micro mill buildings and solar array while some of the Joshua Trees will be removed/relocated.</p>				
Water	1	1	0	No Impact
<p><i>Explanation:</i> No water is visible on site or in the surrounding area.</p> <p>Project development would not introduce water to or remove water from the visible landscape.</p> <p><i>Detail:</i> Water features are not included in pre- or post-development views. No impacts to water features would occur.</p>				

Sensitive Receptor: Local motorists and residents located near the project site.Pre-development and post-development conditions are depicted in **Figure 4.1-4**.

Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Color	1	1	0	Less than Significant
<p><i>Explanation:</i> Most of the foreground, middle ground, and background are dominated by brown and green with shades of grey coloring the mountains and hills in the background.</p> <p>The micro mill buildings would be painted a light brown while the solar panels would be colored black and in contrast with the existing colors. The foreground colors would remain, but the background colors would not be visible because of the micro mill buildings and solar array.</p> <p><i>Detail:</i> Colors during the pre- and post-development would remain mostly the same, though some would be less visible as a result of the micro mill buildings and solar array. The one potentially significant contrast in colors would be the black solar panels.</p>				
Adjacent Scenery	1	1	0	Less than Significant
<p><i>Explanation:</i> The viewshed for KOP 3 mainly consists of light industrial development, paved roads, power lines, and a railway line.</p> <p>Much of the adjacent scenery resides in the middle and foreground. The micro mill buildings and solar array would block views of adjacent scenery, such as power lines and an existing solar development, as seen in the background.</p> <p><i>Detail:</i> The micro mill buildings and solar array would not block much of the adjacent scenery because most of that can be seen in the foreground.</p>				
Scarcity	1	1	0	Less than Significant
<p><i>Explanation:</i> Much of the viewshed for KOP 3 is typical of the area. However, the middle ground does consist of some Joshua Trees. Additionally, an existing solar development and power lines can be seen in the background which is also increasingly common in eastern Kern County. Light industrial development can also be seen in the foreground and isn't scarce in the area.</p> <p>Much of the middle ground would be developed with the micro mill buildings and solar array. The foreground view would not be modified, but most of the background view would be blocked. Additionally, the micro mill buildings and solar array would mesh with the existing light industrial development and solar development.</p> <p><i>Detail:</i> The viewshed from KOP 3 pre-development would not be unique. Additionally, the post-development view would fit with the existing light industrial and solar development.</p>				

Sensitive Receptor: Local motorists and residents located near the project site.
Pre-development and post-development conditions are depicted in **Figure 4.1-4.**

Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Cultural Modifications	3	1	2	Potentially Significant Impact
<p><i>Explanation:</i> The existing cultural modifications consist of paved roads, power lines, a railway line, and light industrial and solar development.</p> <p>Post-development, the micro mill buildings and solar array would occupy most of the middle ground and background viewshed. This would block views of the existing solar development and some of the power lines.</p> <p><i>Detail:</i> The post-development view would change the viewshed of KOP 3 with the development of the micro mill buildings and solar array. Additionally, the post-development view would block views of the existing solar development and some of the power lines.</p>				
Totals:	13	7	6	Potentially Significant Impact

Existing



Proposed



Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

**Figure 4.1-4: KOP 3 - Existing and Simulated Views
from Sierra Highway and Sopp Road Looking
Southeast Towards the Project Site**

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02, Sec. 27 - T10N/R12W



**Kern County
Planning & Natural
Resources Department**

KOP 4

Figure 4.1-5: *KOP 4 -Existing and Simulated Views from the Intersection of Sopp Road and Lone Butte Road Looking Southwest towards the Project Site*, shows views of the project site from the intersection of Sopp Road and Lone Butte Road, looking southwest. This view reflects the motorists view while traveling on Sopp Road. The foreground and middle ground consist of relatively flat terrain with the background consisting of low-lying hills and mountains. The relatively flat terrain hosts typical desert vegetation with sparse amounts of Joshua Trees. Existing in the foreground are paved and unpaved roads while in the middle ground light industrial development resides to the north of the project site. In the background, power lines and a railway line reside.

Post-development, much of the foreground would remain the same. The only significant change proposed would be that the unpaved road would be paved, and a driveway would be paved for access to the project site. The middle ground and background of this viewshed would see the biggest change. Specifically, the micro mill buildings and staging areas for flatbed trucks would be built in the middle ground which would block most of the existing views in the middle ground and background. Along Sopp Road, the light industrial development to the north of the project site would still be visible with a portion of the mountains being visible in the background. The majority of the typical desert vegetation would still be visible in the foreground, including some of the established Joshua Trees, but would mostly be obstructed in the middle ground and background. As discussed in **Table 4.1-7: Visual Quality Rating Analysis – KOP 4**, the pre-development score is 11, and the post-development score is 7. Since the difference in scores would be 4 points, visual impacts from KOP 4 would be potentially significant.

Table 4.1-7: Visual Quality Rating Analysis – KOP 4

Sensitive Receptor: Local motorists near the project site. Pre-development and post-development conditions are depicted in Figure 4.1-5 .				
Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Landform	1	1	0	Less than Significant Impact
<i>Explanation:</i> The majority of the foreground and middle ground are relatively flat, while the background consists of low-lying hills and mountains.				
Much of the view of the foreground will remain unchanged, but most of the middle ground and background will change with views of the micro mill buildings and parking lot. Only the most northerly and westerly portions would remain unchanged.				
<i>Detail:</i> The pre- and post-development views of the foreground would not change. However, once the micro mill buildings and parking lot are built, most of the middle ground and background views would change.				
Vegetation	3	1	2	Potentially Significant Impact
<i>Explanation:</i> Much of the viewshed consists of typical desert vegetation, low and mounded desert shrubs, with a sparse amount of Joshua Trees.				
Much of the vegetation in the foreground will remain and visible via KOP 4. Post-development, most of the vegetation in the middle ground will be replaced by the micro mill buildings and parking lot including the existing Joshua Trees that will either be removed or replaced. Additionally, most of the background view of the vegetation will be blocked by the micro mill buildings and the parking lot.				
<i>Detail:</i> Much of the vegetation in the foreground will remain and be visible. However, views of the vegetation in the middle ground and background will be blocked by the micro mill buildings and parking lot. Additionally, some of the existing Joshua Trees will be either removed or relocated.				
Water	1	1	0	Less than Significant Impact
<i>Explanation:</i> No water is visible on site or in the surrounding area.				
Project development would not introduce water to or remove water from the visible landscape.				
<i>Detail:</i> Water features are not included in pre- or post-development views. No impacts to water features would occur.				

Sensitive Receptor: Local motorists near the project site. Pre-development and post-development conditions are depicted in Figure 4.1-5 .				
Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Color	1	1	0	Less than Significant Impact
<i>Explanation:</i> Most of the foreground, middle ground, and background are dominated by brown and green with shades of grey coloring the mountains and hills in the background. The micro mill buildings would be painted a light brown. The foreground colors would remain, but the background colors would not be visible because of the micro mill buildings and parking lot.				
<i>Detail:</i> Colors during the pre- and post-development would remain mostly the same, though some would be less visible as a result of the micro mill buildings and parking lot.				
Adjacent Scenery	1	1	0	Less than Significant Impact
<i>Explanation:</i> Views of KOP 4 mainly consist of flat desert terrain in the foreground and middle ground. The background consists low-lying hills and mountains. To the north in the middle ground and background, there is some existing light industrial development. Most of the foreground would not be altered, however most of the middle ground and background would be blocked by the micro mill buildings and parking lot. The existing light industrial development to the north and one of the mountains would remain visible.				
<i>Detail:</i> The proposed project would not alter the views of most of the foreground. However, the micro mill buildings and parking lot would block most of the views of the middle ground and background.				
Scarcity	1	1	0	Less than Significant Impact
<i>Explanation:</i> Much of the viewshed for KOP 4 is typical of the area. However, the middle ground does consist of some Joshua Trees. Additionally, an existing power lines can be seen in the background which is also increasingly common in eastern Kern County. Light industrial development can also be seen in the middle ground and isn't scarce in the area. Much of the middle ground would be developed with the micro mill buildings and parking lot. The foreground view would be lightly modified, but most of the background view would be blocked. Additionally, the micro mill buildings and parking lot would mesh with the existing light industrial development to the north.				
<i>Detail:</i> The viewshed from KOP 4 pre-development would not be unique. Additionally, the post-development view would fit with the existing light industrial to the north.				

Sensitive Receptor: Local motorists near the project site. Pre-development and post-development conditions are depicted in Figure 4.1-5.				
Rated Feature	Pre-development Condition	Post-development Score	Difference in Scores	Impact Significance
Cultural Modifications	3	1	2	Potentially Significant Impact
<i>Explanation:</i> Cultural modifications consist of unpaved and paved roads, power lines, a railway line, and light industrial development to the north. The micro mill buildings and parking lot would block some of the views of the power lines and the railway line. However, much of the views of the paved and unpaved roads and light industrial development would remain.				
<i>Detail:</i> The post-development view would change much of the middle ground and background views with much of the foreground views remaining the same.				
Totals:	11	7	4	Potentially Significant Impact

Existing



Proposed



Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

**Figure 4.1-5: KOP 4 - Existing and Simulated Views
from the Intersection of Sopp Road and Lone Butte
Road Looking Southwest towards the Project Site**

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02, Sec. 27 - T10N/R12W



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Factors Reducing Visual Impacts

The following attributes of the project and elements of the existing conditions would reduce visual impacts of the project:

- The project site is generally flat and would reduce the need for grading and visible alteration of landforms.
- The lack of scenic designation of local roads in the immediate project area indicated that viewer sensitivity and expectations for scenic landscapes is reduced compared to areas with higher visual quality.
- Buildings associated with the project would blend in with the colors found in the surrounding natural landscape while not producing reflection.
- Rooftop screening features shall be installed to create a visual screen for rooftop mechanical equipment, such as a parapet or screening material.
- Reflective metal exteriors shall not be used as exterior architectural elements in buildings immediately adjacent to Sierra Highway.
- A landscape plan that will comply with development standards of Kern County Zoning Ordinance, Chapter 19.86 - Landscaping. This landscape plan shall include, but is not limited to, landscape structural elements (such as fencing), and planting materials

Summary

As shown in **Tables 4.1-4** through **4.1-7**, implementation of the project would result in potentially significant visual impacts to the existing visual quality or character of the site and surrounding area. As shown in the visual simulations, the visual change associated with project development would represent a substantial change in the visual environment from most areas. This would be considered an adverse change and potentially significant impacts on existing visual character and scenic quality from public views near the project site. These changes would affect views from but not limited to areas within and surrounding State Route 14, Sierra Highway, Sopp Road, and Lone Butte Road.

The visual simulations and impact discussion for KOPs 1, 2, 3, and 4 demonstrate how the proposed project would result in significant visual impacts with the micro mill buildings, solar array, and parking lot that are visible from each KOP having effects on views of adjacent scenery.

The project would be substantially modified with the removal of vegetation, including the removal and relocation of Joshua Trees, for the micro mill buildings, solar array, and parking lot. From the vantage point of each KOP, the removal of vegetation would be most substantial in the middle ground with some to most of vegetation views being blocked in the background. The existing colors consist mostly of green and brown with some accents of gray mountains and low-lying hills in the background. Most of these colors will still present post-development and the micro mill buildings will blend in with the surrounding color, which will consist of a light brown with yellow accents. However, the black solar panels will provide a contrast with the surrounding colors. Though the micro mill buildings, solar array, and parking lots would provide a significant aesthetic change to the individual KOPs, the project would not be completely out of place with the surrounding development. As mentioned before, there is existing light industrial development to the north of the project site and an existing solar development to the east. This project would be somewhat akin to combining both existing developments into one development.

Mitigation Measures MM 4.1-1 through MM 4.1-4 would reduce visual impacts associated with the proposed project by limiting vegetation removal, planting native vegetation, providing privacy fencing, reducing the visibility of project features, and ensuring that the site is kept free of debris and trash. Native vegetation would be left in place around the proposed project area where feasible, allowing for a natural screening of project components. In addition, proposed landscaping would include receiving areas for western Joshua trees that may be relocated as a result of the proposed development. Furthermore, the color treatment of buildings would help these components to better blend in with the natural landscape.

However, because there are no feasible mitigation measures that can be implemented to maintain the existing open and undeveloped desert landscape character of the project site, impacts to visual resources would remain significant and unavoidable.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits intended to improve energy transmission to the site. The existing transmission corridors and similarly, the proposed routes to be reconductored and re-poled, are a relatively small component of the greater project and installation of these poles would occur along road rights-of-way where such structures are common and would not significantly impact the existing visual character of the surrounding area. Therefore, impacts in this regard would be less than significant.

Mitigation Measures

MM 4.1-1: Prior to the issuance of building permits, the project operator shall demonstrate compliance with the following:

- a. The project proponent shall present a plan to color treat the proposed buildings to blend in with the colors found in the surrounding natural landscape while not producing reflection, as approved by the Kern County Planning and Natural Resources Department.
- b. The project proponent/operator shall erect signs with contact information for the project proponent/operator's maintenance staff at regular intervals along the site boundary, as required by the Kern County Planning and Natural Resources Department. Maintenance staff shall respond within two weeks to resident requests for additional cleanup of debris. Correspondence with such requests and responses shall be submitted to the Kern County Planning and Natural Resources Department.
- c. The project proponent/operator shall implement a regular trash removal and recycling program on an ongoing basis during construction and operation of the project. Barriers to prevent pest/rodent access to food waste receptacles shall be implemented. Locations of all trash receptacles during operation of the project shall be shown on final plans.

- d. Trash and food items shall be contained in closed secured containers at the end of the day and removed at least once per week to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs.

MM 4.1-2: The following aesthetic features shall be required in site plans and building permits for commercial buildings located within 1,000 feet of the Sierra Highway corridor:

- a. Rooftop screening features shall be installed to create a visual screen for rooftop mechanical equipment, such as a parapet or screening material.
- b. Reflective metal exteriors shall not be used as exterior architectural elements in buildings immediately adjacent to Sierra Highway.

MM 4.1-3: During construction, demolition debris and construction wastes shall be recycled to the extent feasible.

- a. An on-site recycling coordinator will be designated by the Project Proponent/ Developer to facilitate recycling of all construction waste through coordination with the on-site contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes.
- b. The name and phone number of the coordinator will be provided to the Kern County Public Works - Waste Management Division prior to issuance of building permits
- c. The on-site recycling coordinator will be responsible for ensuring that wastes requiring special disposal are handled according to state and County regulations that are in effect at the time of disposal

MM 4.1-4: Prior to the issuance of building permits for any facilities on the project site, the project proponent shall submit to the Kern County Planning and Natural Resources Department, a landscape plan that complies with the Kern County zoning ordinance requirements Chapter 19.86 – Landscaping.

The plan shall also include:

- a. Should perimeter fencing be proposed, fencing materials shall be constructed of any materials commonly used in the construction of fences such as chainlink, tubular steel, wrought iron, or other durable materials.
- b. The office building shall be fenced with masonry block walls that are decorative and not bare masonry blocks. Decorative materials an include façade, colored masonry blocks, or other materials.
- c. Fencing proposed around sumps shall be chainlink with view obscuring slats.

Level of Significance after Mitigation

Even with implementation of MM 4.1-1 through MM 4.1-4 impacts would be considered significant and unavoidable for the project.

Impact 4.1-4: The project would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

Regarding night lighting and daytime glare conditions, “light” refers to artificial light emissions, or the degree of brightness, generated by a given source. Regarding glare conditions, the Illuminating Engineering Society of North America (IES) defines “glare” as the sensation produced by luminance in the visual field that is sufficiently greater than the luminance to which the eye has adapted to cause annoyance, discomfort, or loss of visual performance and visibility.

Construction**Lighting**

Construction crews would use minimal illumination in order to perform the work safely during construction, which may occur outside of seasonal daytime hours. All lighting would be directed downward and shielded to focus illumination on the desired work areas only, and to prevent light spillage onto adjacent properties. During construction, dusk-to-dawn security lighting would be required for the temporary construction staging area, parking area, construction office trailer entries, and project site access points. Per Mitigation Measure MM 4.1-5, any nighttime construction would use lighting designed to provide the minimum illumination needed, thereby minimizing adverse impacts on any nearby residents. As a result, construction of the project would result in less-than-significant impacts to nighttime views.

Glare

Most of the proposed construction activities are planned to occur during daylight hours, however there may be portions of the construction schedule that occur outside of seasonal daylight hours. Increased truck traffic and the transport of the solar arrays and construction materials to the project site and transmission lines would temporarily increase glare conditions during construction. However, this increase in glare would be minimal and temporary. Construction activity would occur on focused areas of the project site as construction progresses and any sources of glare would not be stationary for a prolonged period of time. Additionally, the surface area of construction equipment would be minimal compared to the scale of the site. Therefore, construction of the project would not create a new source of substantial glare that would affect daytime views in the area and impacts would be less than significant.

Operation**Lighting**

During operation of the proposed project, the project site would be regularly illuminated at night due to the 24-hour manufacturing schedule. The use of security and overhead lighting for parking areas, and aviation obstruction lighting for the proposed fume treatment plant stack. Lighting would be designed to provide the minimum illumination needed to achieve safety and security objectives. Additionally, lighting would be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. Potential operational impacts associated with new sources of lighting at the solar

sites would be minimized through compliance with applicable development standards pertaining to lighting, including Chapter 19.81 (Dark Skies Ordinance), as required with implementation of Mitigation Measure MM 4.1-5, which states that projects would be designed to provide the minimum illumination needed to achieve safety and security objectives. Therefore, implementation of Mitigation Measure MM 4.1-5 and compliance with applicable local development standards and regulations pertinent to lighting would minimize the potential for light trespass onto adjacent properties and roads, and impacts would be less than significant.

Glare

Potential new sources of glare would be produced by sunlight reflecting off the glass surfaces of the solar modules and has the potential to impact Edwards Air Force Base overhead operations. Solar facility glare potential is much lower than is commonly perceived, however solar panels have the potential to create some glare. The project may produce glare, but it is not expected to cause extreme visual discomfort or impairment of vision for residents because the panels are designed to absorb as much sunlight as possible and, therefore, would have minimal reflectivity. Similarly, and also due to their low reflectivity, the panels would not be expected to cause visual impairment for motorists on area roadways. This is because local motorists would pass well under the angle of refraction (i.e., less than 30 degrees). Effects on eastbound motorists would likely be greatest in the early evening hours, when the sun is at its lowest arc in the western horizon. Glare would have its greatest impact on westbound travelers in the early morning hours, when the sun is rising in the east. Additionally, given the solar panels minimal reflectivity, it is unlikely to impact Edwards Airforce Base overhead operations. To reduce glare potential, the project would be required to implement Mitigation Measures MM 4.1-5 through MM 4.1-7, which require the use of non-reflective and glare-minimizing materials. With implementation of these mitigation measures, impacts would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits intended to improve energy transmission to the site. The existing transmission corridors and similarly, the proposed improvement routes, likely result in temporary use of lighting equipment during the construction activities that occur outside of daytime hours. Nonetheless, SCE would adhere to existing best management practices within their rights of way under the County's jurisdiction, or adhere to minimization measures applicable to the affected utility corridor within the boundaries of Edwards Air Force Base, including those regulations that relate to light or glare. (see Appendix B). Therefore, impacts related to light and glare, or effects on day- or nighttime views in the area would be less than significant.

Mitigation Measures

MM 4.1-5: The project shall continuously comply with the following: project facility lighting shall comply with the applicable provisions of the Dark Skies Ordinance (Chapter 19.81 of the Kern County Zoning Ordinance), and shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the

desired areas only and avoid light trespass into adjacent areas. Lenses and bulbs shall not extend below the shields.

MM 4.1-6: Prior to the issuance of building permits for any facilities on the project site, the project proponent shall submit, and the Kern County Planning and Natural Resources Department shall have approved, plans verifying all outdoor lighting is designed so that all direct lighting is confined to the project site property lines and that adjacent properties and roadways are protected from spillover light and glare.

MM 4.1-7: Prior to the issuance of building permits, the project proponent shall demonstrate the solar panels and hardware are designed to minimize glare and spectral highlighting. Emerging technologies shall be used, such as diffusion coatings and nanotechnological innovations, to effectively reduce the refractive index of the solar cells and protective glass. These technological advancements are intended to make the solar panels more efficient with respect to converting incident sunlight into electrical power while also reducing the amount of glare generated by the panels. Specifications of such designs shall be submitted to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.1-4 through MM 4.1-7, impacts would be less than significant.

Cumulative Setting Impacts and Mitigation Measures

As shown in **Table 3-4**, *Cumulative Project List*, there are 36 separate projects within a six-mile radius. The make-up of these projects includes a variety of projects and also includes seven solar projects and projects with a solar component; none of the cumulative projects includes a proposed manufacturing project. The size and scope of already existing development are increased by the proposed project, which will result in cumulative impacts to aesthetics when considered together with the project. Unobstructed views of regional topographical features and undeveloped lands would no longer be available as acreage is developed with various projects.

To mitigate some of the potential impacts to the existing visual character or quality of public views of the site and its surroundings, Mitigation Measures MM 4.1-1 through MM 4.1-4 would be implemented. For MM 4.1-1, the project proponent shall present a plan to color treat the proposed buildings to blend in with the colors found in the surrounding natural landscape while not producing reflection, as approved by the Kern County Planning and Natural Resources Department. For MM 4.1-2, site plans must reflect rooftop screening features for rooftop mechanical equipment and reflective metal exteriors shall not be used as exterior architectural elements in buildings immediately adjacent to Sierra Highway. For MM 4.1-3, the project proponent shall ensure management of waste and debris generated from construction activities is hauled off-site to appropriate recycling and waste facilities. Finally, MM 4.1-4, prior to the issuance of building permits for any facilities on the project site, the project applicant shall submit, and the Kern County Planning and Natural Resources Department shall have approved, a landscape plan that complies with Chapter 19.86 – *Landscaping* of the Kern County Zoning Ordinance, which will effectively buffer foreground views of the proposed project site from Sierra Highway and SR-14. Though the

project would have potentially significant impacts to the existing visual character and quality of public views of the project site and its surroundings, other impacts would be less than significant.

Regarding impacts to scenic vistas, impacts would be less than significant. In fact, the nearest site considered a scenic vista would be the Pacific Crest Trail portion located near Tehachapi which is approximately 13.5 miles northwest of the project site. Additionally, the proposed project would have a less than significant impact to any State Scenic Highway. The closest State Scenic Highway is in Kern County to the project site is Route 2 which a portion of State Route 58, between Mojave and Boron. Because the project site is approximately 7 miles northeast of the project site, impacts would be less than significant.

Regarding impacts from substantial light or glare, impacts would be less than significant with the implementation of Mitigation Measures MM 4.1-5 through MM 4.1-7. For MM 4.1-5, the project would need to comply with the Dark Skies Ordinance which requires a minimum illumination needed to achieve safety and security objectives and that all lighting shall be directed downward and shielded to focus illumination on the desired areas only and avoid light trespass into adjacent areas. For MM 4.1-6, the project applicant will need to submit plans verifying all outdoor lighting is designed so that all direct lighting is confined to the project site property lines and that adjacent properties and roadways are protected from spillover light and glare to the Kern County Planning and Natural Resources Department for approval. Lastly, MM 4.1-7 requires that the project proponent demonstrate the solar panels and hardware are designed to minimize glare and spectral highlighting by submitting specifications of the design to the Kern County Planning and Natural Resources Department.

The project would result in significant and unavoidable impacts related to visual character despite implementation of mitigation. While other projects in the region would also be required to implement various mitigation measures to reduce impacts, the conversion of a presently rural desert area to industrial and solar development cannot be mitigated to a degree that impacts are no longer significant. Even with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-7, the project's contribution to significant impacts associated with visual character in the Antelope Valley would be cumulatively significant and unavoidable.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SCE lines would occur simultaneously with existing transmission inspections and maintenance that already occur. Accordingly, these elements of the project would require minimal ground disturbance and temporary use of construction equipment, which may include lighting fixtures or brightly colored safety equipment due to the proximity of construction work to regular traffic. The same mitigation measures as listed throughout this chapter also would be applied, as applicable, to these project elements. Once operational, these upgraded transmission lines would be managed by SCE in accordance with all safety and maintenance requirements including those for construction in proximity to and within existing utility easements.

Thus, these parts of the project would not result in the obstruction of scenic views, destruction of scenic resources, create new or significant light emissions or be installed along State designated Scenic Highways. Compared to overall micro mill portion of the project, these SCE improvements are small parts of the overall project and impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility structures would not contribute to cumulatively considerable impacts. SCE would comply with all applicable State and federal laws and regulations during construction and operation, including those regulations that relate to visual and aesthetic impacts. Given these offsite improvements would not result in a cumulatively considerable contribution to cumulative impacts, impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.1-1 through MM 4.1-7.

Level of Significance after Mitigation

With implementation of MM 4.1-1 through 4.1-7, cumulative impacts would be significant and unavoidable for the project.

Section 4.2

Agriculture and Forestry Resources

4.2.1 Introduction

This section of the EIR describes the affected environment and regulatory settings for agriculture and forest resources for the proposed project. It also describes the impacts on agricultural and forest resources that would result from the implementation of the project, and includes mitigation measures that would reduce these impacts, where applicable. This section is based, in part, on information provided in the Kern County Agricultural Crop Report (2021) prepared by the Department of Agriculture and Measurement Standards and the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP).

4.2.2 Environmental Setting

Regional Setting

Kern County covers approximately 8,161 square miles (5,223,040 acres) including 847,383 acres of harvested agricultural land (Kern County Department of Agriculture and Measurement Standards 2021). According to the 2022 Kern County Agricultural Crop Report, agriculture in Kern County was worth approximately \$7.7 billion in 2022, which is a decrease of seven (7 percent) from the 2021 crop value (8.3 billion). The top five commodities for 2022 were grapes, citrus, milk, almonds, and pistachios, which made up more than \$5 billion (66 percent) of the total value, with the top twenty commodities making up approximately 96 percent of the total value (Department of Agriculture and Measurement Standards, 2022).

Kern County's population is growing, and like many agricultural based jurisdictions, must balance urbanization and the loss of farmland. The most recent data from 2018 – 2020 published by the California Department of Conservation (CDOC) provides the acres of prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance that have been converted to a non-agricultural use. As shown in **Table 4.2-1: 2018-2020 Kern County Farmland Conversion**, the California Department of Conservation (CDOC) found the total amount of Important Farmland in Kern County decreased by 5,313 acres (0.6 percent) between 2018 and 2020. Prime farmland has decreased by approximately 6,868 (1.2 percent), farmland of statewide importance has decreased by approximately 385 acres (0.2 percent), unique farmland has increased by 1,940 acres (2.1 percent), farmland of local importance remains at zero acres, and grazing land has increased by approximately 2,620 acres (0.1 percent) (CDOC, 2020). (Note: These various farmland designations are defined in Section 4.2.3, Regulatory Setting, below).

Table 4.2-1: 2018-2020 Kern County Farmland Conversion

Agricultural Designation	Total Acres 2018	Total Acres 2020	Acres Lost	Acres Gained	Total Acres Changed	Net Acres Changed
Prime Farmland	573,934	567,066	8,927	2,059	10,986	-6,868
Farmland of Statewide Importance	208,323	207,938	1,880	1,495	3,375	-385
Unique Farmland	91,770	93,710	1,139	3,079	4,218	1,940
Farmland of Local Importance	0	0	0	0	0	0
Important Farmland Subtotal	874,027	868,714	11,946	6,633	18,579	-5,313
Grazing Land	1,854,639	1,857,259	8,366	10,986	19,352	2,620
Agricultural Land Subtotal	2,728,666	2,725,973	20,312	17,619	37,931	-2,693

Source: CDOC, 2020

The project site is located on the western portion of Antelope Valley. Although there are many areas zoned for agricultural uses in this area (including the project site), land uses in this part of the County consist primarily of undeveloped native desert vegetation interspersed with industrial development including warehouses and commercial scale solar just within the boundaries of Edwards Air Force Base.

According to Kern Council of Governments in their *Regional Growth Forecast* report (2019), it is estimated that the total population of Kern County will reach approximately 1,227,200 individuals in 2050, growing from 2020's population of approximately 909,235 (US Census, 2020). The anticipated growth in population will most likely decrease the amount of agricultural land in Kern County even further. However, it is important to note, the conversion of agricultural land is affected by numerous factors other than population growth and urban development. Actual production is dependent on commodity prices, water prices and supply, labor, the proximity of processing and distribution facilities, and pest management. Factors such as weather, trade agreements, and labor disputes can also affect decisions regarding what crops are grown and which lands go in and out of production. Most conversion of prime farmlands or farmland of statewide importance, or other agricultural lands is occurring within the planned development footprint of Metropolitan Bakersfield, which is within the Valley region of the County approximately 55 miles northwest of the project site. Very little conversion of the most productive agricultural lands has occurred in outlying areas of the County.

Local Setting

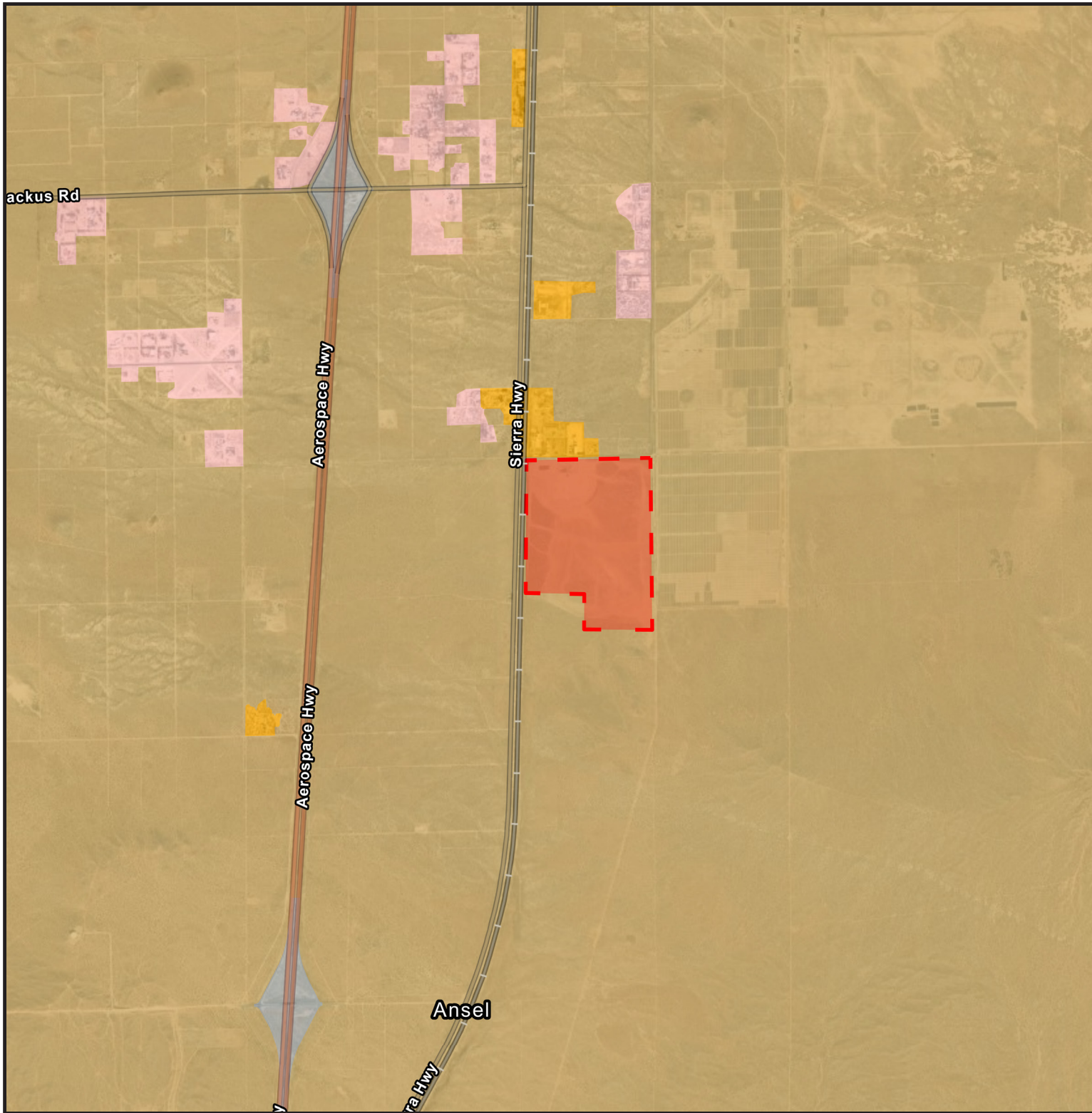
Project Site Designation

The project site is located within unincorporated Kern County on approximately 174 acres of undeveloped, privately owned land. As previously stated in Section 3, *Project Description*, as shown in **Figure 3-3**, the project site is designated as Map Code 8.5 (Resource Management). As shown in **Figure 3-5**, the project site is currently located within the A-1 (Limited Agriculture) zone district. The proposed project would require a General Plan Amendment to change the project site's Map Code Designation to 7.3 (Heavy Industrial), as shown in **Figure 3-4**, and a Zoning Classification Change to change the project site's zoning designation to M-3 PD (Heavy Industrial - Precise Development Plan Combining), as shown in **Figure 3-6**.

Although the project site is predominantly vacant land, the northwest corner was previously used as a seasonal farming operation with outdoor agricultural storage. An approximate 2.25-acre portion of the project site at the northern boundary had historically been used for unpermitted storage by the previous property owner, however, the project site is currently vacant and previous code violations on the project site have been abated.

A portion of the project site is located within the boundaries of Agricultural Preserve No. 24 and is primarily vacant and undeveloped. As depicted in **Figure 4.2-1: Farmland Mapping and Monitoring Program Designations**, and according to the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) 2020 Important Farmland map for east Kern County, there are no agricultural lands designated as Prime Farmland, Farmland of Statewide Importance or Unique Farmland located within the project site. The project site is designated as Nonagricultural and Natural Vegetation and therefore, no lands designated as Important Farmland are located within the project site (DOC, 2020).

The project site is not situated on forest or timberland. No land in the vicinity of the project site is zoned as forestland or timberland, or for timberland production.



Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 4.2-1: Farmland Mapping and Monitoring Program Designations

PSGM3 Holdings Corp (Pacific Steel Group)

- Project Site
- California Important Farmland 2020
 - Rural Residential Land
 - Vacant or Disturbed Land
 - Nonagricultural or Natural Vegetation
 - Semi-agricultural and Rural Commercial Land

APN: 431-010-02 & 431-030-02
 Sec. 27 - T10N/R12W



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4.2.3 Regulatory Setting

Federal

Farmland Protection Policy Act (FPPA) (7 United States Code [USC] Section 4201)

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It also directs Federal programs to be compatible with State and local policies for the protection of farmland. Under the FPPA, the term “farmland” includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. Farmland that is subject to FPPA requirements does not have to be currently used as cropland. It can be forestland, pastureland, or other land but not urban and built-up land or water. FPPA assures that, to the extent possible, federal programs are administered to be compatible with State and local units of government, and private programs and policies to protect farmland.

In 1981, Congress passed the Agriculture and Food Act (Public Law 97-98) which contained the FPPA, Subtitle I of Title XV, Sections 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994. Federal agencies are required to develop and review their policies and procedures related to implementing the FPPA every two years.

The FPPA does not authorize the Federal government to regulate the use of private or nonfederal land or in any way affect the property rights of owners. Projects are subject to FPPA requirements if they irreversibly convert farmland (directly or indirectly) to non-agricultural use and are completed by a Federal agency or rely on assistance from a Federal Agency such as the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (USDA, 2021).

State

California Department of Conservation (DOC), Division of Land Resource Protection

The DOC applies the NRCS soil classifications to identify agricultural lands. These agricultural designations are used in planning for the present and future of California’s agricultural land resources. The DOC uses a minimum mapping unit of 10 acres; parcels that are smaller than 10 acres are absorbed into the surrounding classifications.

The list below describes the categories mapped by the DOC (DOC California Important Farmland Finder, 2018) through the FMMP. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as “farmland.”

- **Prime Farmland.** Farmland that has the ideal combination of physical and chemical features. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields and long-term agricultural production. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- **Farmland of Statewide Importance.** Farmland that is similar to Prime Farmland but with minor shortcomings, such as greater slopes or lower moisture content. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland.** Land with lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include land that supports non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been used for crops at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance.** Land that is important to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups with an interest in grazing activities.
- **Urban and Built-Up Land.** Land that is developed with structures that have been built to a density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land supports residential, industrial, commercial, institutional, public administrative uses; railroad and other transportation yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment facilities; water control structures; and other developed uses.
- **Other Land.** Land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Undeveloped and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Additionally, the Rural Land Mapping Project was undertaken to characterize conversions affecting agricultural land that are not due to urbanization and provides greater detail on the distribution of various land uses within the 'Other Land' category in eight FMMP counties, encompassing all the San Joaquin Valley counties. The Rural Land categories include:

- Rural Residential Land (R) - Residential areas of 1 to 5 structures per 10 acres ('ranchettes');
- Semi-Agricultural and Rural Commercial Land (SAC) - Farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds;
- Vacant or Disturbed Land (V) - Open field areas that do not qualify as an agricultural category, mineral and oil extraction areas, off road vehicle areas, electrical substations, channelized canals, and rural freeway interchanges;
- Confined Animal Agriculture (CI) - Poultry facilities, feedlots, dairy facilities, fish farms - this use may be a component of Farmland of Local Importance in some counties; and
- Nonagricultural or Natural Vegetation (nv) - Heavily wooded, rocky/barren areas, riparian and wetland areas, grassland areas which do not qualify as Grazing Land due to their size or land management restrictions, small water bodies and recreational water ski lakes. Constructed wetlands are also included in this category.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act (California Government Code Section 51200-51297.4), and is applicable to specific parcels within the State of California. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under a Williamson Act contract. The Williamson Act program is administered by the DOC, in conjunction with local governments that administer the individual contract arrangements with landowners. Participation in the Williamson Act program is dependent on County adoption and implementation of the program and is voluntary for landowners (DOC, 2022a).

Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act. It was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy in the State. Farmland Security Zone Act contracts are sometimes referred to as “Super Williamson Act Contracts.” Under the provisions of this act, a landowner who is already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35 percent reduction in the taxable value of land and improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses.

Public Resources Code Section 21060.1

Public Resources Code Section 21060.1 uses the FMMP to define agricultural land for the purposes of assessing environmental impacts. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and analyze the conversion of such lands. The FMMP provides analysis pertaining to agricultural land use changes throughout California.

Local

Kern County General Plan

The Kern County General Plan states that agriculture is vital to the future of Kern County and sets goals to protect important agricultural lands for future use and prevent the conversion of prime agricultural lands to other uses (e.g., industrial or residential). The Kern County General Plan includes four (4) designations for agricultural land:

- **8.1 Intensive Agriculture (minimum parcel size 20 acres gross)** – Lands devoted to the production of irrigated crops or having potential for such use.

Uses shall include, but are not limited to, the following: Irrigated cropland; orchards; vineyards; horse ranches; raising of nursery stock ornamental flowers and Christmas trees; fish farms’ bee keeping’ ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage; groundwater recharge acres; mineral; aggregate; and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries pursuant to

provisions of the Kern County Zoning Ordinance, and land within development areas subject to significant physical constraints.

- **8.2 Resource Reserve (minimum parcel size is 20 acres gross, except to a Williamson Act Contract/Farmland Security Zone Contract, in which case the minimum parcel size shall be 80 acres gross)** – Lands devoted to areas of mixed natural resource characteristics including rangeland, woodland, and wildlife habitat which occur in an established County water district.
- **8.3 Extensive Agriculture (minimum parcel size 20 acres gross, except lands subject to a Williamson Act contract/Farmland Security Zone contract, in which case the minimum parcel size shall be 80 acres gross)** – Lands devoted to uses involving large amounts of land with relatively low value-per-acre yields such as livestock grazing, dry-land farming, and woodlands.
- **8.5 Resource Management (minimum parcel size 20 acres gross, except lands subject to a Williamson Act contract/Farmland Security Zone contract, in which case the minimum parcel size shall be 80 acres gross)** – Lands consisting primarily of open space containing important resource values, such as wildlife habitat, scenic values, or watershed recharge areas. These areas may be characterized by physical constraints, or may constitute an important watershed recharge area or wildlife habitat or may have value as a buffer between resource areas and urban areas. Other lands with this resource attribute are undeveloped, non-urban areas that do not warrant additional planning within the foreseeable future because of current population (or anticipated increase), marginal physical development, or no subdivision activity.

Additionally, the designation of 8.5 (Resource Management) can be used for agricultural uses such as dry-land farming and ranch facilities.

The policies, goals, and implementation measures in the Kern County General Plan for agricultural resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the proposed project. Therefore, they are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use, Open Space, and Conservation Element

1.9 Resource

Goals

- Goal 1: To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.
- Goal 2: Protect areas of important mineral, petroleum, and agricultural resource potential for future use.
- Goal 5: Conserve prime agriculture lands from premature conversion.
- Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

Policies

- Policy 1: Appropriate resource uses of all types will be encouraged as desirable and consistent interim uses in undeveloped portions of the County regardless of general plan designation.
- Policy 7: Areas designated for agricultural use, which include Class I and II and other enhanced agricultural soils with surface delivery water systems, should be protected from incompatible residential, commercial, and industrial subdivision and development activities.
- Policy 12: Areas identified by the Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service) as having high range-site value should be conserved for Extensive Agriculture uses or as Resource Reserve, if located within a County water district.

Implementation Measure

- Measure F: Prime agricultural lands, according to the Kern County Interim-Important Farmland map produced by the Department of Conservation, which have Class I or II soils and a surface delivery water system shall be conserved through the use of agricultural zoning with minimum parcel size provisions.

Kern County Zoning Ordinance

The Kern County Zoning Ordinance establishes basic regulations under which land is developed. This includes allowable uses, building setback requirements, and development standards. Pursuant to state law, the zoning ordinance must be consistent with the Kern County General Plan. The basic intent of the Kern County Zoning Ordinance is to promote and protect the public health, safety, and welfare via the orderly regulation of the land uses throughout the unincorporated area of the county. The zoning ordinance applies to all property in unincorporated Kern County, except land owned by the United States or any of its agencies.

As previously mentioned in **Chapter 3, Project Description**, the Kern County Zoning Ordinance designates the project site for A-1 (Limited Agricultural). The project proponent has requested a change in these zone classifications to M-3 PD (Heavy Industrial -Precise Development Combining) district. The project would also require a Precise Development Plan for conformity with the proposed zone change. Additionally, the project would include a Zone Variance for a reduction in the number of parking stalls required on site and an additional Zone Variance to allow for a maximum height in excess of the maximum permitted height of 150 ft in the M-3 District.

Williamson Act Standard Uniform Rules

Kern County has adopted a set of rules that identify compatible land uses within agricultural preserves established under the Williamson Act. The rules restrict uses on such land to agricultural or other compatible uses. Agricultural uses include crop cultivation, grazing commercial wind farms, livestock breeding, dairies, and uses that are incidental to these uses. Other compatible agricultural uses include those associated with public utilities (e.g., gas, electric, communications, water, and other similar public utilities). For purposes of this analysis, the conversion of agricultural land to a solar facility itself

would be incompatible with the farming provisions necessary for projects under Williamson Act contracts. Therefore, a proposed solar project on contracted land would be required by Kern County to petition for an early cancellation of the contract. However, the project site does not contain lands under an active Williamson Act contract and, therefore, is not subject to these rules.

4.2.4 Impacts and Mitigation Measures

This section of the EIR describes the impact analysis relating to agriculture and forestry resources for the proposed project. It describes the methods used to determine the impacts of the proposed project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Methodology

The proposed project's potential impacts on agriculture and forest resources have been evaluated on a qualitative basis by reviewing the *Kern County Agricultural Crop Report* (2022) and the DOC California Important Farmland Map. A change in land use would normally be determined to be significant if the effects described in the thresholds of significance were to occur (see CCR Title 14, Section 15064.7(a)). The evaluation of project impacts is based on a thorough analysis of the Kern County General Plan's applicable goals and policies related to agricultural resources, professional judgment, and the significance criteria established by CEQA.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify, per Appendix G of the CEQA Guidelines, that a project would have a significant impact on agriculture and forest resources if it would:

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use;
- b. Conflict with existing zoning for agricultural use or Williamson Act Contract;
- c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526) or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g)).
- d. Result in the loss of forestland or conversion of forest land to non-forest use.
- e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use; or
- f. Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code.

Effects Found Not to Be Significant

The lead agency determined in the Notice of Preparation/Initial Study (NOP/IS), located in Appendix A of this EIR, that the proposed project would not result in significant impacts in some of these environmental issue areas, and that no further analysis would be required in the EIR. Thus, the following issue areas are scoped out of further analysis in this EIR:

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use;

According to the California Department of Conservation - California Important Farmland Finder, the project site appears to be within and/or abutting designations of "Semi-agricultural and Rural Commercial Land" as well as "Nonagricultural and Natural Vegetation" as of available 2018 data and mapping layers. No Farmland of Statewide Importance has been identified within the project site boundary. Surrounding properties contain similar designations of "Nonagricultural and Natural Vegetation" and "Semi-agricultural and Rural Commercial Land," in addition to "Rural Residential Land" east of the project site. Given that the project site is not designated as Prime and Unique Farmland, construction and/or operation of the proposed project would not result in the conversion of designated farmland to a non-agricultural use and, therefore, no impact is anticipated, and further analysis is not warranted in the EIR.

- c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526) or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g)).

No lands within or immediately adjacent to the proposed project are zoned forest land or timberland or timberland zoned Timberland Production and there are not such resources on the project site. Therefore, this topic will not be further discussed in the EIR.

- d. Result in the loss of forestland or conversion of forest land to non-forest use.

As noted above, no lands within or immediately adjacent to the project site are zoned forest land or timberland and do not contain any forested areas. Due to a lack of forest land on the project site, the proposed project does not involve any changes to the existing environment that, due to their location or nature, could result in impacts resulting in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact is anticipated, and this topic will not be discussed further in the EIR.

- e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use.

Neither the project site nor surrounding properties are designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. Thus, there are potential changes to the existing environment stemming from the proposed project and potential conversion of surrounding Farmland to non-agricultural. Therefore, further analysis is not warranted in the EIR.

- f. Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code).

Neither the project site nor surrounding land near the project site are encumbered by an active Williamson Act Land Use Contract and therefore, further analysis is not warranted in the EIR.

Project Impacts

Impact 4.2-1: The project would conflict with existing zoning for agricultural use or Williamson Act Contract.

The project site is located within the boundaries of Agricultural Preserve No. 24 and is vacant, previously disturbed land. As noted above, the project site is currently zoned A-1 (Limited Agriculture). The applicant proposes to rezone the A-1 parcels to M-3 PD (Heavy Industrial – Precise Development Combining) in Zone Map 213, as detailed in **Table 3-1: Project Assessor Parcel Numbers, Existing Map Codes, Existing Zoning, and Acreage**, in **Chapter 3, Project Description**. Therefore, with the proposed rezone, the Micro Mill facility would not conflict with zoning for agriculture. None of the project parcels are designated as Important Farmland (DOC, 2020).

Lastly, according to available data, none of the parcels included as part of the proposed project or any other property in the immediate vicinity of the project are subject to a Williamson Act Land Use contract. Thus, the project site does not contain lands that are subject to Williamson Act contracts, either in active on in nonrenewal status. There are no lands under Williamson Act contracts adjacent to the project site or in the project area. As such, there would be no impacts to Williamson Act lands.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SCE lines would occur simultaneously with existing transmission inspections and maintenance that already occur. Accordingly, these elements of the project would require minimal ground disturbance and temporary use of construction equipment, which may include lighting fixtures or brightly colored safety equipment due to the proximity of construction work to regular traffic. The same mitigation measures as listed throughout this chapter also would be applied, as applicable, to these project elements. Once operational, these upgraded transmission lines would be managed by SCE in accordance with all safety and maintenance requirements including those for construction in proximity to and within existing utility easements.

Given these improvements would occur within existing transmission corridors and road rights-of-way that are not designated agricultural or on land that is subject to a Williamson Act Contract, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

The geographic scope for cumulative agricultural and forest impacts is western Antelope Valley. This geographic scope is selected because of its relatively uniform terrain, soil conditions, climate, habitat value, low population and development density relative to areas east of State Route 14, and the region's common groundwater basin and water supply considerations. As shown in **Table 3-3, Cumulative Projects List**, of **Chapter 3, Project Description**, there are 36 proposed or approved cumulative projects, and these projects include numerous other utility-scale solar production facilities as well as development projects that are considered for this analysis.

As previously discussed, construction and operation of the proposed project would develop a Micro Mill facility on land zoned for agricultural uses; however, the land is identified on the Rural Land Mapping Project (see Rural Land Mapping Edition Kern County Important Farmland 2020 Sheet 3 of 3, California Department of Conservation, Division of Land Resource Protection, 2020) as nonagricultural and natural vegetation and is likely identified as such due to its barren areas – per the Project's Geotechnical Investigation, the land “appears to have been vacant, undeveloped desert landscape as far back as the earliest available aerial photograph from 1928” (RMA Geoscience 2022). That said, a small section on the northern portion of the Project site was utilized for livestock holding and seasonal agricultural use (Partner Engineering 2023). Considering the barren nature of the site, the lack of current agricultural use, the proposed rezone and the absence of a Williamson Act Contract, on a project level impacts would be less than significant. When considering the cumulative impact of the project within Antelope Valley, and Kern County as a whole, the proposed Micro Mill facility and rezone would reduce the overall land zoned available for agricultural use. However, the project site does not appear suitable for agricultural use based on the characteristics identified in the Rural Land Mapping Project and from project-specific site investigation. Even though the loss of zoned agricultural land would contribute to the overall loss of zoned agricultural land when viewed in connection with the effects of cumulative projects in the area, this would not be considered cumulatively considerable as the project site does not appear to be well-suited for agricultural use. The zone change to M-3 PD would provide for a more appropriate land use for the parcel.

Therefore, the project's effect is not cumulatively considerable when viewed in connection with the effects of other closely related past projects, the effects of other current projects, and the effects of probable future projects in the area. Thus, the loss of land zoned for agricultural use within Antelope Valley and Kern County would result in a less than significant impact.

Off-Site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits intended to improve energy transmission to the site. The existing transmission corridors and similarly, the proposed improvement routes, may briefly encroach onto land that is agriculturally zoned or used, however such encroachment would be temporary and during the construction phase of the project. Nonetheless, SCE would adhere to existing best management

practices within their rights of way under the County's jurisdiction, or adhere to minimization measures applicable to the affected utility corridor within the boundaries of Edwards Air Force Base, including those regulations that relate to light or glare. (see Appendix B).

Compared to overall micro mill portion of the project, these SCE improvements are small parts of the overall project and impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility structures would not contribute to cumulatively considerable impacts. SCE would comply with all applicable State and federal laws and regulations during construction and operation, including those regulations that relate to agricultural resources. Given none of the areas affected by these offsite improvements are designated by the CDOC as important farmland and none of these areas contain forest or timberland resources or require changes in zoning from such types of land use, construction and installation of these project components would not result in a cumulatively considerable contribution to cumulative impacts on agricultural resources, and any impacts in this regard would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Cumulative impacts would be less than significant for the project.

Section 4.3

Air Quality

4.3.1 Introduction

This section of the EIR describes the affected environment and regulatory setting of the project and evaluates the short- and long-term air quality impacts associated with development of the site. Further, this analysis describes the affected environment and regulatory setting for air quality. Where necessary, mitigation measures are included to avoid or lessen the impacts of the proposed project.

Information in this section is based primarily on the *Air Quality Technical Report* located in Appendix C (ESA, 2023d) and the *Air Quality Analysis of Off-Site Power Utilities Memorandum* located in Appendix D (ESA, 2023a). The report was prepared in accordance with the Kern County Planning Department's *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* (Kern, 2006) and Eastern Kern Air Pollution Control District's (EKAPCD) *Guidelines for Implementation of the California Environmental Quality Act (CEQA)* (EKAPCD, 2021b).

Existing Conditions

The Mojave Micro Mill Project ("project" or "proposed project") will be situated on a 174-acre site located at 860 Sopp Road, at the southeast corner of Sopp Road and Sierra Highway, in unincorporated southeastern Kern County, California. The project site is bounded by the Union Pacific Railway and Sierra Highway (west), Sopp Road (north), vacant land (south) and Edwards Air Force Base (east). The project site is located approximately 57 miles southeast of the City of Bakersfield, approximately 4 miles north of the unincorporated community of Rosamond and 8 miles south of the unincorporated community of Mojave in unincorporated Kern County, California. Regional access to the project site is provided by State Route 14 (SR-14). The project site would be accessed by Backus Road one mile north of the project site, from Sierra Highway to the east off of SR-14. The proposed project is located in the western portion of the Mojave Desert, in the Antelope Valley area. The Mojave Desert is to the south and east of several low mountain ranges and is dominated by desert vegetation. Topography is mostly flat, but elevations gradually rise toward the west and northwest. The Tehachapi Mountains are to the north and west and the San Gabriel Mountains to the south.

Nearby uses surrounding the project site include vacant agriculturally designated land to the south, industrial development (Shemshad Food Products Inc.) to the north, the Edwards Solar Facility followed by Edwards Airforce Base lie east of the project site, and vacant agricultural land, Sierra Highway, and Union Pacific lie to the west of the project site. The immediate area surrounding the project has a few nearby residences; the nearest residence is approximately 1,000 feet to the northwest. Farther away are a few clusters of unincorporated residences located near the State Route 14 and Backus Road exit, as well as approximately 1.25 miles west of the project site beyond State Route 14.

4.3.2 Environmental Setting

Project Description

The proposed project would include development of an approximate 489,200 square-foot micro mill facility which would produce and fabricate reinforcing steel commonly known as “rebar”. The proposed project would also include an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, as well as an approximate 63-acre accessory solar array on 174 total acres of privately owned land that is currently vacant. Outdoor storage for scrap materials and staging is included as part of the proposed project.

The 489,200 square-foot micro mill facility would include raw materials handling, melt shop processes, rolling mill processes, and fabrication shop processes. The micro mill facility would support seven ancillary structures for storeroom and vehicle maintenance, office building, locker room, slag processing office building, containerized power control room, guard shack/scale house, and a trucker restroom facility. Additional site components would include: 63 acres of ground-mounted solar panels, a carbon capture system (CCS), substation to support solar panels, fume treatment plant, water treatment plant, slag processing plant, dolomite and lime silos, staging and spare parts storage, numerous AC power unit substations located throughout the project site to power the various buildings, on-site access corridors, perimeter security fencing, on-site parking area, road improvements along Sopp Road and future private road south of Lone Butte Road/Sopp Road corner, two fiber optic cable lines to provide electricity and telecommunications, a new water main, landscaping, and new pavement, and curb and gutter.

It is anticipated that construction activities would commence as early as the second quarter 2024 with full build-out occurring in second quarter 2026. Construction is anticipated to last approximately 24 months.

The California Air Resources Board (CARB) has divided California into regional air basins according to topographic drainage features. The project site is located in the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of EKAPCD. The MDAB includes the eastern half of Kern County, the northern part of Los Angeles County, most of San Bernardino County except for the southwest corner, and the eastern edge of Riverside County. It is separated from the South Coast Air Basin, to its south, by the San Gabriel and San Bernardino Mountains. It is separated from the San Joaquin Valley to the northwest by the Tehachapi Mountains and the southern end of the Sierra Nevada.

Topography and Meteorology

Air pollution, especially the dispersion of air pollutants, is directly related to a region’s topographic features. Air quality is a function of both the rate and location of pollutant emissions and the meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects ambient air quality.

The project is located within the Antelope Valley, approximately 4 miles north of the unincorporated community of Rosamond, in the southeast portion of Kern County. The Antelope Valley is within the western portion of the Mojave Desert and is bounded by the Tehachapi Mountains to the northwest and the San Gabriel Mountains to the southwest. Land uses in the project area include undeveloped desert, fallow and active agriculture, low-density residences, and energy development (e.g., solar and wind). The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet above mean sea level [amsl]). A lesser valley lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley). The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) whose primary channel is the San Gorgonio Pass (2,300 feet amsl) between San Bernardino and San Jacinto Mountains.

The MDAB is characterized by hot summers, cold winters, large diurnal ranges in temperature, low relative humidity, and irregular rainfall. The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest, due to the proximity of the MDAB to the Pacific Ocean and the blocking nature of the Sierra Nevada Mountains to the north. Air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet amsl), the passes of which form the main channels for these air masses.

During the summer, the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast to the west, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south.

Weather recorded at the Mojave, California Station (NCDC COOP Station # 045756), would be representative of the climate at the project site. The average maximum and minimum temperatures, average precipitation, and average snowfall are recorded below in **Table 4.3-1: Mojave Station 045756 Monthly Climate Summary**.

Table 4.3-1: Mojave Station 045756 Monthly Climate Summary

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Avg. Max Temp. (F)	57.8	61.2	64.7	71.3	79.9	89.9	97.6	96.4	89.0	78.5	65.7	57.2	75.8
Avg. Min Temp. (F)	34.2	37.1	41.0	46.3	55.1	63.8	69.7	68.0	60.3	50.3	40.2	32.9	49.9
Average Total Precipitation (in.)	1.20	1.27	0.93	0.30	0.09	0.03	0.11	0.15	0.21	0.24	0.53	0.87	5.93
Average Total Snowfall (in.)	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.7
Source: Western Regional Climate Center, 2016. Period of record 01/01/1904 to 06/08/2016													

Criteria Air Pollutants

Air pollution, especially the dispersion of air pollutants, is directly related to a region's topographic features. Air quality is a function of both the rate and location of pollutant emissions and the meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects ambient air quality. The project is located within the Antelope Valley, approximately 8 miles south of the unincorporated community of Mojave in unincorporated Kern County within the Mojave Desert Air Basin (Basin). The Basin encompasses the eastern half of Kern County, the northern part of Los Angeles County, most of San Bernardino County except for the southwest corner, and the eastern edge of Riverside County. It is separated from the South Coast Air Basin, to its south, by the San Gabriel and San Bernardino Mountains. It is separated from the San Joaquin Valley, to the northwest, by the Tehachapi Mountains and the south end of the Sierra Nevada. The Basin has four air districts which regulate air quality. The project site lies within the Eastern Kern Air Pollution Control District (EKAPCD).

The Antelope Valley is within the western portion of the Mojave Desert and is bounded by the Tehachapi Mountains to the northwest and the San Gabriel Mountains to the southwest. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass. A lesser valley lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley). The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) whose primary channel is the San Geronio Pass between San Bernardino and San Jacinto Mountains.

The Basin is characterized by hot summers, cold winters, large diurnal ranges in temperature, low relative humidity, and irregular rainfall. The Basin is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the Basin are out of the west and southwest, due to the proximity of the Basin to the Pacific Ocean and the blocking nature of the Sierra Nevada Mountains to the north. Air masses pushed onshore in southern California by differential heating are channeled through the Basin. The Basin is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet above mean sea level), the passes of which form the main channels for these air masses.

During the summer, the Basin is generally influenced by a Pacific Subtropical High cell that sits off the coast to the west, inhibiting cloud formation and encouraging daytime solar heating. The Basin is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. Average temperatures recorded in the Mojave area, range from a low of 35 degrees Fahrenheit (°F) in January to highs of 100°F in July and August (NOAA, 2022). Rainfall is light, averaging about seven inches a year (NOAA, 2022). The Basin averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The Basin is classified as a dry-hot desert

climate, with portions classified as dry-very hot desert, which indicates at least three months have maximum average temperatures over 100°F.

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies. These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted for them. A brief description of the health effects of these criteria air pollutants are provided below.

Ozone (O₃)

Ozone is a regional air pollutant, which is generated over a large area and transported and spread by the wind. As the primary constituent of smog, ozone is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, it is not emitted directly into the air by specific sources but is created by sunlight acting on other air pollutants (the precursors), specifically nitrogen oxides (NO_x) and reactive organic gases (ROG). Sources of precursor gases number in the thousands and include common sources such as consumer products, gasoline vapors, chemical solvents, and combustion byproducts of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone forming chemical reactions often take place in another location, catalyzed by sunlight and heat. Thus, high ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable.

According to the USEPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath (USEPA, 2022c). Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease (USEPA, 2022c). Long-term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children (USEPA, 2022c). According to the California Air Resource Board (CARB), inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath (CARB, 2022m). The USEPA states that people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers (USEPA, 2022c). Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure (USEPA, 2022c). According to CARB, studies show

that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults (CARB, 2022m). Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures (CARB, 2022m). Further research may be able to better distinguish between health effects in children and adults (CARB, 2022m). Elevated ozone concentrations also reduce crop and timber yields, damage native plants, and damage materials such as rubber, paints, fabric, and plastics (CARB, 2007).

Reactive Organic Gases (ROG) and Volatile Organic Compounds (VOCs)

ROG and VOCs are organic chemical compounds of carbon and are not “criteria” pollutants themselves; however, they contribute with NO_x to form ozone, and are regulated to prevent the formation of ozone (USEPA, 2022i). According to CARB, some ROG and VOCs are highly reactive and play a critical role in the formation of ozone, other ROG and VOCs have adverse health effects, and in some cases, can be both highly reactive and have adverse health effects (CARB, 2022d). ROG and VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings, deodorants, hair spray, cleaning products, spray paint, insecticides, etc.) (CARB, 2022d).

The primary health effects of hydrocarbons result from the formation of ozone and its related health effects. High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. There are no separate federal or California ambient air quality standards for ROG and VOC. Carcinogenic forms of ROG and VOCs are considered toxic air contaminants (TACs). An example is benzene, which is a carcinogen. The health effects of individual ROG and VOCs are described under the “Toxic Air Contaminants” heading below. For the purposes of this assessment ROG and VOC are used interchangeably.

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NO_x)

NO_x is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include NO_2 and nitric oxide (NO). Ambient air quality standards have been promulgated for NO_2 , which is a reddish-brown, reactive gas (CARB, 2022k). The principle form of NO_x produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2 , creating the mixture of NO and NO_2 referred to as NO_x (CARB, 2022k). Major sources of NO_x include emissions from cars, trucks and buses, power plants, and off-road equipment (USEPA, 2022e). The terms NO_x and NO_2 are sometimes used interchangeably. However, the term NO_x is typically used when discussing emissions, usually from combustion-related activities, and the term NO_2 is typically used when discussing ambient air quality standards. Where NO_x emissions are discussed in the context of the thresholds of significance or impact analyses, the discussions are based on the conservative assumption that all NO_x emissions would oxidize in the atmosphere to form NO_2 .

According to the USEPA, short-term exposures to NO_2 can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or

difficulty breathing), hospital admissions and visits to emergency rooms while longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections (USEPA, 2022e). According to CARB, controlled human exposure studies that show that NO₂ exposure can intensify responses to allergens in allergic asthmatics (CARB, 2022k). In addition, a number of epidemiological studies have demonstrated associations between NO₂ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses (CARB, 2022k). Infants and children are particularly at risk from exposure to NO₂ because they have disproportionately higher exposure to NO₂ than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB, 2022k). CARB states that much of the information on distribution in air, human exposure and dose, and health effects is specifically for NO₂ and there is only limited information for NO and NO_x, as well as large uncertainty in relating health effects to NO or NO_x exposure (CARB, 2022k).

NO_x contributes to a wide range of environmental effects both directly and indirectly when combined with other precursors in acid rain and ozone. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to the production of particulate nitrates. Airborne NO_x can also impair visibility. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication (a condition that promotes excessive algae growth, which can lead to a severe depletion of dissolved oxygen and increased levels of toxins harmful to aquatic life). Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms. NO_x also contributes to visibility impairment (CAPCOA, 2019).

Carbon Monoxide (CO)

CO is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel, such as natural gas, gasoline, or wood, with the majority of outdoor CO emissions from mobile sources (CARB, 2022c). According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death (USEPA, 2022a). Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease since these people already have a reduced ability for getting oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress (USEPA, 2022a). In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (USEPA, 2022a). According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain (CARB, 2022c). For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased

oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance (CARB, 2022c). Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB, 2022c).

Sulfur Dioxide (SO₂)

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO₂) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California because of regional meteorological features. According to the USEPA, the largest source of SO₂ emissions in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities while smaller sources of SO₂ emissions include industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content (USEPA, 2022g). In 2006, California phased-in the ultra-low-sulfur diesel regulation limiting vehicle diesel fuel to a sulfur content not exceeding 15 parts per million, down from the previous requirement of 500 parts per million, substantially reducing emissions of sulfur from diesel combustion (CARB, 2003). SO₂ is a colorless, irritating gas with a “rotten egg” smell that is formed primarily by the combustion of sulfur-containing fossil fuels. Historically, SO₂ was a pollutant of concern in Kern County, but with the successful implementation of regulations, the levels have been reduced significantly.

According to the USEPA, short-term exposures to SO₂ can harm the human respiratory system and make breathing difficult (USEPA, 2022g). According to CARB, health effects at levels near the state one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity and exposure at elevated levels of SO₂ (above 1 part per million (ppm)) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality (CARB, 2022r). Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO₂ (CARB, 2022r; USEPA, 2022g).

SO₂ tends to have more toxic effects when acidic pollutants, liquid or solid aerosols, and particulates are also present. Effects are more pronounced among “mouth breathers,” e.g., people who are exercising or who have head colds. These effects include:

- Health problems, such as episodes of bronchitis requiring hospitalization associated with lower level acid concentrations;
- Self-reported respiratory conditions, such as chronic cough and difficult breathing, associated with acid aerosol concentrations (individuals with asthma are especially susceptible to these effects. The elderly and those with chronic respiratory conditions may also be affected at lower concentrations than the general population);

- Increased respiratory tract infections associated with longer term, lower level exposures to SO₂ and acid aerosols; and
- Subjective symptoms, such as headaches and nausea, in the absence of pathological abnormalities due to long-term exposure.

SO₂ easily injures many plant species and varieties, both native and cultivated. Some of the most sensitive plants include various commercially valuable pines, legumes, red and black oaks, white ash, alfalfa, and blackberry. The effects include:

- Visible injury to the most sensitive plants at exposures as low as 0.12 ppm for eight hours;
- Visible injury to many other plant types of intermediate sensitivity at exposures of 0.30 ppm for eight hours; and
- Positive benefits from low levels in a very few species growing on sulfur-deficient soils.

Increases in SO₂ concentrations accelerate the corrosion of metals, probably through the formation of acids. SO₂ is a major precursor to acidic deposition. Sulfur oxides may also damage stone and masonry, paint, various fibers, paper, leather, and electrical components.

Increased SO₂ also contributes to impaired visibility. Particulate sulfate, much of which is derived from SO₂ emissions, is a major component of the complex total suspended particulate mixture.

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air (USEPA, 2022f). Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye while other particles are so small they can only be detected using an electron microscope (USEPA, 2022f). Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally 10 micrometers and smaller (PM₁₀); and fine inhalable particles with diameters that are generally 2.5 micrometers and smaller (PM_{2.5}) (USEPA, 2022f). Thus, PM_{2.5} comprises a portion or a subset of PM₁₀. Sources of PM₁₀ emissions include dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, and wind-blown dust from open lands (CARB, 2022g). Sources of PM_{2.5} emissions include combustion of gasoline, oil, diesel fuel, or wood (CARB, 2022g). PM₁₀ and PM_{2.5} may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO₂, NO_x, and certain organic compounds (CARB, 2022g).

According to CARB, both PM₁₀ and PM_{2.5} can be inhaled, with some depositing throughout the airways; PM₁₀ is more likely to deposit on the surfaces of the larger airways of the upper region of the lung while PM_{2.5} is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation (CARB, 2022g). Short-term (up to 24 hours duration) exposure to PM₁₀ has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB, 2022g). The effects of long-term (months or years) exposure to PM₁₀ are less clear, although studies suggest a link between long-term PM₁₀ exposure and respiratory mortality. The International Agency for Research on Cancer published a review in

2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB, 2022g). Short-term exposure to PM_{2.5} has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days and long-term exposure to PM_{2.5} has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children (CARB, 2022g). According to CARB, populations most likely to experience adverse health effects with exposure to PM₁₀ and PM_{2.5} include older adults with chronic heart or lung disease, children, and asthmatics and children and infants are more susceptible to harm from inhaling pollutants such as PM₁₀ and PM_{2.5} compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems (CARB, 2022g). Research has shown that children living in communities with high levels of PM_{2.5} had slower lung growth, and had smaller lungs at age 18 compared to children who lived in communities with low PM_{2.5} levels (Appendix C) (CARB, 2022g). CARB conducted a risk assessment of premature mortality associated with exposure to PM_{2.5} which indicated that PM_{2.5} exposure contributes to 5,400 (uncertainty range of 4,200 – 6,700) premature deaths due to cardiopulmonary causes per year in California (CARB, 2022g). Additionally, PM_{2.5} exposure contributes to approximately 2,800 hospitalizations for cardiovascular and respiratory diseases (uncertainty range 350 – 5,100), and about 6,700 emergency room visits for asthma (uncertainty range 4,300 to 9,300) each year in California (CARB, 2022g).

Lead

Lead is a metal that is a natural constituent of air, water, and the biosphere. Major sources of lead emissions include ore and metals processing, piston-engine aircraft operating on leaded aviation fuel, waste incinerators, utilities, and lead-acid battery manufacturers (USEPA, 2022d). In the past, leaded gasoline was a major source of lead emissions; however, the removal of lead from gasoline has resulted in a decrease of lead in the air by 98 percent between 1980 and 2014 (USEPA, 2022d). EKAPCD no longer monitors lead ambient levels of atmospheric lead in the Air Basin. Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen carrying capacity of blood (USEPA, 2022d). The lead effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage (CARB, 2022i). Excessive lead exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain (CARB, 2022i).

Other Criteria Pollutants (California Only)

The California Ambient Air Quality Standards (CAAQS) regulate the same criteria pollutants as the National Ambient Air Quality Standards (NAAQS) but in addition, regulate State-identified criteria pollutants, including sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride (CARB, 2022a). According to CARB, California law continues to mandate CAAQS, although attainment of the NAAQS has precedence over attainment of the CAAQS due to federal penalties for failure to meet federal attainment deadlines (CARB, 2022a). California law does not require that CAAQS be met by specified dates as is the case with NAAQS. Rather, it requires incremental progress toward attainment (CARB, 2022a).

With respect to the State-identified criteria pollutants (i.e., sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride), the project would either not emit them (i.e., hydrogen sulfide and vinyl chloride), or they would be accounted for as part of the pollutants estimated in this analysis (i.e., sulfates and visibility reducing particles). For example, visibility reducing particles are associated with particulate matter emissions and sulfates are associated with SO_x emissions. Both particulate matter and SO_x are included in the emissions estimates for the project. A description of the health effects of the State-identified criteria air pollutants is provided below.

Sulfates (SO₄²⁻)

Sulfates (SO₄²⁻) are particulate product that comes from the combustion of sulfur-containing fossil fuels. When sulfur monoxide or SO₂ is exposed to oxygen, it precipitates out into sulfates (SO₃ or SO₄). Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur (CARB, 2022q). This sulfur is oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California because of regional meteorological features.

Exposure to SO₄²⁻, which are part of PM_{2.5}, results in health effects similar to those from exposure to PM_{2.5} including reduced lung function, aggravated asthmatic symptoms, and increased risk of emergency department visits, hospitalizations, and death in people who have chronic heart or lung diseases (CARB, 2022q). Population groups with higher risks of experiencing adverse health effects with exposure to SO₄²⁻ include children, asthmatics, and older adults who have chronic heart or lung diseases (CARB, 2022q). CARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. When acidic pollutants and particulates are also present, SO₂ tends to have an even more toxic effect. In addition to particulates, SO₃ and SO₄ are also precursors to acid rain. SO_x and NO_x are the leading precursors to acid rain. Acid rain can lead to corrosion of man-made structures and cause acidification of water bodies. Sulfates are particularly effective in degrading visibility and because they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide (H₂S)

H₂S is a colorless gas with a strong odor of rotten eggs. The most common sources of H₂S emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. Industrial sources of H₂S include petrochemical plants and kraft paper mills. H₂S is also formed during bacterial decomposition of human and animal wastes, and is present in emissions from sewage treatment facilities and landfills (CARB, 2022f).

H₂S is regulated as a nuisance based on its odor detection level; if the standard were based on adverse health effects, it would be set at a much higher level (CARB, 2022f). According to CARB, there are insufficient data available to determine whether or not some groups are at greater risk than others (CARB, 2022f). Exposure to H₂S can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting; additional health effects of eye irritation have only been reported with exposures greater than 50 ppm, which is

considerably higher than the odor threshold (CARB, 2022f). Exposure to higher concentrations (above 100 ppm) can cause olfactory fatigue, respiratory paralysis, and death. Brief exposures to high concentrations of H₂S (greater than 500 ppm) can cause a loss of consciousness. In most cases, the person appears to regain consciousness without any other effects. However, in many individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory, and poor motor function. No health effects have been found in humans exposed to typical environmental concentrations of H₂S (0.00011–0.00033 ppm). Deaths due to breathing in large amounts of H₂S have been reported in a variety of different work settings, including sewers, animal processing plants, waste dumps, sludge plants, oil and gas well drilling sites, and tanks and cesspools.

Visibility-Reducing Particles

Visibility-reducing particles come from a variety of natural and manmade sources and can vary greatly in shape, size and chemical composition. Visibility reduction is caused by the absorption and scattering of light by the particles in the atmosphere before it reaches the observer. Certain visibility-reducing particles are directly emitted to the air such as windblown dust and soot, while others are formed in the atmosphere through chemical transformations of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of particulate matter. As the number of visibility reducing particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range (CARB, 2022t). Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM₁₀ and PM_{2.5} as discussed above (CARB, 2022t).

Vinyl Chloride

Vinyl chloride is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products and are generally emitted from industrial processes and other major sources of vinyl chloride have been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents (CARB, 2022s).

Short-term health effects of exposure to high levels of vinyl chloride in the air include central nervous system effects, such as dizziness, drowsiness, and headaches while long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage and has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans (CARB, 2022s). Most health data on vinyl chloride relate to carcinogenicity; thus, the people most at risk are those who have long-term exposure to elevated levels, which is more likely to occur in occupational or industrial settings; however, control methodologies applied to industrial facilities generally prevent emissions to the ambient air (CARB, 2022s).

Toxic Air Contaminants (TACs)

In addition to criteria pollutants, the EKAPCD periodically assesses levels of toxic air contaminants (TACs) in the Air Basin. A TAC is defined by California Health and Safety Code Section 39655:

“Toxic air contaminant” means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard

to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.

Diesel particulate matter, which is emitted in the exhaust from diesel engines, was listed by the state as a toxic air contaminant in 1998. Most major sources of diesel emissions, such as ships, trains, and trucks operate in and around ports, railyards, and heavily traveled roadways. These areas are often located near highly populated areas resulting in greater health consequences for urban areas than rural areas (CARB, 2022I). Diesel particulate matter has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. Diesel particulate matter consists of fine particles (fine particles have a diameter $<2.5 \mu\text{m}$), including a subgroup of ultrafine particles (ultrafine particles have a diameter $<0.1 \mu\text{m}$). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to diesel particulate matter may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Diesel particulate matter levels and resultant potential health effects may be higher in proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, diesel particulate matter exposure may lead to the following adverse health effects: (1) Aggravated asthma; (2) Chronic bronchitis; (3) Increased respiratory and cardiovascular hospitalizations; (4) Decreased lung function in children; (5) Lung cancer; and (6) Premature deaths for people with heart or lung disease (CARB, 2008 & 2022I).

Airborne Fungus (*Coccidioides immitis*)

Coccidioidomycosis, commonly referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis*.

Coccidioides immitis spores are found in the top few inches of soil. The cocci fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus “blooms” and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust also are more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Approximately 60 percent of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms include fatigue, cough, loss of appetite, rash, headache, and joint aches. In some cases, painful red bumps may develop on the skin. Because these symptoms are not unique to Valley

Fever and also may be caused by other illnesses, identifying and confirming this disease requires specific laboratory tests, such as the following (VFCE, 2022b):

- Microscopic identification of the fungal spherules in infected tissue, sputum or body fluid sample.
- Growing a culture of *Coccidioides immitis* from a tissue specimen, sputum, or body fluid.
- Detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids.
- Administering the Valley Fever Skin Test (called coccidioidin or spherulin), which indicate prior exposure to the fungus.

The highest incidence rate within California occurs in Kern County within the San Joaquin Valley Air Basin, with 3,045 annual cases reported for the year 2021 (Kern, 2022). Valley Fever is not contagious, and therefore cannot be passed on from person to person. Most of those who are infected recover without treatment within six months and thereafter have a lifelong immunity to the fungal spores. In severe cases, especially in those patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used.

The type of medication used and the duration of drug therapy are determined by the severity of disease and response to the therapy. The medications used include ketoconazole, itraconazole, and fluconazole in chronic, mild-to-moderate disease, and amphotericin B, given intravenously or inserted into the spinal fluid, for rapidly progressive disease. Although these treatments are often helpful, evidence of disease may persist and years of treatment may be required (VFCE, 2022a). Approximately 60 percent of people infected are asymptomatic and do not seek medical attention. In the remaining 40 percent, symptoms range from mild to severe. A small percentage, approximately one percent, die as a result of the disease (CDPH, 2022).

The usual course of Valley Fever in healthy people is complete recovery within six months. In most cases, the body's immune response is effective, and no specific course of treatment is necessary. About five percent of cases result in pneumonia (infection of the lungs), while another 5 to 10 percent of patients develop lung cavities. These cavities occur most often in adults, usually without symptoms, and about 50 percent of them disappear within two years. Occasionally, these cavities rupture, causing chest pain and difficulty breathing which requires surgical repair. Only one to two percent of those exposed who seek medical attention would develop a disease that disseminates (spreads) to other parts of the body other than the lungs (CDPH, 2022).

Asbestos

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. In addition, naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks

have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. Serpentine and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. According to information provided by the Department of Conservation Division of Mines and Geology, the project site is not located in an area where naturally occurring asbestos is likely to be present (CDOC, 2000).

Local Air Quality

CARB has established and maintains a network of sampling stations (called the State and Local Air Monitoring Stations [SLAMS] network) that work in conjunction with local air pollution control districts and air quality management districts to monitor ambient pollutant levels. The SLAMS network in Kern County consists of eight stations that monitor various pollutant concentrations. The locations of these stations were chosen to meet monitoring objectives, which, for the SLAMS network, call for stations that monitor the highest pollutant concentrations, representative concentrations in areas of high population density, the impact of major pollution emissions sources, and general background concentration levels.

The EKAPCD is responsible for monitoring air quality in the Kern County portion of the MDAB to determine whether pollutant concentrations meet state and national air quality standards. The nearest air monitoring station to the project site is the Mojave air monitoring station, located approximately 7.5 miles north of the project site. The Mojave monitoring station monitors ambient concentrations of ozone, PM₁₀, and PM_{2.5}. CO and NO₂ data were obtained from the Lancaster monitoring station and SO₂ data was obtained from the Victorville-Park Avenue monitoring station as these are the closest stations that monitors for these pollutants. Data obtained for 2019 through 2022 is summarized below in **Table 4.3-2, Ambient Air Quality Data**.

Table 4.3-2: Ambient Air Quality Data

Pollutant/Standard	2019	2020	2021	2022
O₃ (1-hour) Mojave				
Maximum Concentration (ppm)	0.085	0.108	0.094	0.091
Days > CAAQS (0.09 ppm)	0	5	0	0
O₃ (8-hour) Mojave				
Maximum Concentration (ppm)	0.077	0.100	0.084	0.075
Days > CAAQS (0.070 ppm)	10	16	19	9
Days > NAAQS (0.075 ppm)	2	9	10	0
NO₂ (1-hour) Lancaster				
Maximum Concentration (ppm)	0.050	0.052	0.046	0.044
NO₂ (Annual) Lancaster				
Annual Arithmetic Mean (0.030 ppm)	0.025	0.026	0.027	N/A
CO (1-hour) Lancaster				
Maximum Concentration (ppm)	1.388	1.617	1.416	N/A
CO (8-hour) Lancaster				
Maximum Concentration (ppm)	0.628	0.707	0.746	N/A

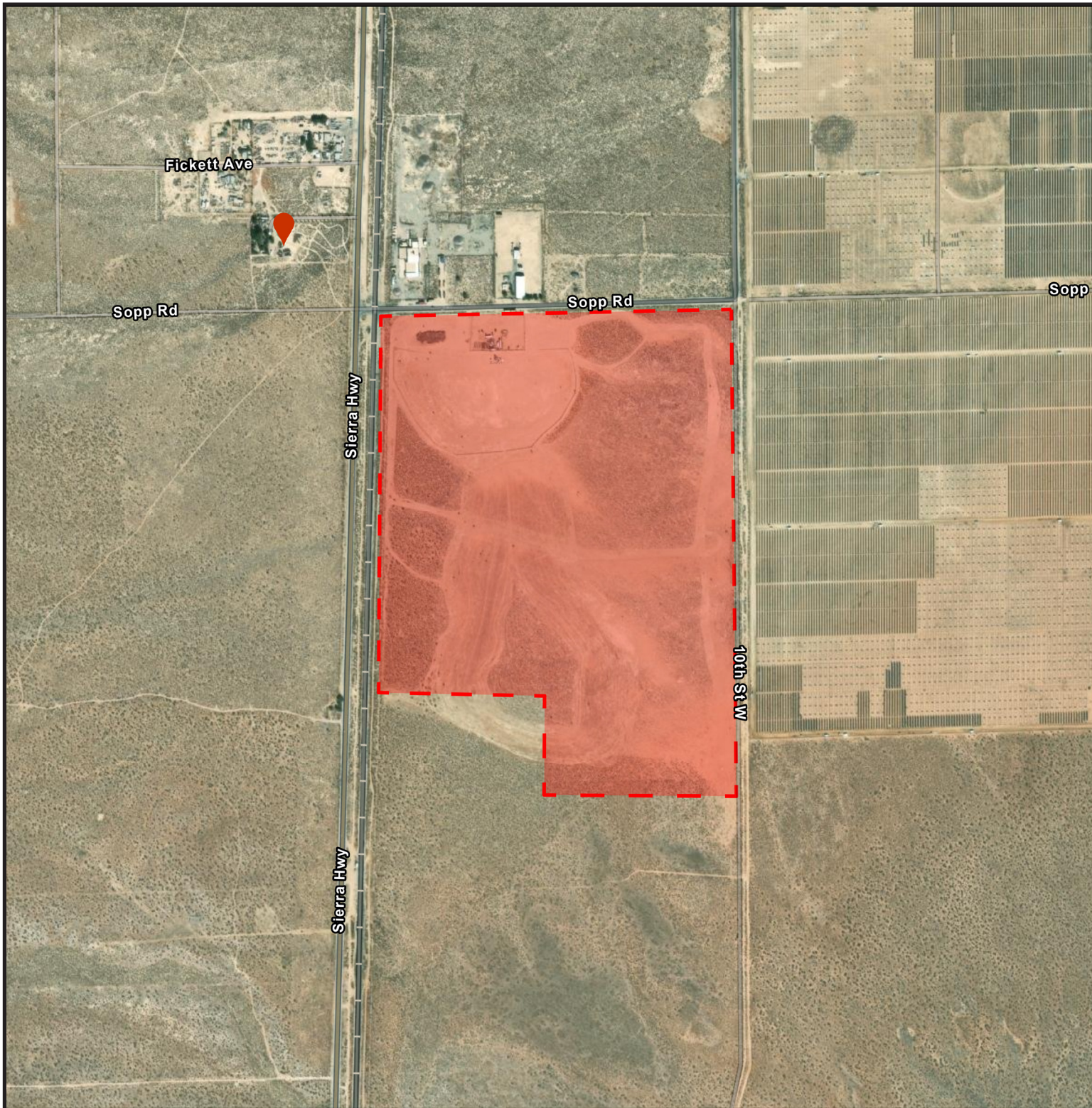
Pollutant/Standard	2019	2020	2021	2022
SO₂ (1-hour) Victorville-Park				
Maximum Concentration (ppm)	0.016	0.006	0.136	N/A
SO₂ (24-hour) Victorville-Park				
Maximum Concentration (ppm)	0.009	0.003	0.016	N/A
PM₁₀ (24-hour) Mojave				
Maximum Concentration (µg/m ³)	248.7	114.8	352.0	121.5
Samples > CAAQS (50 µg/m ³)	15	13	33	7
Samples > NAAQS (150 µg/m ³)	2	0	1	0
PM_{2.5} (24-hour) Mojave				
Maximum Concentration (µg/m ³)	19.8	72.8	50.7	10.9
Samples > NAAQS (35 µg/m ³)	0	6	3	0
ppm = parts per million; µg/m ³ = micrograms per cubic meter				
SOURCE: CARB, Air Quality and Meteorological Information System (AQMIS), 2022. https://arb.ca.gov/aqmis2/aqdselect.php . Accessed October 12, 2023. CARB, Top 4 Summary. https://www.arb.ca.gov/adam/topfour/topfour1.php . Accessed October 12, 2023.				

4.3.3 Sensitive Receptors

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. Sensitive land uses within ¼ mile of the project site are shown in **Figure 4.3-1: Sensitive Receptor Locations Nearest to the Project Site**, and include the following:

- Residential Uses: Single-family residences located approximately 1,000 feet to the northwest of the project site along Dobbs Road.

All other air quality sensitive receptors are located at greater distances from the project site, and would be less impacted by project emissions. Impacts are quantified for the sensitive receptors listed here.





Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 4.3-1: Sensitive Receptor Locations Nearest to the Project Site

PSGM3 Holdings Corp (Pacific Steel Group)

-  Project Site
-  Sensitive Receptor

APN: 431-010-02 & 431-030-02
Sec. 27 - T10N/R12W



Kern County
Planning & Natural
Resources Department

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4.3.4 Regulatory Setting

A number of statutes, regulations, plans and policies have been adopted which address air quality concerns. The project site and vicinity is subject to air quality regulations developed and implemented at the federal, State, and local levels. At the federal level, the USEPA is responsible for implementation of the federal CAA. Some portions of the CAA (e.g., certain mobile source requirements and other requirements) are implemented directly by the USEPA. Other portions of the CAA (e.g., stationary source requirements) are implemented through delegation of authority to state and local agencies. A number of plans and policies have been adopted by various agencies that address air quality concerns. Those plans and policies that are relevant to the project are discussed below.

Federal

The federal Clean Air Act (CAA) was enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990 (42 U.S.C. §7401 et seq.). The CAA is the comprehensive federal law that regulates air emissions in order to protect public health and welfare (USEPA, 2022h). The USEPA is responsible for the implementation and enforcement of the CAA, which establishes federal NAAQS, specifies future dates for achieving compliance, and requires USEPA to designate areas as attainment, nonattainment, or maintenance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for each criteria pollutant for which the state has not achieved the applicable NAAQS. The SIP includes pollution control measures that demonstrate how the standards for those pollutants will be met. The sections of the CAA most applicable to the project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions) (USEPA, 2022b).

The federal Clean Air Act (CAA) establishes a classification system for the level of protection from the impacts of air pollution in an area. Areas designated as Class I receive the greatest level of protection from the impacts of air pollution. There are three Class I areas within 62 miles (100 kilometers (km)) of the proposed project site. These include the Domeland Wilderness Area which is located approximately 85 km to the north, the San Gabriel Wilderness Area located approximately 67 km to the south, and the Cucamonga Wilderness Area located approximately 88 km to the south-southeast.

Title I requirements are implemented for the purpose of attaining NAAQS for criteria air pollutants. The NAAQS were amended in July 1997 to include an 8-hour standard for ozone and to adopt a NAAQS for PM_{2.5}. The NAAQS were also amended in September 2006 to include an established methodology for calculating PM_{2.5}, as well to revoke the annual PM₁₀ threshold.

Table 4.3-3, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant. The NAAQS and the CAAQS for the California criteria air pollutants (discussed below) have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including against decreased visibility and damage to animals, crops, vegetation, and buildings (USEPA, 2023a). In addition to criteria pollutants, Title I also includes air toxics provisions which require USEPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance

with Section 112, USEPA establishes National Emission Standards for Hazardous Air Pollutants. The list of hazardous air pollutants (HAPs), or air toxics, includes specific compounds that are known or suspected to cause cancer or other serious health effects. It also includes the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality, which sets limits on sulfur oxide and particulate matter and other pollutants as outlined in Sections 163 and 166.

Additionally, Title I also includes measures for the Prevention of Significant Deterioration (PSD) of Air Quality (40 CFR 52.21) which requires new and modified stationary sources to demonstrate that their allowable emissions will not cause or contribute to a violation of “any national ambient air quality standard in any air quality control region. Under the PSD, major sources located in a NAAQS attainment or unclassifiable area require the following: installation of Best Available Control Technology (BACT); an air quality analysis (specifically for the PSD permit which demonstrates that new emissions would not cause or contribute to a violation of any applicable NAAQS or PSD increment); an additional impact analysis; and public involvement. The PSD permit does not prevent sources from increasing emissions, but is designed to (USEPA, 2023c):

- Protect public health and welfare.
- Preserve, protect and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value.
- Ensure that economic growth will occur in a manner consistent with the preservation of existing clean air resources.
- Assure that emissions from any source in any state will not interfere with any portion of the applicable implementation plan to prevent significant deterioration of air quality for any other State.
- Assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decision making process.

Title II requirements pertain to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_x emissions have been lowered substantially, and the specification requirements for cleaner burning gasoline are more stringent.

Table 4.3-3: Ambient Air Quality Standards

Pollutant	Average Time	California Standards ^a		National Standards ^b			
		Concentration ^c		Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
O ₃ ^h	1 Hour	0.09 ppm (180 µg/m³)		Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)			0.070 ppm (137 µg/m³)		
NO ₂ ⁱ	1 Hour	0.18 ppm (339 µg/m³)		Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	None	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)			53 ppb (100 µg/m³)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m³)		Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m³)			9 ppm (10 mg/m³)		
SO ₂ ⁱ	1 Hour	0.25 ppm (655 µg/m³)		Ultraviolet Fluorescence	75 ppb (196 µg/m³)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosani-inc Method) ⁹
	3 Hour	-			-	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)			0.14 ppm (for certain areas) ^j	-	
PM ₁₀ ^k	24 Hour	50 µg/m³		Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic	20 µg/m³			-		
PM _{2.5} ^k	24 Hour	No Separate State Standard			35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³		Gravimetric or Beta Attenuation	12.0 µg/m³ ^k	15 µg/m³	
Lead ^{l,m}	30 Day Average	1.5 µg/m³		Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average ^m	--			0.15 µg/m³		
Visibility Reducing Particles ⁿ	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards			
Sulfates (SO ₄)	24 Hour	25 µg/m³	Ion Chromatography				

Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence
Vinyl Chloride ¹	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography

^a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter (µg/m³) is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

^d Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

^e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

^f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

^g Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

^h On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

ⁱ To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

^j On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

^k On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³.

^l The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

^m The national standard for lead was revised on October 15, 2008 to a rolling three-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

ⁿ In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board, Ambient Air Quality Standards (5/4/16). Available <https://ww2.arb.ca.gov/resources/documents/ambientair-quality-standards-0>. Accessed November 2022.

Table 4.3-4, EKAPCD Attainment Status, shows the attainment status of the Air Basin for each criteria pollutant. Further, **Table 4.3-4**, the Air Basin is designated under federal or state ambient air quality standards as nonattainment for ozone and PM₁₀. As detailed in the EKAPCD 2020- 2021 Information Report (EKAPCD, 2021), the major sources of air pollution in the Air Basin are mining, military, aerospace, farming, cannabis, renewable energy, and most recently the wildfires.

Title V of the CAA, as amended in 1990, creates an operating permit program for certain defined major sources. In general, owner/operators of defined industrial or commercial sources that emit more than 100 tons per year (tpy) of any pollutant must process a Title V permit. However, in non-attainment areas, lower thresholds apply as defined in the CAA. Additionally, major source thresholds for HAPs are 10 tpy for a single HAP or 25 tpy for any combination of HAPs. As EKAPCD is in severe non-attainment for ozone, the threshold changes from 100 tpy to 25 tpy.

Title V does not impose any new air pollution standards, require installation of any new controls on the affected facilities, or require reductions in emissions. Title V does enhance public and EPA participation in the permitting process and requires additional record keeping and reporting by businesses, which results in significant administrative requirements.

Table 4.3-4: EKAPCD Attainment Status

Pollutant	National Standards (NAAQS)	California Standards (CAAQS)
O ₃ (1-hour standard)	Attainment/Maintenance ^{a b}	Non-attainment
O ₃ (8-hour standard)	Non-attainment – Severe	Non-attainment
CO	Unclassified/Attainment	Unclassified
NO ₂	Unclassified/Attainment	Attainment
SO ₂	Unclassified/Attainment	Attainment
PM ₁₀	Unclassified/Attainment ^d	Non-attainment
PM _{2.5}	Unclassified/Attainment	Unclassified
Lead (Pb)	Unclassified/Attainment	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride ^c	N/A	N/A

N/A = not applicable

^a The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.

^b EKAPCD was in attainment for the 1-hour ozone NAAQS at time of revocation, the proposed Attainment Maintenance designation's effective date was June 21, 2005, therefore it did not become effective.

^c In 1990, the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

^d The proposed project area is located in the portion of EKAPCD that is designated Unclassified/Attainment, the Kern River/Cummings Valleys area is classified as Nonattainment – Serious, and the Indian Wells Valley is classified at Attainment Maintenance.

SOURCE: USEPA, The Green Book Non-Attainment Areas for Criteria Pollutants, <https://www.epa.gov/green-book>; CARB, Area Designations Maps/State and National, <http://www.arb.ca.gov/design/adm/adm.htm>, and Eastern Kern APCD Attainment Status, <http://www.kernair.org/Documents/Announcements/Attainment/EKAPCD%20Attainment%20Status%202022.pdf>. Accessed November 2022.

New Source Review

New Source Review (NSR) is a Clean Air Act program that requires industrial facilities to install modern pollution control equipment when they are built or when making a change that increases

emissions significantly (USEPA, 2015). The program accomplishes this when owners or operators obtain permits limiting air emissions before they begin construction.

There are three types of NSR permitting requirements: Prevention of Significant Deterioration (PSD), Nonattainment NSR, and Minor source permits. Most NSR permits are issued by state or local air pollution control agencies with the USEPA issues permits in some cases (USEPA, 2023b).

Prevention of Significant Deterioration (PSD)

PSD applies to new major sources or major modifications at existing sources for pollutants where the area the source is located is in attainment or unclassified with the NAAQS (USEPA, 2023c).

A PSD permit requires the following:

- Installation of the Best Available Control Technology;
- An air quality analysis
- An additional impact analysis; and
- Public involvement.

PSD does not prevent sources from increasing emissions (USEPA, 2023c). Instead, PSD is designed to: Protect public health and welfare; preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value; insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources; and assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decision making process (USEPA, 2023c).

State

California Air Resources Board

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of California to achieve and maintain the CAAQS. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts. The SIP is required for the state to take over implementation of the federal CAA from USEPA.

California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS are established to protect the health of the most sensitive groups and apply to the same criteria pollutants as the federal Clean Air Act and also includes State-identified criteria pollutants, which are sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act (Chapter 1568 of the Statutes of 1988), responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 3 provides a summary of the attainment status of the Eastern Kern County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates and unclassified for hydrogen sulfide and visibility-reducing particles. The Air Basin is currently in non-attainment for ozone and PM₁₀ under the CAAQS. Since vinyl chloride is a carcinogenic toxic air contaminant, CARB does not classify attainment status for this pollutant.

California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended or repealed by the state agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operations of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emissions standards.

California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_x, PM₁₀, and PM_{2.5} emissions from existing diesel vehicles operating in California (13 CCR, Section 2025). The requirements were amended to apply to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. For the largest trucks in the fleet, those with a GVWR greater than 26,000 pounds, there are 2 methods to comply with the requirements. The first method is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the state subject to this option would meet or exceed the 2010 engine emission standards for NO₁₀ and PM_{2.5} by 2023. The second

method, if chosen, required fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, with installation of diesel particulate filters (DPFs) for their entire fleet by January 1, 2016. However, DPFs do not typically lower NO_x emissions. Thus, fleet owners choosing the second option had until 2020 to comply with the 2010 engine emission standards for their trucks and buses.

In addition to limiting exhaust from idling trucks, CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR, Section 2449). Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance in 2014, medium fleets in 2017, and small fleets in 2019. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (VDECS) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits (VDECS installation) be fully implemented by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

Toxic Air Contaminants

The California Air Toxics Program was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or “listed”, as a TAC in California. Inception of the program, a number of such substances have been listed (<https://ww2.arb.ca.gov/resources/documents/carb-identified-toxicair-contaminants>). In 1993, the California Legislature amended the program to identify the 189 federal HAPs as TACs.

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on the results of that review, CARB has promulgated a number of ATCMs, both for mobile and stationary sources. As discussed above, in 2004, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time.

In addition to limiting exhaust from idling trucks, as discussed above, CARB promulgated emission standards for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation, adopted by CARB on July 26, 2007, aims to reduce emissions by the installation of diesel particulate filters and encouraging the replacement of older, dirtier engines with newer emission controlled models. Reduction over time will occur as implementation is staggered based on fleet size, with the largest

operators beginning compliance in 2014 with full implementation by 2023 for large and medium fleets and 2028 for small fleets.

The AB 1807 program is supplemented by the AB 2588 Air Toxics “Hot Spots” program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

California State Implementation Plan

The CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all State Implementation Plans to determine if they conform to the requirements of the CAA. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. As discussed below, the *EKAPCD 2017 Ozone Attainment Plan* informs the EKAPCD’s portion of the SIP.

Regional

Eastern Kern Air Pollution Control District

The project site is located within the Mojave Desert Air Basin which encompasses the desert portions of Kern, Los Angeles, Riverside, and San Bernardino Counties. The Basin has four air districts which regulate air quality. The project site lies within the EKAPCD. EKAPCD is responsible for air quality planning in its portion of the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished through air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles. The EKAPCD has established the following rules and regulations which apply to the project to ensure compliance with local, State, and federal air quality regulations:

Rule 201

Rule 201 establishes permitting requirements for stationary sources to operate. The proposed project must obtain Authority to Construct and Permit to Operate approval under Rule 201.

Rule 201.1

Rule 201.1 implements the requirements of Title V of the CAA for permits to operate for certain sources emitting regulated air pollutants, including attainment and non-attainment pollutants. This rule covers Title I requirements of the CAA, including: New Source Review, PSD, New Source Performance Standards; NAAQS; NESHAPs; Maximum Achievable Control Technologies; Risk Management Plan Preparation and Registration Requirements; Solid Waste Incineration requirements, Consumer and Commercial requirements; Tank Vessel requirements; District prohibitory rules approved by the SIP; Standards or regulation promulgated to a Federal Implementation Plan, and Enhanced Monitoring and Compliance Certification requirements.

Rule 208.2

This Rule establishes criteria by which a project under review by EKAPCD can be found to have no potential for causing a significant environmental impact, and, thus, be granted a general rule exemption pursuant to Section 15061(b)(3) of the State CEQA Guidelines.

For purposes of determining whether a proposed project has no potential to cause a significant effect on the environment, a new or modified emissions unit (as defined in Rule 210.1, Subsection II.L.) at a facility shall be found to have no potential for causing a significant effect on the environment if the new or modified emissions unit meets all of the following requirements:

A. All answers to the KCAPCD "Environmental Information Form and Initial Study Evaluation" are "No";

B. The proposed new or modified emissions unit will comply with all applicable requirements and limits established in Regulation IV of the Kern County Air Pollution Control District Rules and Regulations, and all provisions of state and federal law and regulations which the Kern County Air Pollution Control District has authority to enforce;

C. Expected emissions from the proposed new or modified emissions unit are calculated using:

1. Standardized emission factors from published CARB or U.S. EPA sources;
2. Source tests for the same or similar facilities conducted in accordance with CARB or U.S. EPA test methods;
3. Recognized formulas from published engineering and scientific handbooks, material safety data sheets, or other similar published literature;
4. Manufacturer's guarantees; and/or
5. Other fixed standards;

D. Best Available Control Technology (BACT) as required by Rule 210.1, Subsection III.A., is proposed and BACT is established based on:

1. The latest edition of the CARB/U.S. EPA BACT/LAER Clearinghouse;
2. The EKAPCD's own compilations of BACT for specific types of sources; or
3. A more stringent BACT proposed by the project proponent;

E. Any emission reduction offsets required by Rule 210.1, Subsection III.B., are provided solely from emissions units within the facility at which the new or modified emissions unit is proposed to be constructed and the emission reductions from those units can be determined from source tests, production data, or other existing District records;

F. Any increase in the quantity or type of toxic air contaminants emitted from the facility is shown by a risk assessment prepared in accordance with current Cal-EPA guidelines to have increased cancer risk at any receptor outside the facility perimeter less than one in one million (1×10^{-6}) and total hazard index at any receptor outside the facility perimeter less than 0.2; and G. The proposed project will not have a significant impact due to cumulative effects of successive projects of the same type at the same location.

Rule 210.1

Rule 210.1 is EKAPCD's New and Modified Stationary Source Review rule and establishes stationary source offset levels for new and modified stationary sources of air pollutants. Under this rule, the EKAPCD has established required offsets for when the emissions from a source exceed the following trigger levels:

- PM_{10} – 15 tons/year
- SO_x (as SO_2) – 27 tons/year
- VOCs – 25 tons/year
- NO_x (as NO_2) – 25 tons/year.

Additionally, this rule requires BACT for all affected pollutants expected to be emitted from a new emissions unit. Offsets are required for PM_{10} , SO_x , NO_x , and VOC in federal or state designated PM_{10} , SO_x , NO_x , or ozone non-attainment areas. After a stationary sources New Source Review (NSR) balance and/or stationary source potential to emit equals or exceeds these trigger levels and offsets have been provided fully offsetting the NSR balance or the stationary source potential to emit, any additional future increase shall be offset.

Rule 210.4

The purpose of this Rule is to include the federal Prevention of Significant Deterioration rule requirements into the EKAPCD Rules and Regulations by incorporating the federal requirements by reference. The PSD program is a construction permitting program for new major source facilities and major modifications to existing major source facilities located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant.

Rule 210.5

This rule prevents adverse impacts to Federal Class I areas. For any new major stationary source or major modification which would have the potential to emit NO_x , SO_x , or particulate matter in significant amounts and is required to utilize BACT for such pollutants, EKAPCD shall not issue an Authority to Construct unless the analysis required by this Rule demonstrates that an adverse impact on visibility will not occur.

Rule 401

Rule 401 states that a person shall not discharge into the atmosphere, from any single source of emissions whatsoever, any air contaminant from any single emissions source for a period of periods aggregating more than 3 minutes in any one hour which is:

- As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
- Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Subsection A [of the Rules].

Rule 402

Rule 402 of the EKAPCD's rules and regulations addresses significant man-made dust sources from active operations. An active operation is defined as "Activity capable of generating fugitive dust, including any open storage pile, earth-moving activity, construction/demolition activity, disturbed surface area, and nonemergency movement of motor vehicles on unpaved roadways and any parking lot served by an unpaved road subject to this Rule." Rule 402 applies to specified bulk storage, earthmoving, construction and demolition, and man-made conditions resulting in wind erosion, and includes the following requirements:

- A person shall not cause or allow emissions of fugitive dust from any active operation to remain visible in the atmosphere beyond the property line of the emission source.
- A person shall utilize one or more Reasonably Available Control Measures (RACM) or Bulk Material Control Measures (BMCM) to minimize fugitive dust emissions from each source type that is part of any active operation, including unpaved roadways.
- No person shall conduct a large operation without filing for and obtaining an approved fugitive dust emission control plan. Large operation is defined as "Any construction activity on any site involving 10 or more contiguous acres of disturbed surface area, or any earthmoving activity exceeding a daily volume of 10,000 cubic yards or relocating more than 2,500 cubic yards per day of bulk materials at least three days per year."
- EKAPCD may require onsite PM₁₀ monitoring for any large operation that causes downwind PM₁₀ ambient concentrations to increase more than 50 micrograms per cubic meter above upwind concentrations as determined by utilizing high-volume particulate matter samplers, or other EPA approved equivalent method(s).

Rule 404.1

Rule 404.1 pertains to Particulate Matter Concentrations – Desert Basin and states:

- A person shall not discharge into the atmosphere from any single source operation, in service on the date this Rule is adopted, particulate matter in excess of 0.2 grains per cubic foot of gas at standard conditions.
- A person shall not discharge into the atmosphere from any single source operation, the construction or modification of which commenced after the adoption of this Rule, particulate matter in excess of 0.1 grains per cubic foot of gas at standard conditions.

Rule 410.1

This rule limits VOC emissions from architectural coatings by specifying VOC content limits, storage, cleanup, and labeling requirements.

Rule 410.4

The purpose of this rule is to limit VOC emissions from the coating of metal parts and products, large appliances parts and products, metal furniture, plastic parts and products, automotive/transportation and business machine plastic parts and products, and pleasure crafts, and from cleaning, storage, and disposal of organic solvents and waste solvent materials associated with such coating operations.

Rule 414

Rule 414 states that a person shall not use any compartment of any vessel or device operated for the recovery of oil or tar from effluent water, from any equipment which processes, refines, stores or handles petroleum or coal tar products unless such compartments is equipped with one of the following:

- A solid cover with all openings sealed and totally enclosing the liquid contents of the compartment, except for such breathing vents as are structurally necessary; or
- A floating pontoon or double-deck type cover, equipped with closure seals that have no holes or tears, installed and maintained so that gaps between the compartment wall and seal shall not exceed 0.32 centimeters (1/8 inch) for an accumulative length of 97 percent of the perimeter of the tank, and shall not exceed 1.3 centimeters (1/2 inch) for an accumulative length of the remaining 3 percent of the perimeter of the tank. No gap between the compartment wall and the seal shall exceed 1.3 centimeters (1/2 inch); or a vapor recovery system with a combined collection and control efficiency of at least 90 percent by weight.

Rule 419

Rule 419 states that a person shall not discharge from any source whatsoever such quantities of contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or that endanger the comfort, repose, health, or safety of such persons or the public or that cause or have a natural tendency to cause injury or damage to business or property.

Rule 423

Rule 423 adopts the EPA's National Emissions Standards for Hazardous Air Pollutants by reference, which grants EKAPCD the ability to ensure that all sources of hazardous air pollution would comply with applicable standards, criteria, and requirements set forth in Title 40, Chapter 1, Parts 61 and 63, of the Code of Federal Regulations that are in effect as of October 10, 2017.

2023 Ozone Air Quality Attainment Plan

In 2008, USEPA adopted a more stringent 8-hour ozone NAAQS of 0.075 ppm, and in 2015, adopted the 8-hour ozone NAAQS of 0.070 ppm. Although EKAPCD attained the 1997 8-hour ozone NAAQS, and the Indian Wells Valley planning area met the new (2008) ozone NAAQS, the EKAPCD's Design Value was higher than 0.075 ppm. In 2012, a portion of the EKAPCD was classified "marginal" nonattainment pursuant to the 2008, 8-hour Ozone NAAQS Air Quality Designations. However, EKAPCD failed to meet the 0.075 ppm standard by the applicable attainment date and was reclassified as "moderate" nonattainment, effective June 3, 2016. As a result, EKAPCD was required to submit a SIP revision for the nonattainment area by January 1, 2017, which showed compliance with statutory and regulatory conditions applicable to the "moderate" designation (EKAPCD, 2023).

EKAPCD, in partnership with CARB, conducted photochemical modeling along with supplemental analyses to determine whether the EKAPCD could attain the 2008 ozone NAAQS by the "moderate" nonattainment deadline. Modeling indicated EKAPCD would not meet the 0.075 ppm standard by the moderate deadline but could attain it by 2020, which is the attainment date for "serious" nonattainment areas. Pursuant to Section 181(b)(3) of the CAA "Voluntary Reclassification," EKAPCD requested CARB formally submit a request to USEPA asking for voluntary reclassification of EKAPCD from "moderate" to "serious" nonattainment for the 2008, 8-hour ozone NAAQS, and revise the attainment date to December 31, 2020 (EKAPCD, 2023).

In response, on May 15, 2021, the EKAPCD requested CARB submit documentation to the USEPA to reclassify the EKAPCD's nonattainment area from Serious to Severe pursuant to the 2008 ozone NAAQS. On June 25, 2021, the USEPA approved/conditionally approved, all elements of the 2017 Eastern Kern Ozone SIP, with the exception of deferred action on the Severe nonattainment redesignation request and reasonably available control measures (RACM) demonstrations. On July 7, 2021, the USEPA reclassified the EKAPCD's nonattainment area to Severe nonattainment pursuant to the 2008 ozone NAAQS, with an attainment date of July 2027 (EKAPCD, 2023).

The 2023 Ozone Air Quality Attainment Plan (2023 AQAP) was adopted by EKAPCD on May 4, 2023. The 2023 AQMP includes required elements of an attainment plan, as well as the emissions reductions and control measures necessary to demonstrate attainment with the 2008 and 2016 8-hour ozone NAAQS. Modeling completed by EKAPCD indicates that EKAPCD would not attain the 2015, 8-hour ozone NAAQS (0.070 ppm) by 2027, attainment deadline for the Serious nonattainment designation, but could attain it by 2033, the attainment deadline for the Severe nonattainment designation. Pursuant to CAA Section 181(b)(3) "Voluntary Reclassification", EKAPCD is petitioning CARB in the 2023 AQAP to formally submit a request to the USEPA asking for the voluntary reclassification from "Serious" to "Severe" for the 2015 8-hour ozone NAAQS. The voluntary reclassification would extend the attainment deadline to August 27, 2033. As of June 1, 2023, neither CARB nor the USEPA have approved the 2023 AQAP (EKAPCD, 2023).

EKAPCD Air Quality Guidance Documents

The EKAPCD published the *Guidelines For Preparing An Air Quality Assessment For Use In Environmental Impact Reports* (EKAPCD, 2006) to assist with the preparation of the air quality assessments for use as a technical document in Environmental Impact Reports. These guidelines

are intended to ensure that the assumptions and methodology used in the County's environmental documents are uniform from one project to the next to facilitate the comparison of air quality environmental effects. The *Guidelines For Preparing An Air Quality Assessment For Use In Environmental Impact Reports* provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. EKAPCD recommends using the latest version of all models for the appropriate application.

Kern Council of Governments

Kern Council of Governments (KCOG) is the Metropolitan Planning Organization (MPO) for the region in which the project is located. In addition, on September 23, 2010, CARB adopted the GHG emissions reduction targets of 5 percent per capita reduction by 2020 and 10 percent per capita reduction by 2035 relative to 2005 levels for KCOG (CARB, 2020). Under SB 375, the reduction target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, Senate Bill 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

Pursuant to Health & Safety Code Section 40460, KCOG is responsible for preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment and transportation programs, measures and strategies. With regard to air quality planning, KCOG adopted the 2018 Regional Transportation Plan and Sustainable Communities Strategy (2018 RTP/SCS) (KCOG, 2018), which is an update to the previous 2014 RTP/SCS, on August 16, 2018. The 2018 RTP/SCS seeks to: improve economic vitality, improve air quality, improve the health of communities, improve transportation and public safety, promote the conservation of natural resources and undeveloped land, increase regional access to community services, increase regional and local energy independence and increase opportunities to help shape the communities' future, while successfully achieving the GHG-emission-reduction targets set by CARB. CARB approved that the KCOG 2018 RTP/SCS would achieve the 2020 and 2035 GHG reduction targets (CARB, 2020). Kern COG makes conformity findings for each air basin. Kern County recently prepared a draft 8-hour ozone air quality conformity analysis to analyze Kern County's federally approved Federal Transportation Improvement Program (FTIP) and the 2018 RTP/SCS. The conformity findings conclude that all air quality conformity requirements have been met (DOT, 2018).

KCOG adopted the 2022 RTP/SCS (KCOG, 2022a) on December 16, 2022. The 2022 RTP serves as a blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. The 2022 SCS includes land use planning strategies and policies to reduce air emissions from passenger and light duty truck travel by better coordinating transportation expenditures with forecasted development patterns in order to meet the GHG emissions reduction target for the region by achieving a 9 percent reduction in per capita transportation GHG emissions by 2020 and a 15 percent reduction in per capita transportation emissions by 2035 compared to the 2005 level (KCOG, 2022a). Compliance with and implementation of the 2022 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions (e.g.,

nitrogen dioxide, carbon monoxide, etc.) associated with reduced per capita vehicle miles traveled (VMT).

The 2022 RTP/SCS states that Kern County region was home to approximately 927,500 people in 2020 and included approximately 272,900 homes and 341,000 jobs (KCOG, 2022a). By 2050, the integrated growth forecast projects that these figures will increase by 299,700 people, with approximately 89,200 more homes and 61,200 more jobs (KCOG, 2022a). KCOG's 2022 RTP/SCS provides specific strategies for implementation. These strategies include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation and cultures and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles (KCOG, 2022a).

In addition, the 2022 RTP/SCS includes strategies to promote active transportation; support local planning and projects that serve short trips; promote transportation investments, investments in active transportation, more walkable and bikeable communities that will result in improved air quality and public health and reduced GHG emissions; and support building physical infrastructure such as local and regional bikeways, sidewalk and safe routes to schools pedestrian improvements, regional greenways and first-last mile connections to transit, including to light rail and bus stations. The 2022 RTP/SCS aligns active transportation investments with land use and transportation strategies, increases competitiveness of local agencies for federal and state funding, and expands the potential for all people to use active transportation. CARB is in the process of reviewing the KCOG GHG quantification determination in the 2022 RTP/SCS for future GHG emission reduction targets. Although there are GHG emission reduction targets for passenger vehicles set by CARB for 2045, the 2022 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are needed for 2045. By meeting and exceeding the SB 375 targets for 2035, as well as achieving an additional 0.4 percent reduction in GHG from transportation-related sources in the ten years between 2035 and 2045, the 2022 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the state's future GHG emission reduction goals (KCOG, 2022a). The conformity findings conclude that all air quality conformity requirements have been met (KCOG, 2022b).

Local

Kern County General Plan

The Kern County General Plan was originally adopted on June 15, 2004 and was last amended on September 22, 2009. It contains the following policies that relate to air quality. The policies and implementation measures in the Kern County General Plan for air quality emissions that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the proposed project. Therefore, they are not listed below, but all policies,

goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use, Conservation, and Open Space Element

1.10.2 Air Quality

Policies

Policy 18: The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.

Policy 19: In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision-making body, as part of its deliberations, will ensure that:

- (a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
- (b) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.

Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.

Implementation Measures

Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.

Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:

- a. Minimizing idling time.
- b. Electrical overnight plug-ins.

Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:

- a. Pave dirt roads within the development.
- b. Pave outside storage areas.

- c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
- d. Use of alternative fuel fleet vehicles or hybrid vehicles.
- e. Use of emission control devices on diesel equipment.
- f. Develop residential neighborhoods without fireplaces or with the use of EPA certified low emission natural gas fireplaces.
- g. Provide bicycle lockers and shower facilities on site
- h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
- i. The use and development of park and ride facilities in outlying areas.
- j. Other strategies that may be recommended by the local Air Pollution Control Districts.

Measure J: The County should include PM₁₀ control measures as conditions of approval for subdivision maps, site plans, and grading permits.

Chapter 5. Energy Element

5.4.5 Solar Energy Development

Policies

- Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.
- Policy 2: The County should attempt to identify and remove disincentives to domestic and commercial solar energy development.
- Policy 3: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.
- Policy 4: The County should encourage solar development in the desert and valley regions previously disturbed, and discourage development of energy projects on undisturbed land supporting State or federally protected plant and wildlife species.

Implementation Measures

- Implementation Measure A: The County shall continue to maintain, and update as necessary, provisions in the Kern County Zoning Ordinance to provide adequate development standards for commercial solar energy development.
- Implementation Measure B: The County should work with affected state and federal agencies and interest groups to establish consistent policies for solar energy development.

Kern County Best Management Practices for Dust Management

In 2013, solar developers and planners from Los Angeles and Kern Counties began a series of meetings to discuss the best practices for protecting air quality and minimizing construction impacts from solar projects. The process incorporated feedback from the Mojave Air and Space Port, members of the Mojave Chamber of Commerce, Rosamond Municipal Advisory Council, and numerous other community leaders. Subsequent to these meetings, Kern County has developed a new approach to best control fugitive dust emissions and improve air quality in the high desert. The County's approach recognizes that effective dust control management must be site-specific and cannot be "one-size-fits-all" because standard methods do not adequately meet the challenges of such a unique environment as the Mojave Desert region. An effective strategy has to be based on soil conditions, topography, adjacent land uses, and wind direction.

Conditions imposed on the new solar projects in Kern County are more extensive and rigorous than ever before. These include:

- Development of a Site Specific Dust Control Plan that considers ongoing community stakeholder input, to the extent feasible and practicable.
- Use of Global Positioning System (GPS) or lasers to level posts, generally avoiding grading except when elevation changes exceed design requirements.
- When grading is unavoidable, it is to be phased and done with the application of approved chemical dust palliatives (chemical substances applied to a road surface to reduce airborne dust) that stabilize the earth.
- Use of dust suppression measures during road surface preparation activities, including grading and compaction.
- Final road surfaces must be stabilized to achieve a measurable threshold friction velocity (TFV – the wind speed at which erosion starts) equal to or greater than 100 centimeters per second.
- If ground is cleared, plant roots must be left in place where possible.
- Expanded onsite watering processes.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved (i.e., without asphalt) surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least 2 feet of freeboard.
- Sending mailings to residents within 1,000 feet of a project site.

Kern County is also carefully monitoring all solar construction activities to ensure that all mitigation measures are followed and are adequate to minimize dust-related health concerns.

4.3.5 Impacts and Mitigation Measures

This section describes the impact analysis relating to air quality for the project. It describes the methods used to determine the impacts of the project and lists the thresholds used to conclude whether an impact would be significant. Where warranted, measures to mitigate (i.e., avoid,

minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Methodology

The air quality significance criteria were developed considering the CEQA significance criteria developed by the local air quality district in the project area, approved CEQA air quality checklists, and considering other federal criteria. The analysis presented within this section is based on both qualitative and quantitative approaches for determining air quality impacts associated with construction, operation, and maintenance of the project. The findings in the *Air Quality Technical Report* and the *Air Quality Analysis of Off-Site Utilities Memorandum* prepared for the project (located respectively in Appendix C and Appendix D), which was prepared in accordance with Kern County Planning Department's *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* documents were relied upon for the following analysis

Air Quality Plan Consistency

The EKAPCD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., ozone). The EKAPCD's 2023 AQAP contains a comprehensive list of RACM's directed at reducing emissions and achieving NAAQS related to these pollutants (EKAPCD, 2023). EKAPCD's *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* states that the following should be included in the consistency determination for existing air quality plans:

- Discuss project in relation to Kern COG conformity and traffic analysis zones (TAZs).
- Quantify the emissions from similar projects in the Ozone Attainment Plan for the applicable basin. Discuss the Ozone Attainment Plan for the applicable air district, development, and relation to regional basin, Triennial Plan, and SIP.

Emissions

Existing Site Emissions

As previously discussed, the project site currently vacant. Thus, there are no existing site emissions.

Project Emissions

The construction and operational emissions were estimated from several emission models, emissions factors, and references, depending on the source type and data availability. Project impacts were quantitatively assessed using the following:

Construction equipment horsepower, load factors, and emission factors from the California Emissions Estimator Model (CalEEMod) model, version 2020.4.0.

- Vehicle emission factors using EMFAC2021.
- Fugitive dust emission factors for grading, truck loading/dumping, and paved road travel from the CalEEMod model and particulate matter control efficiencies based on

watering for construction dust control. Fugitive dust from travel on paved roads was calculated using AP-42 and CARB factors (CARB, 2018).

- USEPA's AP-42 Compilation of Air Pollutant Emission Factors
 - Chapter 3 (Stationary Internal Combustion Sources)
 - Chapter 13 (Miscellaneous Sources)
 - 13.4 Wet Cooling Towers
 - 13.2.2 Unpaved Roads
- Burns & McDonnell, Prevention of Significant Deterioration Air Construction Permit Application, Nucor Steel Florida, Inc. August 2018.
- Kern County, Draft Environmental Impact Report, Aratina Solar Project, May 2021.
- California Public Utilities Commission, Circle City Substation and Mira Loma-Jefferson 66 kV line Project, May 2018.

Construction Emissions

Construction of the project would generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators and loaders, and through worker vehicle trips and haul trucks traveling to and from the project site. In addition, fugitive dust emissions would result from various soil-handling activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions.

Micro Mill

Regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. Assuming an early date for construction activities is conservative because emission factors decrease in future years due to improvements in engine technology and the retirement of older, dirtier equipment and vehicles from the fleet.

The emissions have been estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, an emissions inventory software program developed by the California Pollution Control Officers Association (CAPCOA), and using the most recent version of CARB's on-road vehicle emissions factor model (EMFAC2021). Construction phasing would include site preparation, grading/excavation, drainage/utilities/trenching, electrical installation, foundations/concrete pour, building erection, mechanical equipment installation, process piping installation, paving and landscaping. The Applicant provided a resource loaded construction schedule, which included the construction phases with the number of equipment pieces allocated in the various subphases. Therefore, not all equipment would be operated during the entire phase but only during the specified subphase. The resource loaded schedule is provided in Appendix C.

Haul truck trips, worker trips, and vendor truck trip estimates were based on information obtained from the Applicant, and the corresponding on-road emissions were calculated using the EMFAC model and Excel spreadsheets. The CalEEMod model was used with project-specific inputs to

determine off-road emissions occurring from construction-related activities. CalEEMod relies on emission factors from CARB's OFFROAD2011 model.

The yearly emissions from these activities were estimated by construction phase and compared to the EKAPCD significance thresholds.

Incidental Solar Array

Construction emissions for the approximate 63-acre, 10 megawatt (MW) solar array were estimated from a similar solar array in the same air district (Kern, 2021b). The emissions from the Aratina Solar project, which is larger in acres than that for the proposed project, were scaled based on its size and the size of the proposed solar array of approximately 63 acres.

Offsite Improvements

Power and Fiber-optic (telecommunication) Lines

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road. See **Figure 3-14: Existing and Proposed Offsite Improvements**.

SCE estimates that the existing 66 kV line from Rosamond Substation to the corner of Sopp Road and Division Street will need to be reconducted (totaling approximately 13 miles), with all existing transmission poles requiring replacement with new poles installed for the section from the corner of Sopp Road and Division Street to the Project Site. This will consist of the installation of new poles and circuits.

There will be two fiber lines connected to the plant. One fiber optic cable will be installed by SCE who will be the electricity provider for the Project Site and it would tie into the existing telecommunications line from approximately Tehachapi Willow Springs Road following the route of Backus Road and routing around the north side of Exit 61 of State Route 14 (SR-14) to Sierra Highway. The other fiber optic cable will be for PSG business and industrial use, and it will be connected from an existing AT&T fiber at Sopp road. Additional information available in the SCE memorandum (Appendix D).

Water Line

The construction activities associated with the water line connection from the Antelope Valley-East Kern Water Agency (AVEK) to the proposed site will be analyzed. The location of the water line connection within the project site will be between the employee and visitor car parking area and the solar fields on the western side of the property, continuing linearly due west under the railroad easement and to the edge of the Sierra Highway right-of-way, connecting at approximately 34°56'09.7"N, 118°08'58.0"W, approximately 1,500 ft in length.

Traffic Improvements

The Traffic Impact Study completed for the Project included traffic improvements including as Traffic Mitigation Projects 1 through 4 (LAV, 2023). The construction activities associated with these traffic improvements will be analyzed. Construction emissions have been estimated using CalEEMod and EMFAC2021. Construction phasing would include site preparation, grading/excavation, electrical installation, and paving. Haul truck trips, worker trips, and vendor truck trip estimates were based on defaults within CalEEMod.

As stated above, fugitive dust emissions would result from various soil-handling activities during construction of the project. Construction contractors are required to comply with the applicable provision of EKAPCD Rule 402 (Fugitive Dust). As discussed previously, EKAPCD Rule 402 requires construction activities to control fugitive dust emissions by complying with reasonably available control measures or bulk material control measures to limit visible dust emissions to more than 20 percent opacity. They must meet the conditions for a stabilized surface by creating a fugitive dust emission control plan (Mitigation Measure MM 4.3-2). Applicable fugitive dust control measures are incorporated into the construction emissions modeling.

Project construction is assumed to start as early as second quarter of 2024 and require up to 24 months with full build-out occurring in the second quarter of 2026. The construction of the solar array is not yet known but expected to occur in the future, after full buildout of the micro mill. The solar array was conservatively assumed to occur over approximately 3 months at the conclusion of the micro mill construction schedule. If construction commences at a later date, construction emissions would be lower than those estimated in this Technical Report due to the use of a more energy-efficient and cleaner burning construction vehicle fleet mix, pursuant to state regulations that require vehicle fleet operators to phase-in less-polluting trucks. As a result, should project construction commence at a later date than analyzed in this Technical Report, air quality impacts would be lower than the impacts disclosed herein.

Operational Emissions

Micro Mill Facility

At the time of the Air Quality Technical Report, the exact equipment for the proposed project was not yet determined. However, the proposed project would include raw (scrap) material handling, the electric arc furnace (EAF), the ladle metallurgy station (LMS), CCS, furnace, casting, rolling, slag, cooling towers, emergency engines, and fuel tanks. Since the exact equipment for the proposed project were not available, emissions for the micro mill were calculated using emissions from a similar facility (Burn, 2018). The emissions from the Nucor facility were scaled based on the anticipated production rate for the project compared to a similar rebar facility's production rate of 450,000 tons of steel produced per year. The emissions from similar processes and equipment were scaled based on the anticipated production rate of 456,000 tons of steel produced per year for the proposed project. It should be noted, the Nucor facility is not an all-electric micro mill but rather utilizes natural gas. The emissions presented herein are considered a conservative estimate (i.e., overestimated) as the all-electric micro mill would result in lower criteria air pollutant emissions, specifically NO_x, VOCs, and SO₂ as well as a small reduction in toxic air containment emissions associated with the project's elimination of natural gas combustion. Additionally, the emissions presented do not account for the reduction of CO₂ that would be captured in the EAF from the CCS

or the reduction of NO_x from the selective catalytic reduction unit. The complete Nucor document can be found in Appendix C. Details of the processes and equipment associated with the proposed project are described below.

Raw Material Handling

Recycled scrap metal for the proposed project would be purchased from outside suppliers and transported into the facility by truck. Scrap metal to be received would include un-shredded and shredded scrap largely from crushed automobiles but also may include old appliances, machinery, sheet metal, rectangular bundles, and miscellaneous scrap metal. Un-shredded scrap metal would be processed by suppliers off-site to meet industry-standard size and cleanliness, arriving in a form either suitable for direct use in the steelmaking process or in larger sizes that would require cutting by a torch cutter, located in the scrap storage area, prior to its use in the process. The scrap metal would be stored in the 24,300-square-foot scrap bay or at the overflow scrap storage piles. Scrap would be moved using a front-end loader and loaded into a conveyor system using magnet cranes to the proposed Electric Arc Furnace (EAF). Particulate matter emissions would be generated during the indoor and outdoor scrap handling and storage, from the scrap storage piles and sweepings, and from vehicular traffic on the paved facility roads. A small amount of particulate matter and combustion emissions would also be formed from the torch cutting of larger pieces of scrap.

In addition to the recycled scrap metal, the project would use carbon and fluxing agents as raw materials in the steelmaking process. Raw materials would be delivered to the project site by truck and moved into storage silos. These raw materials would be pneumatically transferred from the silos to the EAF and LMS as needed. Particulate emissions will be generated during the storage and handling of carbon and fluxing agents. The silo would have a dust collector to control dust particles.

Alloy aggregates would be used in the EAF and LMS for refining steel metallurgy. Alloys would be transported by truck, unloaded into storage bins and eventually transferred by front-end loaders or forklift to the EAF/LMS bay for use in the EAF or LMS as needed. Ferro Silicon 75 ((FeSi75) an alloy produced by combining 75 percent silicon and 25 percent iron), Ferro Silicon Manganese (FeC₅H₅MnSi), Silicon Carbide (SiC), Calcium Carbide (CaC₂), Fluorspar (CaF₂), Metallurgical carbon alloys, Ferro Vanadium (FeV), Ferro Chrome (FeCR), and Calcium Silicon (CaSi) alloys may be used as part of the steel making process. Particulate emissions will be generated during the storage and handling of alloy aggregates.

Melt Shop

The melt shop (MS) process includes use of the EAF, LMS, casting operations, ladle and tundish preheaters, and refractory repair. Scrap metal is preheated by the EAF exhaust heat and then fed into the EAF. Chemical and electrical energy would be used to melt the entire batch of scrap metal. The melted steel is then transferred to the LMS via a ladle. The main emission control device for these proposed operations is the fume treatment plant which captures emissions from the EAF and LMS. The following subsections describe each process that occurs during the melt shop process:

- **EAF:** During the first use of the EAF after downtime, loading of scrap metal would be accomplished using charge buckets, which are transported into position over the EAF using overhead electric cranes. Once in position, the charge bucket would open,

allowing scrap to fill the EAF. After the first batch of steel is made, scrap for subsequent batches would be fed to the EAF using a continuous conveyor (i.e., the endless charging system (ECS)). The heating and melting of the scrap metal would generate particulate matter emissions.

During the melting, raw materials such as fluxing agents, metallurgic coal or coke, and oxygen would be added to the molten steel in order to achieve the desired product chemistry. Once the desired steel properties are reached in the EAF, the molten steel is poured (i.e., “tapped”) into the ladle. The molten steel is then transferred to the LMS via a ladle car. The refining and tapping processes generate emissions of particulate matter.

The slag formed in the EAF would be emptied by tipping the EAF to the side and stored in a stockpile within the EAF/LMS bay. As the slag cools, some limited combustion of residual coke in the slag may occur resulting in emissions of NO_x, CO, and SO₂. The slag would be subsequently removed from the pit using a front-end loader, quenched using process water, and transported to an outdoor storage pile before being processed on-site.

- **LMS:** The ladles filled with molten steel would be transferred from the EAF to the LMS via the ladle car. The molten steel would be further refined with the injection and mixing of raw materials such as fluxing agents, carbon, and alloys into the molten steel. Once the molten steel reaches the desired temperature and composition, the ladle would transport the molten steel to the continuous casting machine. The refining of the molten steel would generate particulate matter emissions. Emissions from the LMS would be captured by the ladle ducts connected to the fume treatment plant. Emissions not captured by the ladle furnace ducts would be captured by the melt shop canopy or the caster canopy.
- **Casting Operations:** The ladle is transported to a continuous casting machine within the caster bay. During casting, steel flows out of the bottom of the ladle via a slide gate into a tundish. From the tundish, the steel flows into a single mold. In the mold, the steel is water-cooled and formed into bars (billets). Emissions from the process would be emitted through the caster canopy and captured by the fume treatment plant.
- **Ladle and Tundish Preheaters:** Refractory materials would line the ladles and tundishes which must be dried completely prior to steel production. Additionally, the ladles and tundishes must be preheated prior to the transfer of molten steel in order to prevent heat losses. Electrical ladle and tundish preheaters and dryers would be installed. The tundish would also use a refractory material that does not require curing.

Rolling Mill Process

The rolling mill process is a metal forming process in which metal stock is passed through one or more pairs of rolls to reduce the thickness and to make the thickness of the metal uniform. The rolling mill process includes an induction furnace located between the caster and the rolling mill for temperature elevation and stabilization, then a series of rolling mill stands that reduce the cross sectional area and hot-form final rolled steel reinforcing bar. The products are water quenched for tempering and directed to the cooling beds to cool in the ambient air. The rolled steel is then sheared to length, cooled on a natural convection cooling bed, bundled and stored or fed directly into spooler machines which roll the reinforcing bar into a spool. Particulate emissions in the form of water

droplets will be created from the water quenching, as well as VOC and HAP from the oil and grease contamination of the contact water. Rolling mill emissions will vent through the roll mill vent.

Cooling Towers

Two non-contact cooling towers and one contact cooling tower would be used to remove heat from the cooling water used in the proposed project. Cooling towers reduce the temperature of the system by relying on the latent heat of water evaporation to exchange heat between the cooling water and the air passing through the cooling tower. Because cooling towers provide direct contact between the cooling water and the air passing through the tower, some of the liquid water may be entrained in the air stream and be carried out of the tower into the atmosphere as “drift” droplets. The dissolved solids within these water droplets are a source of particulate matter emissions.

Ancillary Buildings

Operational emission associated with the ancillary buildings part of the project were also calculated. The proposed project includes ancillary structures for storeroom and vehicle maintenance, water pre-treatment building, office building, locker room, slag processing office building, containerized power control room, guard shack/scale house, and a trucker restroom facility. Emissions and energy consumption from the ancillary buildings were calculated using CalEEMod version 2020.4.0. Additional sources of emissions would include: 63 acres of ground-mounted solar panels, substation to support solar panels, and a water treatment plant. Mobile source emissions would be generated by vehicle trips traveling to and from the project site. Operational impacts were assessed for the proposed project buildout year of 2026 (i.e., as early as 2025 assuming construction begins at the earliest possible time in 2024).

The project’s operational emissions for the ancillary buildings were estimated using CalEEMod to project regional emissions from area and energy sources that would occur during long-term project operations. Mobile source emissions were estimated based on CARB’s EMFAC2021 to generate Air Basin-specific vehicle fleet emission factors in units of pounds per mile, and daily trip rates from the project’s traffic study (LAV, 2023).

Area source emissions for the ancillary buildings, including landscaping equipment and consumer products, such as solvents used in non-industrial applications which emit VOCs during their product use and cleaning supplies including aerosols, were calculated using the CalEEMod software. Energy source emissions for the buildings are based on an all-electric consumption (building heating and water heaters). Natural gas would not be utilized at the project site and therefore emission from natural gas combustion are not included for the project.

Incidental Solar Array

The exact equipment for the solar array project have yet to be determined. Therefore, emissions from the approximate 63-acre solar array were calculated using emissions from a similar facility and would use similar construction equipment (i.e., excavators, graders, forklifts, etc.) (Kern, 2021b). The solar array would consist of solar panels and a substation. No structures or emergency generators would be present on the solar array. In addition, workers from the Micro Mill Facility would perform routine maintenance such as washing of the solar panels. As such, no area or additional mobile sources are included. Energy sources would be limited to water conveyance required for panel washing. Operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions.

Health Risk Assessment

The proposed project would emit TACs from several construction and operational sources. Diesel particulate matter (DPM) would be emitted from construction equipment and diesel trucks, and various toxic compounds from VOCs and metals would be emitted from the micro mill processing. An HRA was conducted to estimate cancer, non-cancer chronic (long-term), and noncancer acute (short-term) impacts from the proposed project.

The HRA predicted the above health risks using a dispersion model to calculate ground-level concentrations of TACs based on the proposed project's TAC emissions and toxicity and exposure factors provided by the California Office of Environmental Health Hazard Assessment (OEHHA) (OEHHA, 2015).

EPA's AERMOD atmospheric dispersion model was used to simulate physical conditions and predict pollutant concentrations from construction and operational sources at sensitive receptors near the project site. AERMOD is EPA's preferred air dispersion model for near-field modeling from vented and non-vented sources. The model uses hourly meteorological observations and emission rates to determine hourly average concentrations from which other averaging periods (e.g., 24-hour, annual averages) are determined.

Cancer risk is quantified based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home (for residents only), and the exposure duration divided by averaging time, to yield the excess cancer risk. It is important to note that exposure duration is based on a one-year construction period. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure level (REL) for that substance. REL is defined as the concentration at which no adverse noncancer health effects are anticipated. Based off OEHHA guidance, the current REL for DPM is 5 µg/m³.

For construction health risk, concentration outputs obtained from AERMOD were used with Microsoft Excel workbooks to calculate health risk at the nearby sensitive receptors. For operational health risk, the Hotspots Analysis and Reporting Program Version 2 (HARP2) Air Dispersion & Risk Tool (ADMRT) version 19121 was employed to calculate the health risks at nearby sensitive receptors. Dispersion modeling assumptions and results are provided in Appendix C.

While the project site is relatively isolated, there are sensitive receptors located in the vicinity. The nearest residence is approximately 1,000 feet to the northwest along Dobbs Road. There are other potential sensitive receptors as much greater distances that would observe lesser health risk impacts than the nearest residence.

Ambient Air Quality Analysis

The Kern County Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports (EKAPCD, 2006) require a dispersion modeling analysis of the maximum 24-hour average concentrations of PM₁₀ and PM_{2.5} resulting from construction and operation in comparison to applicable ambient air quality standards and thresholds. The purpose of the AAQA is to determine whether the project's construction and operational emissions would cause or contribute to exceedances of any CAAQS or NAAQS during construction.

CO Hotspot

Heavy traffic congestion can contribute to high levels of CO. Individuals exposed to these CO “hot-spots” may have a greater likelihood of developing adverse health effects. The potential for the proposed project to result in localized CO impacts at intersections resulting from addition of its traffic volumes is assessed based on Kern County's suggested criteria, which recommends performing a localized CO impact analysis for intersections operating at or below level of service (LOS) E.

Visibility Impacts

The County guidance states that potential impacts to visibility should be evaluated for all industrial projects and any other projects, such as mining projects, that have components that could generate dust or emissions related to visibility.

The project's emissions to the Class I areas will be below the significance threshold established by USEPA and Federal Land Managers. The analysis will be demonstrated initially by the screening level Q/D approach. In this approach, all visibility-related emissions (SO₂, NO_x, PM₁₀, and sulfuric acid mist) from the project based on 24-hour maximum allowable emissions prorated to annual emissions in units of tons per year will be summed (Q). The sum will be divided by the distance in km (D) from the site to the nearest receptor for each Class I area. If the ratio (Q/D) is less than 10, the project will be presumed to have negligible impact on Class I area visibility and no further analysis will be required. If the Q/D ratio is greater than 10, then long range transport modeling will be conducted to demonstrate that the 98th percentile change in light extinction is less than 5 percent for each of the 3 years modeled, when compared to the annual average natural condition value for that Class I area.

Valley Fever (Coccidioides immitis Exposure)

While there are no specific thresholds for the evaluation of potential *Coccidioides immitis* (Valley Fever) exposure, the potential for workers or area residents contracting Valley Fever as a result of the project is evaluated based on the anticipated earth-moving activities, and considers measures such as the development and implementation of a dust control plan to help control the release of the *Coccidioides immitis* fungus during construction activities.

Asbestos

There are no quantitative thresholds related to receptor exposure to asbestos. However, EKAPCD Rule 423 (National Emission Standards for Hazardous Air Pollutants and Source Categories)

requires all projects to comply with the provisions of Title 40, Chapter I, Parts 61 and 63, of the Code of Federal Regulations.

Thresholds of Significance

The significance thresholds below are derived from the Environmental Checklist question in Appendix G of the State CEQA Guidelines and EKAPCD's Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports. Pursuant to the State CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, the significance criteria established by the applicable air quality management district or air pollution control district when making determinations of significance. The proposed project would be under the EKAPCD's jurisdiction, and they use air quality significance thresholds in the Kern County Planning Department Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports. Projects that produce emissions that exceed these thresholds shall be considered significant for a project level and/or cumulatively for impacts to air quality. These thresholds will be used to evaluate the significance of the impacts listed below.

A significant air quality impact would occur if the project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
- c) Expose sensitive receptors to substantial pollutant concentrations;
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Project Impacts

Impact 4.3-1: Implementation of the proposed project would conflict with or obstruct implementation of the applicable air quality plan.

Consistency with Air Quality Plan

EKAPCD's most recently adopted air quality management plan is its 2023 AQAP. This AQAP covers the project area since it is located within the boundaries of the EKAPCD. The 2023 AQAP is a road map that demonstrates how the region will, in accordance with the requirements of the California Clean Air Act, implement all feasible measures to reduce ozone precursors (ROG/VOC and NO_x) and reduce the transport of ozone and its precursors to neighboring air basins, in order to achieve the 2008 and 2015 8-hour ozone NAAQS.

Air quality impacts are controlled through policies and provisions of the EKAPCD, the Kern County General Plan, and the Kern County Code of Building Regulations. The California CAA requires air pollution control districts with severe or extreme air quality problems to provide for a 5 percent reduction in nonattainment emissions per year. The Attainment Plans prepared for the

EKAPCD complies with this requirement. CARB reviewers approve or amend the document and forward the plan to USEPA for final review and approval within the SIP.

In determining consistency with the 2023 AQAP, this analysis considers whether the proposed project would (1) support the primary goals of the 2023 AQAP, and (2) include applicable control measures from the 2023 AQAP. The primary goals of the 2023 AQAP are: to protect air quality and public health at the regional and local scale by reducing regional ROG/VOC and NO_x emissions and ozone concentrations and reducing local air-quality-related health risks by meeting the 2008 and 2015 8-hour ozone NAAQS. Applicable control measures in the 2023 AQAP include the RACM from EKAPCD Rule 425.2 for boilers, steam generators, and process heaters.

In general, a project would not interfere with the applicable air quality plan if it is consistent with growth assumptions used to form the 2023 AQAP. The land uses designated in the Kern County General Plan and the KCOG 2022 RTP/SCS form the basis for the growth assumptions in the 2023 AQAP. The proposed project proposes changing the general land use designation from resource management to heavy industrial and the zone classification from limited agricultural to heavy industrial –precise development combining. This change in land use designation and zone classification would bring additional jobs to the area.

Implementation of the proposed project is consistent with the goals of the Kern County General Plan in providing an adequate and geographically balanced supply of land designated for a range of industrial purposes. The proposed project site is geographically isolated from sensitive uses with the nearest residence located approximately 1,000 feet to the northwest of the project site promoting compatibility with land uses that may be affected by industrial operations while ensuring economic strength for Kern County and its residents. Furthermore, the Project would not include any new residential growth or dwelling units and thus would not include a substantial increase in passenger vehicle and light duty truck trips and be consistent with the goals of the 2022 RTP/SCS.

2023 AQAP Rules

The proposed project, as a steel mill plant, would be considered a new major stationary source and would be subject to EKAPCD's NSR rule. This rule requires new major stationary sources that increase emissions in amounts exceeding specified thresholds to provide emission reduction offsets to mitigate their emissions growth. The applicability threshold for NO_x and VOC in Rule 210.1 is 50 tons per year with an offset ratio of 1.2-to-1.0. As such, there should be no net effect on emissions inventories from future construction or modifications at major stationary sources due to offset requirements. To ensure construction or modification of major sources has no net effect on emission inventories used for demonstrating attainment, banked ERCs, which otherwise would not be included as emissions in the baseline and subsequent inventories, must be added back into the inventories, pursuant to federal requirements. The 2023 AQAP includes a list of banked ERCs currently in the EKAPCD's credit bank as of 2022. The banked ERCs would lead to an increase of 0.005 ppb in attainment year ozone design values and would not affect the attainment status. Thus, with compliance of EKAPCD Rule 210.1, construction and operation of the proposed project would comply with the 2023 AQAP.

Although the proposed project emissions were not included in the projections for the 2023 AQAP, compliance with EKAPCD's Rule 210.1, NSR would render the proposed project consistent with growth projections of the 2023 AQAP, since they would not increase emissions, over those allowed

by the NSR, and would not jeopardize attainment of the AQAP. Therefore, the proposed project is consistent with the goals of the 2023 AQAP.

Proposed Project Emissions

Construction

On-Site

The construction emissions for the proposed project within the project site boundary were estimated for each construction phase and are discussed further below, under Impact 4.3-2. As shown in Table 4.3-6, with implementation of Mitigation Measure 4.3-1, construction emissions would be reduced to below the significance thresholds. See Impact 4.3-2 below for additional information regarding the proposed project emissions.

Off-Site Improvements

Construction of off-site improvements related to the water line, traffic improvements, and SCE powerlines would entail a minimal amount of ROG, NO_x, CO, SO_x, PM₁₀, PM_{2.5} emissions and would comply with applicable EKAPCD rules and regulations. Haul truck, vendor truck, and worker vehicle trips would be generated during the proposed construction activities but would cease after construction is completed. This off-site improvement work would not be anticipated to conflict with any applicable air quality management plan, such that impacts would be less than significant.

Operation

As previously stated, the proposed project would include development of an approximate 489,200 square-foot micro mill facility and with an additional 61,721 square feet of accessory buildings, and an approximate 63-acre accessory solar array. Operation of the proposed project has the potential to generate emissions from the micro mill portion of the proposed project, including raw (scrap) material handling, the electric arc furnace (EAF), the ladle metallurgy station (LMS), furnace, casting, rolling, slag, cooling towers, emergency engines, and fuel tanks. Operational emissions would also be generated from the ancillary buildings and the solar array. Mobile source emissions would be generated by vehicle trips traveling to and from the project site.

The solar facility portion of the proposed project could also function to reduce the air pollutant emissions within the MDAB to the extent that the power generated is used to offset power production from fossil fueled power plants within (or contributory to) the MDAB. This power production is not projected within the existing air quality plans, and so the solar array could further aid in reducing air pollutant emissions and increase the potential for attainment of the 2023 AQAP.

The off-site improvement work would not result in a substantial increase in long-term trips or vehicle miles traveled in the areas and would not require additional employees to maintain or operate the approximate 13 mile reconducted lines. Therefore, no additional off-site improvement specific operation analysis is included herein.

As shown below in Impact 4.3-2, in **Table 4.3-7: Unmitigated Proposed Project Long-term Operational Emissions**, the proposed project's long-term operational emissions would exceed EKAPCD's applicable significance thresholds. Implementation of Mitigation Measure MM 4.3-1

would reduce operational emissions from off-road equipment. However, emissions would still exceed the significance thresholds.

Mitigation Measures MM 4.3-2 would reduce construction emissions by implementing exhaust reduction measures and a Fugitive Dust Control Plan. In addition, compliance with all applicable EKAPCD NSR rules would reduce operational emissions. However as shown in **Table 4.3-8: Mitigated Proposed Project Long-term Operational Emissions**, operational emissions of the project would still exceed EKAPCD CEQA significance thresholds; therefore, impacts would be significant and unavoidable.

Mitigation Measures

MM 4.3-1: To control NO_x and PM emissions during construction and operation, the project proponent/operator and/or its contractor(s) shall implement the following measures during construction and operation of the project, subject to verification by the County:

- a. Off-road equipment engines over 25 horsepower shall be equipped with EPA Tier 4 or higher.
- b. All equipment shall be maintained in accordance with the manufacturer's specifications.
- c. Heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes.
- d. Notification shall be provided to trucks and vehicles in loading or unloading queues that their engines shall be turned off when not in use for more than 5 minutes.
- e. Electric equipment shall be used to the extent feasible in lieu of diesel or gasoline powered equipment.
- f. All vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_x emissions.
- g. Existing electric power sources shall be used to the extent feasible. This measure would minimize the use of higher polluting gas or diesel generators.
- h. The hours of operation of heavy-duty equipment and/or the quantity of equipment in use shall be limited to the extent feasible.

MM 4.3-2: To control fugitive PM emissions during construction, prior to the issuance of grading or building permits and any earthwork activities, the project proponent shall prepare a comprehensive Fugitive Dust Control Plan for review and approval by the Eastern Kern Air Pollution Control District and submitted to the Kern County Planning and Natural Resources Department. The plan shall include all Eastern Kern Air Pollution Control District recommended measures, including but not limited to, the following:

- a. All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of

disturbed soils areas. Watering shall take place a minimum of three times daily where soil is being actively disturbed, unless dust is otherwise controlled by rainfall or use of a dust suppressant.

b. Vehicle speed for all on site (i.e., within the project boundary) construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. Signs identifying construction vehicle speed limits shall be posted along onsite roadways, at the site entrance/exit, and along unpaved site access roads.

c. Vehicle speeds on all offsite unpaved project-site access roads (i.e., outside the project boundary) construction vehicles shall not exceed 25 mph. Signs identifying vehicle speed limits shall be posted along unpaved site access roads and at the site entrance/exit.

d. All onsite unpaved roads and offsite unpaved public project-site access road(s) shall be effectively stabilized of dust emissions using water or Eastern Kern Air Pollution Control District approved dust suppressants/palliatives, sufficient to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads. If water is used, watering shall occur a minimum of three times daily, sufficient to keep soil moist along actively used roadways. During the dry season, unpaved road surfaces and vehicle parking/staging areas shall be watered immediately prior to periods of high use (e.g., worker commute periods, truck convoys). Reclaimed (non-potable) water shall be used to the extent available and feasible.

e. The amount of the disturbed area (e.g., grading, excavation) shall be reduced and/or phased where possible.

f. All disturbed areas shall be sufficiently watered or stabilized by Eastern Kern Air Pollution Control District approved methods to prevent excessive dust. On dry days, watering shall occur a minimum of three times daily on actively disturbed areas. Watering frequency shall be increased whenever wind speeds exceed 15 mph or, as necessary, to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads. Reclaimed (nonpotable) water shall be used to the extent available and feasible.

g. All clearing, grading, earth moving, and excavation activities shall cease during periods when dust plumes of 20 percent or greater opacity affect public roads or nearby occupied structures.

h. All disturbed areas anticipated to be inactive for periods of 30 days or more shall be treated to minimize wind-blown dust emissions. Treatment may include, but is not limited to, the application of an Eastern Kern Air Pollution Control District-approved chemical dust suppressant, gravel, hydro-mulch, revegetation/seedling, or wood chips.

i. All active and inactive disturbed surface areas shall be stabilized, where feasible.

j. Equipment and vehicle access to disturbed areas shall be limited to only those vehicles necessary to complete the construction activities.

- k. Where applicable, permanent dust control measures shall be implemented as soon as possible following completion of any soil-disturbing activities.
- l. Stockpiles of dirt or other fine loose material shall be stabilized by watering or other appropriate methods sufficient to reduce visible dust emissions to a limit of 20 percent opacity. If necessary and where feasible, three-sided barriers shall be constructed around storage piles and/or piles shall be covered by use of tarps, hydro-mulch, woodchips, or other materials sufficient to minimize windblown dust.
- m. Water shall be applied prior to and during the demolition of onsite structures sufficient to minimize wind-blown dust.
- n. Where acceptable to the fire department and feasible, weed control shall be accomplished by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.
- o. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least six inches of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with California Vehicle Code Section 23114.
- p. Gravel pads, grizzly strips, or other material track-out control methods approved for use by Eastern Kern Air Pollution Control District shall be installed where vehicles enter or exit unpaved roads onto paved roadways.
- q. Haul trucks and off-road equipment leaving the site shall be washed with water or high pressure air, and/or rocks/grates at the project entry points shall be used, when necessary, to remove soil deposits and minimize the track out/deposition of soil onto nearby paved roadways.
- r. During construction paved road surfaces adjacent to the site access road(s), including adjoining paved aprons, shall be cleaned, as necessary, to remove visible accumulations of track-out material. If dry sweepers are used, the area shall be sprayed with water prior to sweeping to minimize the entrainment of dust. Reclaimed water shall be used to the extent available.
- s. Portable equipment, 50 horsepower or greater, used during construction activities (e.g., portable generators) shall require California statewide portable equipment registration (issued by California Air Resources Board) or an Eastern Kern Air Pollution Control District permit.
- t. The Fugitive Dust Control Plan shall identify a designated person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures, as necessary, to minimize the transport of dust off site and to ensure compliance with identified fugitive dust control measures. Contact information for a hotline shall be posted on site should any complaints or concerns be received during working hours and holidays and weekend periods when work may not be in progress. The names and telephone numbers of such persons shall be provided

to the Eastern Kern Air Pollution Control District Compliance Division prior to the start of any grading or earthwork.

u. Signs shall be posted at the project site entrance and written notifications shall be provided a minimum of 30 days prior to initiation of project construction to residential land uses located within 1,000 feet of the project site. The signs and written notifications shall include the following information: (a) Project Name; (b) Anticipated Construction Schedule(s); and (c) Telephone Number(s) for designated construction activity monitor(s) or, if established, a complaint hotline.

v. The designated construction monitor shall document and immediately notify Eastern Kern Air Pollution Control District of any air quality complaints received. If necessary, the project operator and/or contractor will coordinate with Eastern Kern Air Pollution Control District to identify any additional feasible measures and/or strategies to be implemented to address public complaints.

w. The solar array shall obtain a permit from the Eastern Kern Air Pollution Control District and implement phased removal of vegetation from the site to ensure dust control during construction.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2, construction impacts would be less than significant, but operational impacts would remain significant and unavoidable.

Impact 4.3-2: Implementation of the project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

Emissions

The proposed project is located within the Kern County portion of the MDAB, which is an area that is designated as non-attainment for federal and state ozone standards as well as state PM₁₀ standards and is under the jurisdiction of the EKAPCD. The EKAPCD's approach for assessing cumulative impacts is based on the forecasts of attainment and ambient air quality standards in accordance with requirements of the federal and state clean air acts. With respect to determining the significance of a project's contribution to regional emissions, Kern County, in its Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports document, states that projects that produce emissions that exceed the adopted thresholds of the EKAPCD for ROG, NO_x, and PM₁₀ shall be considered significant for a project level and/or cumulatively for impacts to air quality. Thus, based on Kern County's guidance, if an individual project results in air pollutant emissions of ROG, NO_x, and PM₁₀ that exceed the EKAPCD's thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these pollutants for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

Construction

On-Site

Construction of the proposed project would result in the temporary addition of pollutants to the local airshed caused by off-road construction equipment, soil disturbance and on-road haul trucks, vendor trucks, and worker vehicle trips. Criteria air pollutant emissions associated with temporary construction activity were quantified using a combination of emission factors and methodologies from CalEEMod and EMFAC2021. Construction schedule assumptions, including phase type, duration, and sequencing, were based on information provided by the project Applicant and is intended to represent a reasonable scenario based on the best information available.

Off-Site Improvements

In addition, emissions from the construction of the off-site water line, traffic improvements, and the reconductoring and re-poling of approximately 13 miles of existing SCE 66kV power lines were also included in the whole-project analysis. Default values provided in CalEEMod were used where detailed project information was not available. Details of the emission calculations are provided in Appendix D. Details regarding the SCE improvements can be found in the SCE Memorandum prepared for the proposed project and can be found in Appendix D.

Table 4.3-5: Unmitigated Proposed Project Construction Emissions, presents the annual construction emission generated during construction of the project. As shown, construction-related unmitigated NO_x emissions would exceed the EKAPCD numeric significance. Therefore, impacts would be potentially significant before mitigation. As discussed previously, the project would implement Mitigation Measure MM 4.3-1 for on-site construction activities, which would reduce NO_x emissions by implementing diesel exhaust reduction measures including equipment maintenance, Tier 4 equipment, idling restrictions, and alternative fueled equipment. While it is possible Mitigation Measure 4.3-1 could be implemented for the off-site improvements, since construction activities would be implemented by a third-party, Mitigation Measure MM 4.3.1 was conservatively excluded from the analysis for the off-site improvements.

As shown in **Table 4.3-5**, temporary unmitigated emissions during construction would exceed the thresholds adopted by EKAPCD for NO_x.

Table 4.3-5: Unmitigated Proposed Project Construction Emissions

Phase and Year	ROG/VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}
On-Site					
Micro Mill ^A					
2024	3.95	33.27	0.18	1.76	1.19
2025	8.76	66.64	0.33	3.19	2.31
2026	0.91	7.07	0.03	0.32	0.24
Solar Array ^B					
2026	0.09	0.64	0.005	1.05	0.17
Off-Site					
Traffic Improvement Project 1 ^C					
2026	0.02	0.08	0.001	0.01	0.01
Traffic Improvement Project 2 ^C					
2041	0.02	0.03	0.001	0.01	0.003

Traffic Improvement Project 3 ^C					
2026	0.04	0.08	0.003	0.01	0.01
Traffic Improvement 4 ^C					
2041	0.06	0.13	0.005	0.01	0.01
Water Line Project ^C					
2026	0.03	0.23	0.001	0.02	0.01
Power and Telecommunication 2026	0.55	4.51	0.03	0.21	0.15
Maximum Annual Emissions	8.76	66.64	0.33	3.19	2.31
EKAPCD Threshold (TPY)	25	25	27	15	--
Exceeds Thresholds?	No	Yes	No	No	--

Notes:

^A Micro mill emissions calculations using information provided to ESA and CalEEMod software.^B Solar Array emissions were estimated using the Aratina Solar Project EIR and scaled relative to the size of the solar array for this project.^C Emissions calculated using information provided to ESA, conservative assumptions and CalEEMod software.

Source: ESA, 2023d

Mitigation Measures MM 4.3-1 and MM 4.3-2 would be required to reduce fugitive dust emissions by implementing exhaust reduction measures and a Fugitive Dust Control Plan, respectively. Diesel exhaust reduction measures include equipment maintenance, Tier 4 equipment, idling restrictions, alternative fueled equipment, and compliance with CARB and EKAPCD rules. As depicted in **Table 4.3-6: Mitigated Proposed Project Construction Emissions**, Mitigation Measure MM 4.3-1 would reduce NO_x construction emissions to below significance thresholds. Therefore, emissions from construction of the proposed project would be less than significant

Table 4.3-6: Mitigated Proposed Project Construction Emissions

Phase and Year	ROG/VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}
On-Site					
Micro Mill ^A					
2024	1.22	6.78	0.18	0.67	0.26
2025	2.76	13.92	0.32	1.31	0.54
2026	0.28	1.35	0.03	0.12	0.05
Solar Array ^B					
2026	0.09	0.64	0.005	1.05	0.17
Off-Site ^C					
Traffic Improvement Project 1 ^D					
2026	0.02	0.08	0.001	0.01	0.01
Traffic Improvement Project 2 ^D					
2041	0.02	0.03	0.001	0.01	0.003
Traffic Improvement Project 3 ^D					
2026	0.04	0.08	0.003	0.01	0.01
Traffic Improvement Project 4 ^D					
2041	0.06	0.13	0.005	0.01	0.01
Water Line Project ^D					
2026	0.03	0.23	0.001	0.02	0.01
Power and Telecommunication 2026	0.55	4.51	0.03	0.21	0.15
Maximum Annual Emission	2.76	13.92	0.32	1.31	0.54
EKAPCD (TPY)	25	25	--	15	--
Exceeds Threshold?	No	No	No	No	--

Notes:

^A Micro mill emissions calculations were calculated using information provided to ESA and CalEEMod software.

^B Solar Array emissions were estimated using the Aratina Solar project EIR and scaled relative to the size of the solar array for this project.

^C Since construction of the water line, traffic improvements, and power and telecommunication lines would be constructed by a third-party, the exact mitigation measures are unknown and no mitigation measures were applied.

^D Emissions calculated using information provided to ESA, conservative assumptions and CalEEMod software.

Source: ESA, 2023d.

Operation

Operation of the proposed project would generate criteria air pollutants, which were analyzed according to the methodology described above. **Table 4.3-7: Unmitigated Proposed Project Long-Term Operational Emissions**, provides the annual operational emissions for the project. As stated in *Section 4.3.6 Methodology*, the emissions presented for the Meltshop were scaled from another steel mill facility which included natural gas. The proposed project would be all-electric and would not utilize natural gas. Therefore, the emission presented herein are considered a conservative estimate (i.e., overestimated) as the all-electric micro mill would result in lower criteria air pollutant emissions, specifically NO_x, VOCs, and SO₂ as well as a small reduction in toxic air containment emissions associated with the project's elimination of natural gas combustion. Additionally, the emissions presented do not account for the reduction of CO₂ that would be captured in the EAF from the CCS or for the reduction of NO_x from the selective catalytic reduction unit. The control efficiency of the CCS is estimated to reduce CO₂ by up to 78 percent (Sgro, 2023). The control efficiency of the SCR is estimated to reduce NO_x emissions by up to 90 percent (RF MacDonald Co., 2023). These emissions are above the EKAPCD criteria pollutant mass emissions thresholds, and the impact would be significant.

Table 4.3-7: Unmitigated Proposed Project Long-Term Operational Emissions

Operational Source	ROG/VOC	NO _x	PM ₁₀	PM _{2.5}
<i>Industrial Sources</i>				
Meltshop ^A	85.47	95.85	125.24	118.43
Scrap Storage and Handling ^A	0.01	0.22	0.58	0.10
Silos and Material Storage ^A	0.00	0.00	2.38	2.30
Slag Yard ^A	0.00	0.00	1.78	0.16
Cooling Towers ^B	0.00	0.00	3.79	2.28
Emergency Equipment ^B	1.67	0.29	0.02	0.02
Off-road Equipment ^B	1.19	9.65	0.39	0.35
<i>Auxiliary Sources</i>				
Building Energy	0.00	0.00	0.00	0.00
Site Area	0.32	0.00	0.00	0.00
Mobile	1.35	21.55	41.52	6.78
Maximum Annual Emissions^{C D}	90.01	127.56	175.70	130.42
EKAPCD Threshold (TPY)	25	25	15	--
Exceeds Threshold?	Yes	Yes	Yes	--

^A Emissions were calculated based in Nucor Florida Permit Application and scaled to represent operational conditions for the proposed project. As such, the emissions presented assume a highly conservative estimate.

^B ESA calculated emissions based on Applicant provided project specifics included in Appendix D.

^C No new operational activities are assumed with the off-site improvements; therefore no operational emissions were assumed.

^D The CCS is anticipated to have a control efficiency of up to 78%.

Source: ESA, 2023d. Sgro, 2023.

Table 4.3-8, provides the annual operational emissions for the project after implementation of Mitigation Measure MM 4.3-1. These emissions are above the EKAPCD criteria pollutant mass emissions thresholds, and the impact would be significant.

Table 4.3-8: Mitigated Proposed Project Long-Term Operational Emissions

Operational Source	ROG/VOC	NO_x	PM₁₀	PM_{2.5}
<i>Industrial Sources</i>				
Meltshop ^A	85.47	92.85	125.24	118.43
Scrap Storage and Handling ^A	0.01	0.22	0.58	0.10
Silos and Material Storage ^A	0.00	0.00	2.38	2.30
Slag Yard ^A	0.00	0.00	1.78	0.16
Cooling Towers ^B	0.00	0.00	3.79	2.28
Emergency Equipment ^B	1.67	0.29	0.02	0.02
Off-road Equipment ^B	0.32	1.71	0.06	0.06
<i>Auxiliary Sources</i>				
Building Energy	0.00	0.00	0.00	0.00
Site Area	0.32	0.00	0.00	0.00
Transportation/Mobile	1.35	21.55	41.52	6.78
Maximum Annual Emissions^D	89.14	116.62	175.37	130.13
EKAPCD Threshold (TPY)	25	25	15	--
Exceeds Thresholds?	Yes	Yes	Yes	--

Notes:

^A Emissions were calculated based in Nucor Florida Permit Application and scaled to represent operational conditions for the project. As such, the emissions presented assume a highly conservative estimate.

^B ESA calculated emissions based on Applicant provided project specifics included in workbooks included in Appendix D.

^C No new operational activities are assumed with the off-site improvements, therefore no operational emissions were assumed.

^D The CCS is anticipated to have a control efficiency of up to 78 percent and the SCR has an anticipated control efficiency of up to 90 percent (RF MacDonald Co., 2023).

Source: ESA, 2023d. Sgro, 2023.

Eastern Kern County is currently in nonattainment for the ozone CAAQS and NAAQS, and the PM₁₀ CAAQS. Certain individuals residing in areas that do not meet the CAAQS or NAAQS could be exposed to pollutant concentrations that cause or aggregative acute and/or chronic health conditions (e.g., asthmas, lost work days, premature mortality). A description of the health effects of criteria pollutants can be found in Section 4.3.2, Existing Air Quality Conditions.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 and MM 4.3-2.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2, construction impacts would be less than significant, but operational impacts would remain significant and unavoidable.

Impact 4.3-3: Implementation of the project would not expose sensitive receptors to substantial pollutant concentrations.***Health Risk Assessment***

Sensitive receptors are particularly sensitive to air pollution because they are persons that are ill, elderly, or have lungs that are not fully developed. Locations where such persons reside, spend considerable amount of time, or engage in strenuous activities are also referred to as sensitive receptors. Typical sensitive receptors include inhabitants of long-term healthcare facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities. As detailed in the sensitive receptors discussion under Section 4.3.4, the closest sensitive receptors are approximately 1,000 feet from the project borders. Implementation of Mitigation Measure MM 4.3-1 would ensure that all readily available and feasible air quality control measures would be implemented to reduce emissions associated with construction and operation.

Toxic Air Contaminants

Projects are evaluated for potential health risk impacts when a new or modified source of TACs is proposed for a location near an existing residential area or other sensitive receptor. An HRA was conducted following OEHHA guidance, as discussed above. The HRA analyzed exposure to TACs starting with the construction period and continuing during operations, for a 30-year exposure period, per the guidance (OEHHA, 2015).

The primary TAC concerns during project construction would be DPM emitted within the project site. During operation of the micro mill, DPM from on-road and off-road equipment and other TACs emitted during metal processing are of concern. Operation of the project processes would follow strict compliance with EKAPCD and CARB rules and regulations to limit emissions. The anticipated construction and operational emissions from the proposed project were quantified in the HRA.

Construction plus Operation

Construction of on-site facilities and off-site improvements would generate short-term DPM air quality impacts, which were evaluated in the HRA. Detailed assumptions and calculations are included in the project-specific Health Risk Assessment Data (Appendix C) and the SCE improvements in the *Air Quality Analysis of Off-Site Power Utilities Memorandum* (Appendix D). The HRA evaluated cancer and non-cancer chronic health risks from construction. DPM is the primary TAC associated with construction, and it does not have an acute REL; therefore, acute hazard index was not quantified for construction impacts.

Exposure to TACs during the construction period was assumed to start with a fetus in the third trimester and continue for the 24 months of construction. Breathing rates and age sensitivity factors from the OEHHA guidance were assumed for the age bin from third-trimester fetus to 2 years of age.

Operation of the proposed project once construction is completed would also generate TAC emissions, as described above. Because cancer risk accumulates over time, the HRA evaluated cancer risk from the proposed project's operations with exposure starting at the end of construction.

Exposure to TACs during the operational period was assumed to start with a 2-year old child and continue for 28 years, resulting in a total exposure period of 30 years. Breathing rates and age sensitivity factors from the OEHHA guidance for the 2-16 year and 16-30 year age bins were used for the operational exposure period.

The results of the HRA for the construction plus operational period for the unmitigated cancer risk at the maximally exposed individual resident (MEIR) is shown in **Table 4.3-9: Maximum Unmitigated Health Risk Impacts for Off-Site Sensitive Receptors**. The unmitigated cancer risk level would exceed the 10 in one million threshold established by the EKAPCD (OEHHA, 2015). The MEIR is located to the northwest of the project site. The non-carcinogenic chronic hazard index associated with construction activities was also quantified for proposed project. The unmitigated chronic hazard index at the same MEIR as the cancer impact would be below the EKAPCD chronic hazard index threshold of 1.0.

Table 4.3-9: Maximum Unmitigated Health Risk Impacts for Off-site Sensitive Receptors

Exposure Scenario	Maximum Cancer Risk (# in one million)	Chronic Hazard Index ^a
Unmitigated Construction	10.53	0.26
Traffic Improvement ^b	0.27	0.057
Water Line ^b	0.03	0.003
Power and Telecommunication	4.5	0.01
Unmitigated Operations	3.29	NA
TOTAL	18.62	0.26 ^c
Maximum Individual Risk Threshold	10	1.0
Exceeds Threshold?	Yes	No

^aDPM is the primary TAC associated with construction, and it does not have an acute REL; therefore, acute hazard was not quantified for the construction period.

^b The maximum risk impacts from these construction studies are added to the maximum risk from Micro Mill construction and operation. This is inherently conservative because the maximum impacts may occur at different receptors than those from the Micro Mill.

^cThe hazard index is not additive as it is not a cumulative impact as operations begin after completion of construction. The maximum chronic hazard index occurs in construction year 2024.

Source: ESA, 2023d.

Implementation of Mitigation Measure MM 4.3-1 would reduce TAC emissions such that the cancer risk would be reduced to below the 10 in one million significance threshold. The maximum mitigated chronic hazard index at the MEIR would be further reduced below the significance threshold of 1.0. The mitigated risks are presented in **Table 4.3-10: Maximum Mitigated Health Risk Impacts for Off-Site Sensitive Receptors**.

Table 4.3-10: Maximum Mitigated Health Risk Impacts for Off-site Sensitive Receptors

Exposure Scenario	Maximum Cancer Risk (# in one million)	Chronic Hazard Index
Mitigated Construction	4.98	0.043
Traffic Improvement ^b	0.27	0.057
Water Line ^b	0.03	0.003
Power and Telecommunication		
Mitigated Operation	1.93	NA
TOTAL	7.17	0.06 ^c
Maximum Individual Risk Threshold	10	1.0

Exceeds Threshold?	No	No
^a The DPM is the primary TAC associated with construction, and it does not have an acute REL; therefore, acute hazard was not quantified for the construction period.		
^b The maximum risk impacts from these construction studies are added to the maximum risk from Micro Mill construction and operation. This is inherently conservative because the maximum impacts may occur at different receptors than those from the Micro Mill.		
^c The hazard index is not additive as it is not a cumulative impact.		
Source: ESA, 2023d.		

Operations

The HRA also evaluated the health risks from the 30-year exposure period of operations, with exposure starting once construction is completed. This was done to capture the effect of a 30-year exposure starting with the most vulnerable population in the third trimester fetus to 2-year age bin. Breathing rates and age sensitivity factors from the OEHHA guidance were assumed for the age bins including fetus to 2 years, 2 years to 16 years, and 16 years to 30 years. Detailed assumptions and calculations are included in the project specific Health Risk Assessment Data, (Appendix C).

The modeled cancer risk at the MEIR would be 9.97 in one million and is located northwest of the project site. This risk level would not exceed the 10 in one million significance threshold. The non-carcinogenic chronic and acute hazard impacts associated with project operations were also quantified. The chronic hazard index at the same MEIR as the cancer impact would be 0.03 and would not exceed the significance threshold of 1.0. The acute hazard index at the MEIR would be 0.21 and would not exceed the significance threshold of 1.0. The acute MEIR is located northwest of the project site. The unmitigated results are shown in **Table 4.3-11: Maximum Unmitigated 30-Year Operational Health Risk Impacts for Off-Site Sensitive Receptors**.

Table 4.3-11: Maximum Unmitigated 30-Year Operational Health Risk Impacts for Off-site Sensitive Receptors

Exposure Scenario	Maximum Cancer Risk (# in one million)	Chronic Hazard Index	Acute Hazard Index
30-Year Operation	9.97	0.03	0.21
Maximum Individual Risk Threshold	10	1.0	1.0
Exceeds Threshold?	No	No	No
Source: ESA, 2023d.			

Implementation of Mitigation Measure MM 4.3-1 would further reduce TAC emissions by requiring use of Tier 4 on-site heavy equipment such that the cancer risk would be reduced to 5.28 in one million, which would be below the 10 in one million significance threshold. The mitigated results are shown in **Table 4.3-12: Maximum Mitigated 30-Year Operational Health Risk Impacts for Off-Site Sensitive Receptors**.

Table 4.3-12: Maximum Mitigated 30-Year Operational Health Risk Impacts for Off-site Sensitive Receptors

Exposure Scenario	Maximum Cancer Risk (#one in one million)	Chronic Hazard Index	Acute Hazard Index
Operation	5.28	0.02	0.21
Maximum Individual Threshold	10	1.0	1.0
Exceeds Thresholds?	No	No	No
Source: ESA, 2023d.			

As shown in **Table 4.3-11**, the cancer risk impacts related to project operations would not exceed the 10 in one million significance threshold at the MEIR and thus would also not exceed the significance threshold at other nearby sensitive receptors.

Additionally, non-carcinogenic and acute hazards at the MEIR are also below EKAPCD thresholds. As such, the health risk impact attributed to the operation of the proposed project would be less than significant.

Ambient Air Quality Analysis

The proposed project would be required to comply with EKAPCD and USEPA permitting requirements. The project would require a permit application for an Authority to Construct with the EKAPCD, which would require purchase of offsets for non-attainment pollutants greater than the NSR thresholds. In addition, the proposed project would require a PSD application with the USEPA and undergo a PSD impact analysis of attainment pollutants. To obtain both of these permits, an ambient air quality analysis must show less than significant impacts to the CAAQS and NAAQS.

CO Hotspots

A CO “hotspot” can occur when vehicles are idling at highly congested intersections. CO hotspots can adversely affect nearby sensitive receptors. The Kern County Planning and Natural Resources Department’s, Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports (2006) states that CO hotspots must be analyzed when one of the following conditions occur: (a) a project increases traffic at an intersection or roadway that operates at a Level of Service (LOS) E or worse; (b) a project involves adding signalization and/or channelization to an intersection; or (c) sensitive receptors such as residences, schools, hospitals, etc., are located in the vicinity of the affected intersection or signalization.

The proposed project is not located in the vicinity of an intersection that is currently operating at level of service (LOS) C or worse. The project would have trip generation associated with construction worker vehicles and vendor trucks. As construction is only expected to last approximately 24 months, it would be considered temporary and would not result in a long-term source of CO emissions.

With the addition of project-generated traffic, the intersections of Backus Road and Sierra Highway, and Sopp Road and Sierra Highway, would all maintain an LOS of C or better through 2042 and improvements are not warranted (LAV, 2023). Highway 14 ramp intersections with Backus Road are anticipated to degrade to a LOS of F with project traffic. However, with implementation of Mitigation Measure MM 4.17-3, installation of a traffic signal and expansion of the intersection at full buildout, LOS would be improved to a C or better. Additionally, under year 2042 estimated traffic volumes the State Route 14 southbound ramp intersection with Backus Road is anticipated to degrade to a LOS of F. With implementation of MM 4.17-3, a traffic signal at State Route 14 and the southbound ramp, the LOS would improve the LOS to better than C. Additionally, as previously noted, the traffic study used in the LOS determination includes both passenger vehicle and diesel trucks. However, passenger vehicles, which are predominantly gasoline-fueled, are the primary source of CO emissions at congested intersections. Regardless, with mitigation, the project would not result in intersections operating at or below LOS E.

Therefore, the project would not have CO hotspot-related impact with MM 4.17-3 and would not contribute a significant level of CO such that localized air quality and human health would be substantially degraded. Therefore, impacts would be less than significant, and a CO hotspot analysis is not required.

Visibility Impacts

Visibility at offsite locations may be impacted by emissions of airborne PM from short-term construction activities and long-term operation of the project. Federally designated Class I areas are of particular concern. These include many wilderness areas and national parks. The nearest Class I areas within 100 kilometers (km) of the proposed site include Domeland, San Gabriel, and the Cucamonga Wilderness areas.

Visibility impact analyses are intended for stationary sources of emissions which are subject to the PSD requirements in 40 CFR Part 60. To ensure visibility at offsite locations are not impacted by project emissions, Mitigation Measure 4.3-3 would be required, so that the 98th percentile change in light extinction is less than 5 percent for each year modeled, when compared to the annual average natural condition value for that Class I area. Emissions reductions pursuant to Mitigation Measures MM 4.3-1 and MM 4.3-2 would also be implemented to reduce the potential for adverse visibility impacts.

Valley Fever

During the proposed ground disturbing activities associated with the project, the potential exists that such activities could disturb dust particles and, if present, *Coccidioides immitis* (CI) spores, which could then be released into the air and potentially be inhaled by on-site workers and nearby sensitive receptors; exposure to these spores can cause an illness in some individuals known as Valley Fever. Because dust can be an indicator that increased efforts are needed to control other airborne particulates (including CI spores, if any), the project is required to control dust and the potential for exposure to any CI spores as well as provide training and awareness of Valley Fever via Mitigation Measures MM 4.3-2, and MM 4.3-4 and MM 4.3-5.

Mitigation Measure MM 4.3-2 requires the project to have comprehensive site construction controls in place to proactively control the generation of fugitive dust as required and regulated by the EKAPCD Rule 402. This Rule also requires the site to have a designated dust monitor, as well as visible signage for nearby residents with the phone number for the site construction management and the EKAPCD for nearby residents use if they see blowing dust.

Mitigation Measure MM 4.3-4 requires the project to provide training to construction workers on measures they must take to proactively control and reduce fugitive dust and the potential for the release of CI spores during their ground disturbing activities, training on specific worker/task safety procedures, and general information regarding symptoms testing and treatment options for Valley Fever. All workers are trained in and are expected to use their “stop work” authority if their activities are deemed to be causing the release of fugitive dust. This Mitigation Measure also requires the project to develop an educational Valley Fever Training Handout for distribution to onsite workers and nearby residents. This handout contains general information about the causes, symptoms, and treatment instructions regarding Valley Fever, including contact information of local health departments and clinics knowledgeable about Valley Fever. Additionally, MM 4.3-5

would require a one-time fee to Kern County Public Health Services Department for Valley Fever public awareness programs.

With the implementation of Mitigation Measures MM 4.3-2 and MM 4.3-4 through 4.3-5, the potential for the release of CI spores, if present, and the associated potential for workers or nearby residents to contract Valley Fever would be minimized; accordingly, the project would not add significantly to the existing exposure level of construction workers or nearby residences to the CI fungus.

Asbestos

Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading of development projects, and at mining operations.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. However, according to information provided by the Department of Conservation Division of Mines and Geology, the project site is not located in an area where naturally occurring asbestos is likely to be present (CDOC, 2000). Therefore, impacts associated with exposure of construction workers and nearby sensitive receptors to asbestos would be less than significant.

Off-site Improvements

The off-site improvements including the reconductoring and re-poling of existing SCE transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in approximately 13 miles of existing transmission poles and circuits being replaced. Compliance with the required dust control plan would reduce fugitive dust impacts to less than significant for construction, which would so minimize release of *Coccidioides immitis* fungus from construction activities. Consequently, impacts from this off-site improvement work during the construction phase will be less than significant.

Project Health Effects of Criteria Air Pollutants

The EPA and CARB have established AAQS at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. Further, California air districts, like the EKAPCD, have established emission-based thresholds that provide project-level estimates of criteria air pollutant quantities that air basins can accommodate without affecting the attainment dates for the AAQS. Accordingly, elevated levels of criteria air pollutants as a result of a project's emissions could cause adverse health effects associated with these pollutants. The EKAPCD is designated as attainment area for ozone (one hour), PM₁₀ and PM_{2.5} and nonattainment for ozone (eight hours) under the NAAQS, and nonattainment for ozone, PM₁₀ and PM_{2.5} under the CAAQS.

Regarding health effects of criteria air pollutants, implementation of Mitigation Measures MM 4.3-1 through MM 4.3-4 would reduce the projects potential to result in regional health effects associated with ROG, NO_x, PM₁₀ and PM_{2.5}; however, localized health effects associated with NO_x, PM₁₀, and PM_{2.5} could occur. However, implementation of the mitigation measures would reduce both localized and regional project generated construction and operational emissions.

In *Sierra Club v. County of Fresno* (S219783) (Sierra Club) the Supreme Court held that CEQA requires environmental impact reports to either (i) make a “reasonable effort” to substantively connect the estimated amount of a given air pollutant a project will produce and the health effects associated with that pollutant, or (ii) explain why such an analysis is infeasible (6 Cal.5th at 1165-66). However, the Court also clarified that that CEQA “does not mandate” that EIRs include “an in-depth risk assessment” that provides “a detailed comprehensive analysis ... to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population wide health risks associated with those levels of exposure.” Id. at 1665. However, correlating the project’s criteria air pollutant to specific health impacts, particularly with respect to ozone is not possible because there is no feasible or established scientific method to perform such analysis. This conclusion is supported by both the SJVAPCD and the South Coast Air Quality Management District (SCAQMD) who have determined that this type of analysis is speculative and infeasible and there are no unique issues for the EKAPCD that would make this analysis invalid.

Writing as amicus curiae in *Sierra Club*, the SJVAPCD explained that “[t]he health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the National Ambient Air Quality Standards (NAAQS). Accordingly, while the type of individual facility/health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task” (Appendix C).

Instead, the SJVAPCD explained that it assesses a project’s potential to exceed AAQS by evaluating the project’s compliance with district thresholds of significance, which are measured in mass emissions (Appendix C). As explained by SJVAPCD, its thresholds are based on factual, scientific data and have been set at a level that ensures that AAQS will not be exceeded, taking into consideration all cumulative emission sources (Appendix C). The SJVAPCD explained that attempting to connect criteria pollutant emissions to localized health impacts will “not yield reliable information because currently available modeling tools are not well suited for this task” (Appendix C). Available models are only equipped to model the impact of all emissions sources on an air basin-wide or regional basis, not on a project-level basis, and “[r]unning the photochemical grid model used for predicting ozone attainment with emissions solely from one project would thus not be likely to yield valid information given the relative scale involved” (Appendix C).

This inability to “accurately ascertain local increases in concentration” of mass emissions and then to further link emissions with health effects is particularly true for ozone and its precursors NO_x and ROG/VOC; ozone is not directly emitted into the air, but is instead formed as ozone precursors undergo complex chemical reactions through sunlight exposure (Appendix C). Given the complex nature of this process, and the fact that ozone can be transported by wind over long distances, “a specific tonnage amount of NO_x or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area” (Appendix C). For this reason, the photochemical analysis for

ozone is done on a regional scale and it is inappropriate to analyze ozone impacts at a local or project-level basis because a localized analysis would at most be speculative, and at worst be misleading. Speculative analysis is not required by CEQA (CEQA Guidelines Section 15145; *Laurel Heights Improvement Association v. Regents of the University of California* 1988).

The SJVAPCD also explained that the disconnect between the tonnage of precursor pollutants and the concentration of ozone or particulate matter formed in a particular area is especially important to understand in considering potential health effects because it is the concentration, not the tonnage, that causes health effects (Appendix C). The SJVAPCD explained that even if a model were developed that could accurately assess local increases in concentrations of pollutants like ozone and particulates, it would still be “impossible, using today’s models, to correlate that increase in concentration to a specific health impact” (Appendix C). The SJVAPCD stated that even a project with criteria pollutant emissions above its CEQA thresholds does not necessarily cause localized human health impacts as, even with relatively high levels of emissions, the SJVAPCD cannot determine “whether and to what extent emissions from an individual project directly impact human health in a particular area” (Appendix C). The SJVAPCD explained that this is particularly true for development projects like the proposed project, where most of the criteria pollutants derive from mobile and area sources and not stationary sources. The SCAQMD also, as amicus curiae in *Sierra Club*, made similar points, reiterating that “an agency should not be required to perform analyses that do not produce reliable or meaningful results” (Appendix C). SCAQMD agrees that it is very difficult to quantify health impacts with regard to ozone, opining that the only possible means of successfully doing so is for a project so large that emissions would essentially amount to *all* regional increases (Appendix C). With regard to particulate matter, the SCAQMD noted that while the CARB has created a methodology to predict expected mortality from large amount of PM_{2.5}, the primary author of the methodology has reported that it “may yield unreliable results due to various uncertainties” and CARB staff has been directed by its Governing Board to reassess and improve it, which factor “also counsels against setting any hard-and-fast rule” about conducting this type of analysis. The amicus briefs filed by SJVAPCD and SCAQMD in *Sierra Club* are included in Appendix C.

Mitigation Measures

Implement MM 4.3-1, MM 4.3-2, and MM 4.17-3, see Section 4.17, *Transportation and Traffic*

MM 4.3-3: Complete a screening procedure approved by the Federal Land Manager that demonstrates the 98th percentile change in light extinction is less than 5 percent for each modeled year, when compared to the annual average natural condition value for the Class I areas within 100 km of the proposed site.

MM 4.3-4: To minimize personnel and public exposure to potential Valley Fever–containing dust on and off site, the following control measures shall be implemented during project construction:

- a. Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved off site to other work locations.
- b. Wherever possible, grading and trenching work shall be phased so that earthmoving equipment is working well ahead or downwind of workers on the ground.

- c. The area immediately behind grading or trenching equipment shall be sprayed with water before ground workers move into the area.
- d. In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers being exposed to dust shall leave the area until a truck can resume water spraying.
- e. To the greatest extent feasible, heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEP-filtered air system.
- f. Workers shall receive training in procedures to minimize activities that may result in the release of airborne *Coccidioides immitis* (CI) spores, to recognize the symptoms of Valley Fever, and shall be instructed to promptly report suspected symptoms of work related Valley Fever to a supervisor. Evidence of training shall be provided to the Kern County Planning and Natural Resources Department within 5 days of the training session.
- g. A Valley Fever informational handout shall be provided to all onsite construction personnel. The handout shall, at a minimum, provide information regarding the symptoms, health effects, preventative measures, and treatment. Additional information and handouts can be obtained by contacting the Kern County Public Health Services Department.
- h. Onsite personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health–approved respirators shall be provided to onsite personnel, upon request. When exposure to dust is unavoidable, provide appropriate NIOSH-approved respiratory protection to affected workers. If respiratory protection is deemed necessary, employers must develop and implement a respiratory protection program in accordance with Cal/OSHA's Respiratory Protection standard (8 CCR 5144).

MM 4.3-5: Prior to the issuance of any grading permit, a one-time fee shall be paid to the Kern County Public Health Services Department in the amount of \$3,200 for Valley Fever public awareness programs.

Level of Significance

With the implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5 and MM 4.17-3 from Section 4.17, *Transportation and Traffic*, impacts would be less than significant.

Impact 4.3-4: Implementation of the project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

Other Emissions (Such as Odors)

Land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project is a large industrial facility. However, the majority of the operations would be indoors. Water that has direct contact with contaminants in the steel making

process (contact water) would be treated in a wastewater treatment plant. Water that has run through the steel making process would flow to a settling basin where settleable matter is dropped out. An oil skimmer would remove oils from the water in the basin then pumped to a sand filter for further treatment. Treated water would then be stored in a clarified water tank where chemical dosing units are used to balance the water's chemistry. Sewage water would not be treated at the treatment plant. The proposed project would follow EKAPCD rules, including Rule 414 (Wastewater Separators) and 419 (Nuisance) during project operations.

Additionally, the operation of the water line, traffic improvements, and the SCE power and telecommunication lines are not land uses that produce objectionable odors. During operation of the off-site improvements minimal amounts of emissions could be generated from periodic inspections and maintenance. Most regular operation and maintenance activities of the traffic improvements and overhead facilities are performed from service vehicles. For these reasons, impacts from the operations of the off-site improvements would be less than significant. During construction, odors would come predominantly from construction equipment, which would cease immediately after construction is complete. Furthermore, the project would be required to comply with California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. Additionally, the project would follow all applicable EKAPCD rules and regulation to keep odors minimal. Given the large project area and strong prevailing winds at the project site, these odors would be dispersed and would not create significant objectionable odors. As discussed, construction-related odors would be short-term and cease upon project completion.

Sparse residences are located in the vicinity of the project site; therefore, short term fueling odors during construction and periodic refueling during long-term operations would not impact a substantial number of people. As such, the proposed project is not expected to result in adverse emissions affecting a substantial number of people.

Off-site Improvements

The reconductoring and re-poling of approximately 13 miles of existing SCE transmission lines would not result in emissions adversely affecting a substantial number of people. As discussed previously, to supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. Given the existing, built out transmission lines, project-related improvements would not result in newly disturbed land or creation of new routes that would affect nearby sensitive receptors. For these reasons, impacts from the construction and installation of off-site improvements standing alone would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting Impacts and Mitigation Measures

Local Air Quality Impacts

By definition, regional air pollution is largely a cumulative impact in that no single project is sufficient in size, by itself, to cause nonattainment of air quality standards. The contribution of a project's air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from cumulative projects in the vicinity could also contribute to cumulative air quality conditions and potentially adverse regional air quality impacts. The project-level thresholds for criteria air pollutants identify levels of emissions for new sources that are not anticipated to result in a considerable net increase in nonattainment criteria air pollutants. Therefore, if a project's emissions are below the project-level thresholds, the project would not result in a considerable contribution to cumulative regional air quality impacts. However, if the project contribution is above the thresholds, then the project would contribute a considerable amount to the cumulative impact. This analysis was conducted under Impact 4.3-2, and the project contribution (due to operations) was found to exceed significance thresholds, resulting in a considerable contribution.

Cumulative Projects

There are a total of 35 projects within a six-mile radius of the project site. Of the 35 projects, 16 have been approved, 15 are in the application phase, 3 are in the process stage, and 1 is completed/constructed. Since thresholds were exceeded with one approved project from each the 1-mile and the 6-mile, one of the 16 approved projects, and the completed/constructed were selected to demonstrate the localized construction impacts. The Edwards Air Force Base Solar Project is located adjacent and the east of the project site and has been completed and the Bellefield Solar Project (approved) located approximately 4.6 miles north of the project site are included in **Table 4.3-13: Cumulative Construction Emissions within 1-Mile and 6-Mile Radius**. As shown in **Table 4.3-13**, the combined construction emissions from the project and other potential projects within 1-mile and 6-miles from the project site would exceed EKAPCD's significance thresholds for NO_x and PM₁₀. Under a conservative scenario where construction schedules for all projects would overlap with each other and with the project, the localized effect would result in cumulatively significant construction NO_x and PM₁₀ emissions.

With regard to operations, several of the cumulative projects are renewable energy, residential, and some commercial projects. During operation of the proposed project, the only likely sources of emissions for renewable facilities would be limited to vehicular emissions associated with routine employee vehicle trips for maintenance and monitoring activities, the energy storage system facilities, and emergency backup generators. Additionally, employee trips may also be made for the washing of solar PV panels, which may only occur seasonally throughout the year. During operation of the residential and commercial uses, sources would include vehicular emissions associated with residents, visitors, and delivery vehicle trips to and from the residential uses. Additional emissions from on-site sources such as natural gas combustion, landscaping equipment, and use of consumer products would also be emitted. However, as shown in **Table 4.3-8**, operational emissions of the project, even with mitigation, would exceed EKAPCD thresholds. As such, the project's contribution to the cumulative impact would be considerable.

Table 4.3-13: Cumulative Construction Emissions within 1-Mile and 6-Mile Radius

Project	VOC	NO_x	SO_x	PM₁₀
Proposed Project ^a	2.81	16.03	0.38	1.59
Project within 1-Mile Radius				
Edwards Air Force Base Solar	2.57	23.31	0.08	17.57
Projects within 6-Mile Radius				
Bellefield Solar Project	3.4	23.6	0.1	13.9
EKAPCD Threshold (TPY)	25	25	-	15
Exceeds Threshold?	No	Yes	-	Yes

Notes:

^a Micro mill emissions calculations were calculated using information provided to ESA and CalEEMod software.

Source: ESA, 2022.

Toxic Air Contaminants

TACs from the proposed project would be considered significant and unavoidable if project specific risk exceeded cancer, chronic, and acute thresholds listed above. As discussed previously, mitigated TAC impacts from construction and operation would result in less-than significant cancer and non-cancer risk. Therefore, the contribution to health risk from project TAC emissions would not be cumulatively considerable, and impacts would be less than significant.

CO Hotspots

The project level discussion of CO hotspots, above, is in itself a cumulative analysis. There is no additional information to present for cumulative impacts. Therefore, as stated above, CO impacts would not be cumulatively considerable and impacts would be less than significant.

Cumulative Impacts Summary

As discussed in Impact Statement 4.3-1, the construction emissions generated by the project individually, but inclusive of both on-site facilities and off-site improvements, would not exceed EKAPCD thresholds. With regard to project level construction emissions, Mitigation Measures MM 4.3-1 and MM 4.3-5 would reduce impacts related to NO_x and PM₁₀ from diesel emissions, reduce dust generation, and address potential Valley Fever risk by implementing fugitive dust control measures, establishing a public complaint protocol for excessive dust generation, and requiring Valley Fever-related training for construction workers. However, assuming on a worst-case basis that the construction schedules for all cumulative projects would overlap with each other and with the proposed project, cumulative impacts during construction could be significant and unavoidable related to NO_x and PM₁₀ emissions.

Operation of the proposed project would result in an overall net reduction of emissions by providing electricity that could displace energy produced from fossil fuels. Operation of the project exceeds the project level regulatory thresholds and, therefore, would contribute to a long-term cumulative increase in criteria pollutants. The project's incremental contribution to operational impacts would be cumulatively considerable.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through MM 4.3-5.

Level of Significance after Mitigation

Despite implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5, construction emissions generated by the project and related projects could cumulatively combine and result in a temporary significant and unavoidable cumulative impact. Cumulative operational impacts would also be significant and unavoidable.

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Section 4.4

Biological Resources

4.4.1 Introduction

This section of the EIR describes the affected environment and regulatory setting for biological resources either present or with the potential to be present on the project site. The section includes the physical and regulatory setting for the project; an evaluation of the existing biological conditions on the project site and its vicinity; the criteria used to evaluate the significance of potential impacts on biological resources; the methods used in evaluating these potential impacts; an analysis of potential impacts; and project-specific mitigation. The analysis presented in this section is based on a review of relevant literature, field reconnaissance surveys, and focused biological surveys as well as the *Mojave Micro Mill Project, Kern County, California, Biological Technical Report* and associated appendices prepared by Environmental Science Associates (ESA) (Biological Technical Report, “BTR”) which is available in Appendix E1F of this EIR. A Western Joshua Tree Impact technical memo (August 8, 2023) has also been prepared to supplement the BTR and is available in Appendix E2 of this EIR.

The purpose of the BTR is to provide an inventory of biological resources occurring or potentially occurring within the project area and to evaluate the relationship of those biological resources to the proposed project’s construction and operational activities. The biological study area (BSA) analyzed within the BTR comprises the approximately 174-acre project site, refer to **Figure 3-2: Vicinity Map**. The BTR also recommends a project design feature, avoidance & minimization, and mitigation measures to reduce potential impacts to less-than-significant.

Prior to conducting the on-site surveys, a complete literature review and search of natural resources databases was conducted to assess the potential for sensitive biological resources to occur within the project site and immediate vicinity. The literature review included a review of aerial maps and biological resource databases to identify biological resources potentially occurring within the BSA and broader vicinity of the proposed project. Recent and historical aerial imagery were reviewed, as well as the topographic electronic copies of the applicable United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps, centered around the Soledad Mountain quadrangle. Aerial imagery was reviewed to confirm the current locations of developed and undeveloped land, and unique landforms. A list of special-status plant and wildlife species and their habitats historically recorded to occur near the Project site was compiled primarily from the California Department of Fish and Wildlife’s (CDFW) California Natural Diversity Database (CNDDB) and California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Plants. A query was also conducted of the CNDDB and CNPS records for the following USGS 7.5-minute topographic quadrangle maps: Bissell, Little Buttes, Mojave, Monolith, Rosamond, Rosamond Lake, Sanborn, Soledad Mountain, and Willow Springs. Specifically, the Project Site is located in the Soledad Mountain USGS 7.5-minute topographic quadrangle. Other data sources reviewed included the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soils mapping (USDA 2022), U.S. Fish and Wildlife Service (USFWS) critical habitat maps (USFWS 2022a), the Information for Planning and Consultation (IPaC) (USFWS 2022b), and the National Wetlands Inventory (NWI) (USFWS 2022c).

Biological Field Surveys

Reconnaissance Level Survey

A reconnaissance level survey of the of the BSA was conducted on March 17, 2021 by ESA senior biologists. The survey effort involved pedestrian access over the entire site. Areas where foot access was prevented were surveyed with the use of binoculars. All species of plant and animals observed, including sign (e.g., presence of scat, etc.) as well as any audible detections of wildlife, were noted. Vegetation mapping was conducted. No focused surveys for special-status species or aquatic resource delineations were conducted.

Western Joshua Tree Survey

The project site is located in Kern County, which requires the development of a Joshua Tree Preservation and Transportation Plan. Additionally, the western Joshua tree (*Yucca brevifolia* [WJT]) was designated a candidate state threatened species on October 9, 2020 by the CDFW. The CDFW provided ESA a recommended WJT survey protocol via email on March 17, 2022. This protocol required the following data points be collected:

- A comprehensive census inventory of every WJT within 290-feet of the Project Site utilizing 100% visual coverage.
- Estimated visual height and crown diameter.
- Mechanism of reproduction – Sexual (flowering and fruiting) or asexual/clonal (branch sprouts, basal sprouts).
- Number of branching terminal flower panicles.
- Individual tree photographs.
- Individual trees will be assessed for relocation potential.
- Conditions of habitat quality.

Mohave Ground Squirrel Survey

Prior to the survey, a literature review of Mohave ground squirrel (*Xerospermophilus mohavensis* [MGS]) records occurring with the project vicinity was conducted. A visual/auditory survey for MGS and a habitat assessment was then carried out on the project site on March 20, 2022 by a biologist who holds a memorandum of understanding (MOU) with CDFW for MGS surveys. Per CDFW direction, the survey was conducted using a 100-trap live-trapping grid established around the existing native vegetation in the western side of the project site and the adjoining areas and 27 wildlife cameras established across the project site outside of the live-trapping grid. The cameras were operated from dawn to dusk for three (3), five (5)-day sessions for a total of 15 days; bait was renewed every other day. Traps were checked at least every four (4) hours until they were closed at the end of each day (or until temperature reached 90°F, in accordance with the guideline).

4.4.2 Environmental Setting

Regional Setting

The project site is located in unincorporated southeastern Kern County, in central California as shown in **Figure 3-1: Regional Vicinity Map** and **Figure 3-2: Vicinity Map**. Kern County's geography includes, among other features, mountainous areas, agricultural lands throughout the valley floor, and deserts. The project site is located within the eastern high desert region of unincorporated Kern County and, more specifically, within the western extent of the Mojave Desert. The Mojave Desert covers more than 40,000 square miles in California, Arizona, Nevada, and Utah. The western Mojave Desert is generally bounded by the Tehachapi Mountains to the northwest, the San Gabriel Mountains to the southwest, and the Great Basin to the east.

Climate

The climate of the region is characterized by a typical desert climate, with hot, dry, windy summers and mild, relatively dry winters. Average high temperatures range from 57° in December to 97° in July, and it is not uncommon for temperatures to exceed 100°F during the summer. Average low temperatures range from 29° in December to 66°F in July. Precipitation events are variable from year to year, with an average of 7.38 inches of rain falling mainly between December and March, although the region is known to experience sudden thunderstorms in the summer months.

Vegetation

Vegetation in the Mojave Desert region within which the project site is located is influenced by arid climatic conditions, topography, desert soils, and past land uses. Vegetation in the region includes a predominance of plant morphological adaptations to extreme aridity (e.g., waxy or resinous leaf cuticles, drought deciduous or succulent plants, woolly leaf pubescence, deep tap root systems) and saline-alkali soils (e.g., salt excretion, active transport systems). Vegetative structure is characterized by short-statured and widely spaced shrubs, and arborescent shrubs resulting from a competition for soil water resources.

Wildlife

The Mojave Desert region supports a variety of reptiles, birds and mammals. Reptile species commonly occurring in the desert portion of Kern County include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Aspidoscelis tigris*), desert spiny lizard (*Sceloporus magister*), gopher snake (*Pituophis catenifer*), glossy snake (*Arizona elegans*), and Mojave rattlesnake (*Crotalus scutulatus*). Bird species common to the region include common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), house finch (*Haemorhous mexicanus*), loggerhead shrike (*Lanius ludovicianus*), and red-tailed hawk (*Buteo jamaicensis*). Mammal species typical of the area include white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beechyi*), and bat species including California myotis (*Myotis californicus*), western small-footed myotis (*Myotis ciliolabrum*) and western pipistrelle (*Pipistrellus hesperus*).

Sensitive Natural Communities

Sensitive natural communities are designated by the CDFW, or occasionally in local policies and regulations, and are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent and/or distribution. These communities are considered threatened enough to warrant some level of protection. The CDFW tracks communities it believes to be of conservation concern through the CNDDDB, and plant alliances or associations with a state rank of S1 through S3 are considered to be sensitive communities by the State.

Surface Hydrology and Jurisdictional Waters

Within the arid and semi-arid western United States, limited precipitation restricts wetland and riparian resources to 1 to 5 percent of the land surface, a relatively low proportion compared to other systems globally. The proportion of wetland resources is even lower (less than 1 percent) in extremely arid areas such as the Mojave Desert (U.S. Army Corps of Engineers [USACE], 2008).

The project site is located in the Antelope Valley, an isolated basin that comprises approximately 1,580 square miles of alluvial valley in the western Mojave Desert. Stream channels are generally subject to flow path uncertainty due to rapid diversion of one channel to another in response to blockages and changes in sediment accumulation from previous flow events (California Department of Fish and Game [CDFG], 2010). This region of the Mojave Desert is characterized by low precipitation, which rarely allows for surface runoff in the highly porous soils and colluvium. Streams in this region are generally ephemeral to intermittent, and only flow in response to rain events. Because of the high infiltration rates of the sediments, consistent stream flow usually only occurs after periods of steady rain, typically during a wet winter. Heavy floods produce visually definable channels in streambeds, and localized flood events can produce overbank flow transporting sediment and debris onto the floodplain.

The project site is located within the Antelope Valley Hydrologic Unit, a closed basin situated within the western Mojave Desert, with a system of Rosamond, Buckhorn, and Rogers dry lakes as the central watershed termini. Rosamond, Buckhorn, and Rogers Lakes and their tributaries function as an isolated intrastate watershed system and are non-jurisdictional waters of the United States.

Wildlife Movement Corridors

Migration corridors are linkages between large open space areas. Top tier predators, mesopredators (medium-sized carnivorous or omnivorous animals), and prey species alike utilize migration corridors for travel and refuge between open space areas, as well as for wintering and breeding grounds. Some migration corridors are created naturally by topography and have been used by wildlife for hundreds or thousands of years, and some have been constructed by humans to mitigate for the loss of existing natural corridors, such as bridge crossings, underpasses and culverts. Natural features commonly utilized for local wildlife movement and migration include creeks, rivers, canyons and valleys, because these low-lying riparian areas are generally flat and include an over story of vegetation that provides shelter from predators. Functional wildlife movement corridors are especially important in highly fragmented habitat, such as urbanized areas. Wildlife movement corridors are generally used by terrestrial animals, although they may also be important for aquatic species and avian dispersal.

The predominant movement paths in the region include the Tehachapi Connection and the Sierra Madre-Castaic Connection, located at least 12 miles to the northwest and at least 25 miles to the southwest of the project site, respectively. The Tehachapi Connection links the Sierra Nevada and Sierra Madre Mountains. This connection includes much of Tejon Ranch and runs along the northwestern edge of the Antelope Valley from Quail Lake to Red Rock Canyon State Park. Similarly, the Sierra Madre-Castaic Connection links the Castaic Range, located south of the project site, to points west in Los Padres National Forest. Combined, these two connections serve as the primary linkage for most terrestrial wildlife moving from Angeles National Forest and the Sierra Nevada rather than across the floor of the Antelope Valley.

Local Setting

The project site and surrounding land are relatively flat and exhibit little topographic relief. The elevation of the project site ranges between approximately 2,554 and 2,564 feet above mean sea level (AMSL). The project site is relatively flat with a gentle southeast-facing slope. Soils consist of Cajon loamy sand, DeStazo sandy loam, and Garlock loamy sand which consist of well to somewhat excessively drained soils formed in the recent alluvium. None of these soils are considered hydric. The project site consists mostly of Red brome or Mediterranean grass grasslands. The project site is within a basin that drains south into Rodgers Dry Lake and is isolated from the adjacent Mojave River Watershed. Development in the vicinity of the project site is sparse with limited airport and industrial uses comprising the minimal nearby development.

Natural Communities

Based on the field reconnaissance, a total of five natural communities and land uses were determined to be present within the project site. Acreages for natural communities observed are shown in **Table 4.4-1: Natural Communities and Land Cover Types within the Project Site**. Refer to the BTR in Appendix E1 for detailed descriptions of each natural community and land cover type. No communities are considered to be sensitive natural communities. Special status plant species that may occur on the project site are discussed in more detail below.

Table 4.4-1: Natural Communities and Land Cover Types within the Project Site

Natural Community/Land Cover Type	Total (acres)
Terrestrial	
Allscale Scrub (<i>Atriplex polycarpa</i> Shrubland Alliance)	16.78
Creosote Bush Scrub (<i>Larrea tridentata</i> Shrubland Alliance)	14.40
Developed/Disturbed Land Cover Types	
Disturbed Creosote Bush Scrub (<i>Larrea tridentata</i> Shrubland Alliance)	6.01
Red brome or Mediterranean grass grasslands (<i>Bromus rubens</i> – <i>Schismus (arabicus, barbatus)</i> Herbaceous Semi-Natural Alliance)	131.46
Disturbed/Developed	5.15
TOTAL	173.80

Observed Wildlife Species

The project site and surrounding areas contain suitable habitat for common wildlife species typically found throughout disturbed desert shrub vegetation types. Common avian species detected or observed during the biological reconnaissance include cactus wren (*Campylorhynchus*

brunneicapillus), common raven, horned lark, house finch, barn swallow (*Hirundo rustica*), lesser goldfinch (*Spinus psaltria*), and European starling (*Sturnus vulgaris*). Common mammal species observed consisted of black-tailed jackrabbit and desert cottontail (*Sylvilagus audubonii*). A comprehensive list of all plant and wildlife species observed is provided in the BTR in Appendix E1. Special status wildlife species that may occur on the project site are discussed in more detail below.

Candidate, Sensitive, or Special Status Biological Resources

Plants

Special-status plants are defined as those plants that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as under threat from human-associated developments. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as special-status on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. Special-status plants are defined as follows:

- Plants that are listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA)
- Plants that meet the definitions of rare or endangered under State California Environmental Quality Act (CEQA) Guidelines Section 15380
- Plants covered under an adopted Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP)
- Plants considered by the CNPS to be rare, threatened, or endangered (California Rare Plant Rank [CRPR] 1A, 1B, 2A and 2B plants) in California
- Plants listed as rare under the California Native Plant Protection Act (Fish and Game Code 1900 et seq.)

The potential for special-status plant species to occur within the project site is determined based on on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences and geographic ranges. A review of the CNDDDB and the CNPS Inventory of Rare and Endangered Plants as part of the preparation of the BTR found that many special-status plant species have been recorded within the USGS quadrangle search area. Refer to Appendix E1 for this list of species. The BTR determined that many of these species do not have the potential to occur on the project site because they lack necessary habitat requirements. As these species do not have the potential to occur on the project site, they are not further discussed.

A total of 13 special-status plants were determined to have at least low potential to occur on the project site. However, nine (9) plant species are associated with habitats and soils that do not occur in the project site or are outside the range of the species. Thus, these species are also not discussed further.

The remaining four (4) plant species identified by the BTR with at least low potential and association with habitats and soils that do occur in the project site are discussed below in detail. Of these four (4) species, one (1) species was observed within the project site: WJT, a California candidate threatened species. The remaining three (3) species were not observed within the project site and have low potential to occur: alkali mariposa lily (*Calochortus striatus*), recurved larkspur (*Delphinium recurvatum*), and pale-yellow layia (*Layia heterotricha*). A detailed description of each of these plants is provided below, and their potential to occur within the project site is provided in **Table 4.4-2: Special Status Plant Species**. The criteria for potential to occur include:

- **Present:** Species was observed or detected during Project-specific biological surveys.
- **High Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present on the Project site. These species are generally common and/or widespread in the Project area and vicinity.
- **Moderate Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present within the Project site. These species are generally less common and/or widespread than species considered to have “high” potential to occur.
- **Low Potential:** Species identified in the literature search or known to occur in the region, but the habitat on site is of low or marginal quality and/or the Project site occurs outside the species known geographic or elevational range. Distance to nearest known occurrence and the age of last reported local occurrence are also considered. Limited to no suitable habitat present within the project site.
- **Not Expected:** Species identified in the literature search or known to occur in the region, but the habitat on site is not suitable for the species.

Table 4.4-2: Special Status Plant Species

Common Name <i>Scientific Name</i>	Flowering Period	Sensitivity Status	Preferred Habitat/Known Elevational Range	Presence/Potential to Occur within the Project Site
Dicots				
Recurved larkspur <i>Delphinium recurvatum</i>	March-June	--/--/1B.2	Chenopod scrub, Cismontane woodland, Valley and foothill grassland. On alkaline soils; often in valley saltbush or valley chenopod scrub. Elevation range: 10-2,590 feet.	Low. Limited suitable chenopod habitat exists within the project site. However, chenopod habitat present is highly disturbed. There is two CNDDB records within one mile of the project site.
Pale-yellow layia <i>Layia heterotricha</i>	March-June	--/--/1B.1	Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Elevation range: 985-5,595 feet.	Low. Limited suitable chenopod habitat exists within the project site. However, chenopod habitat present is highly disturbed. There are no CNDDB records of this species within 5 miles of the project site.
Monocots				

Alkali mariposa lily <i>Calochortus striatus</i>	April-June	--/--/1B.2	Occurs usually in wetlands, occasionally in non-wetlands. Meadows in shadscale scrub, chaparral, and wetland-riparian. Elevation range: 230–5,235 feet.	Low. Limited suitable chenopod habitat exists within the project site. However, chenopod habitat present is highly disturbed. There are four CNDDDB records of this species within 5 miles of the project site. One record is located within the northwest corner of the project site dated 1995.
Western Joshua tree <i>Yucca brevifolia</i>	March-June	--/SCT/--	Joshua tree woodlands. Elevation range: 1,300 – 6,560 feet.	Present. This species was observed within the project site.

Key:**Federal Listings**

FC = Federal candidate

FD = Federally delisted

FE = Listed as endangered under the FESA

FT = Listed as threatened under the FESA

State Listings

SC = State candidate

SE = Listed as endangered under the CESA

ST = Listed as threatened under the CESA

SCT = State Candidate as Threatened

SSC = Species of Special Concern (CDFW)

CRPR Rankings

1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere

1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

2A: Plants Presumed Extirpated in California, But Common Elsewhere

2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3: Plants About Which More Information is Needed – A Review List

4: Plants of Limited Distribution – A Watch List

SOURCE: BTR, see Appendix E1

Recurved Larkspur

Recurved larkspur is a CRPR 1B.2 species that has a low potential to occur within the BSA. Limited suitable chenopod habitat exists within the BSA and what habitat is present is highly disturbed. There are two CNDDDB records within one mile of the BSA (CNDDDB, 2023). This species was not detected during the biological resources reconnaissance or the WJT surveys. These field visits were conducted within the flowering period for the species in both 2021 and 2022.

Pale-Yellow Layia

Pale-yellow layia is a CRPR 1B.1 species that has a low potential to occur within the BSA. Limited suitable chenopod habitat exists within the BSA and what habitat is present is highly disturbed. There are no CNDDDB records of this species within five miles of the BSA (CNDDDB, 2023). This species was not detected during the biological resources reconnaissance or the WJT surveys. These field visits were conducted within the flowering period for the species in both 2021 and 2022.

Alkali Mariposa Lily

Alkali mariposa lily is a CRPR 1B.2 species and has a low potential to occur within the BSA. Limited suitable chenopod habitat exists within the BSA and what habitat is present is highly disturbed. There are four CNDDDB records of this species within five miles of the BSA (CNDDDB, 2023). One record is located within the northwest corner of the BSA dated 1995. This species was

not detected during the biological resources reconnaissance or the WJT surveys. These field visits were conducted within the flowering period for the species in both 2021 and 2022 and individuals would have been easily observed.

Western Joshua Tree

WJT is a California candidate species for listing under the CESA that occurs within the Project Site. A focused tree inventory for this species was conducted in 2022, recording a total of 136 WJTs within the Project Site (see Appendix E1). An additional 16 WJTs were recorded within a 290-foot buffer around the Project Site. The WJT are sparsely disturbed throughout the Project Site and do not constitute a Joshua tree woodland habitat. The focused WJT survey was conducted during the late spring with the highest potential of observing the trees in fruit. The standalone WJT Inventory, Preservation, and Relocation Plan (Plan) is presented in the BTR appendices (see Appendix E1).

Wildlife

Special-status wildlife are species that, because of their recognized rarity or vulnerability to various forms of habitat loss or population decline, are considered by federal, State, or other agencies to be under threat from human-associated developments. Some of these species receive specific protection that is defined by federal or state endangered species legislation and others have been designated as special-status on the basis of adopted local policies (i.e., city and county) or the educated opinion of respected resource interest groups (e.g., Western Bat Working Group [WBWG]). Special-status wildlife is defined as follows:

- Wildlife listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the FESA or the CESA.
- Wildlife that meet the definitions of rare or endangered under CEQA Guidelines Section 15380.
- Wildlife covered under an adopted Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP).
- Wildlife designated by CDFW as species of special concern, included on a Watch List, or are considered Special Animals.
- Wildlife “fully protected” in California (Fish and Game Code Sections 3511, 4700, and 5050).
- Bird species protected by the Migratory Bird Treaty Act (MBTA).
- Bat species considered priority by WBWG.

The potential for special-status wildlife species to occur within the project site is based on on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences and geographic ranges. A review of the CNDDDB as part of the preparation of the BTR found that many special-status plant species have been recorded within the USGS quadrangle search area. Refer to Appendix E1 for this list of species. The BTR determined that many of these species do not have the potential to occur on the project site because their necessary habitat requirements are not met or they do not have a range that overlaps the project site. For example, because of the lack of a perennial water source and habitat types present, no fish or amphibian

species are expected in the project site. As these species do not have the potential to occur on the project site, they are not further discussed.

A total of eight (8) wildlife species have been recorded in the vicinity of the project site; however, five (5) of these wildlife species are associated with habitats that do not occur within the project site or the project site is located outside of the species' range. As these species do not have the potential to occur on the project site, they are also not further discussed.

The remaining three (3) wildlife species identified by the BTR with at least low potential and association with habitats that do occur in the project site are discussed below. None of these species were observed on the project site. A detailed description of each of these wildlife species is provided below, and their potential to occur within the project site is provided in **Table 4.4-3: Special-Status Wildlife Species**. The potential for these special-status wildlife species to occur within the project site is based on the criteria described below:

- **Present:** The species was observed within the study area during the site assessment or has been documented within or immediately adjacent to the BSA during recent surveys (with 2 years).
- **High Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present on the BSA. These species are generally common and/or widespread in the BSA and vicinity.
- **Moderate Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present within the BSA. These species are generally less common and/or widespread than species considered to have "high" potential to occur.
- **Low Potential:** Species identified in the literature search or known to occur in the region, but the habitat on site is of low or marginal quality and/or the BSA occurs outside the species known geographic or elevational range. Distance to nearest known occurrence and the age of last reported local occurrence are also considered.

Table 4.4-3: Special-Status Wildlife Species

Common Name Scientific Name	Sensitivity Status	Preferred Habitat/Known Elevational Range	Presence/Potential to Occur within Biological Study Area
Reptiles			
Desert tortoise <i>Gopherus agassizii</i>	FT/ST	Inhabits semi-arid grasslands, gravelly desert washes, canyon bottoms and rocky hillsides within the Mojave Desert.	Low. Limited suitable habitat present within the project site. No sign or burrows observed during 18 field visits. There are two CNDDDB records within five miles of the project site with the most recent in 2012.
Birds			
Burrowing owl <i>Athene cunicularia</i>	BCC/SSC	Inhabits coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, annual and perennial grasslands, bare ground, and disturbed habitats characterized by low-growing vegetation. A subterranean nester dependent upon burrowing mammals,	Low. Limited suitable foraging habitat located within the project site. There are three CNDDDB records located within five miles of the project site with the most recent in 2007. There are no CNDDDB records located within one mile of the project site.

		particularly the California ground squirrel.	
Mammals			
Mohave ground squirrel <i>Xerospermophilus mohavensis</i>	--/ST	Known to occur within Joshua tree woodlands, creosote scrub, saltbush scrub and Mojave mixed woody scrub vegetation.	Low. Limited suitable habitat present within the project site. No sign or burrows observed during field visits. CDFW protocol survey were conducted in 2022 and negative for the species. There is a single CNDDDB record dated 1973 located within five miles of the project site.
<p>Key:</p> <p>Federal Listings FE = Listed as endangered under the FESA FT = Listed as threatened under the FESA BCC = Birds of Conservation Concern (USFWS)</p> <p>State Listings SE = Listed as endangered under the CESA ST= Listed as threatened under the CESA SSC = Species of Special Concern (CDFW) WL = Watch List (CDFW)</p> <p>CNDDDB Element Rankings S1 = Less than 6 element occurrences (Eos) or 1,000 individuals or less than 2,000 acres (S1.1 very threatened, S1.2 threatened, S1.3 no current threats known) S2 = 6-20 Eos or 1,000-3,000 individuals or 2,000-10,000 acres (S2.1 very threatened, S2.2 threatened, S2.3 no current threats known) S3 = 21-100 Eos or 3,000-10,000 individuals or 10,000-50,000 acres (S3.1 very threatened, S3.2 threatened, S3.3 no current threats known) S4 = Apparently secure; this rank is clearly lower than S3 but factors exist to cause some concerns; i.e., there is some threat, or somewhat narrow habitat. ? = indicates some uncertainty. SOURCE: BTR, see Appendix E1</p>			

Desert Tortoise

Desert tortoise is a federally and state listed Endangered species, with an S2S3 State Conservation Rank. The species occurs in semi-arid grasslands, gravelly desert washes, canyon bottoms and rocky hillsides within the Mojave Desert. Limited suitable habitat is present within the BSA. No sign or burrows were observed during 18 field visits, which includes the Mohave ground squirrel trapping effort. There are two CNDDDB records within five miles of the BSA with the most recent recorded in 2012 (CNDDDB 2023).

Burrowing Owl

Burrowing owl is a state species of special concern, with an S3 State Conservation Rank. Commonly associated vegetation for this species includes coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, annual and perennial grasslands, bare ground, and disturbed habitats characterized by low-growing vegetation. It is a subterranean nesting species, dependent upon burrowing mammals, particularly the California ground squirrel. No burrows were observed within the BSA. Limited suitable foraging habitat is located within the BSA. There are three CNDDDB records within five miles of the BSA with the most recent recorded in 2007. There are no CNDDDB records located within one mile of the BSA (CNDDDB 2023).

Mohave Ground Squirrel

Mohave ground squirrel is state listed as Threatened, with an S2S3 State Conservation Rank. The species is known to occur within Joshua tree woodlands, creosote scrub, saltbush scrub and Mojave mixed woody scrub vegetation. Limited suitable habitat is present within the BSA. No sign or burrows were observed during 18 field visits, including trapping surveys, during the focused protocol surveys. CDFW protocol survey was conducted in 2022 and was negative for the species. There is a single CNDDDB record dated 1973 located within five miles of the BSA (CNDDDB 2023). The standalone Mohave Ground Squirrel Report is presented in the BTR appendices (see Appendix E1).

Sensitive Natural Communities

Sensitive natural communities and habitats are defined by the CDFW as those natural communities that have a reduced range and/or are imperiled as a result of residential and commercial development, agriculture, energy production and mining, or an influx of invasive and other problematic species. Vegetation communities are evaluated using the Vegetation Classification and Mapping Program (VegCAMP) Heritage Methodology, which is based on the knowledge of range and distribution of a specific vegetation type and the proportion of occurrences that are of good ecological integrity. Evaluation is done at both global level (natural range within and outside of California [G]) and subnational level (state level for California [S]), each ranked from 1 (“critically imperiled,” or very rare and threatened) to 5 (demonstrably secure). Natural communities and habitats with state ranks of S1 through S3 are considered sensitive natural communities and require review when evaluating environmental impacts.

According to the CNDDDB, there are no sensitive natural communities located within the project site. The field surveys also observed no sensitive natural communities.

Critical Habitat

Under FESA, to the extent feasible, the USFWS and National Marine Fisheries Service (NMFS) are required to designate critical habitat for endangered and threatened species. Critical habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated critical habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter. Designated critical habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Critical habitat delineates all suitable habitat, occupied or not, essential to the survival and recovery of the species.

According to the CNDDDB and USFWS’s critical habitat maps, there is no critical habitat mapped within the project site.

Areas of Critical Environmental Concern

Areas of Critical Environmental Concern (ACEC) are designated areas by the Bureau of Land Management (BLM) where special management is provided for fish and wildlife or other natural resources. The project site is not located within or adjacent to any ACECs.

Aquatic Resources

A formal jurisdictional waters delineation was not conducted. No National Wetland Inventory (NWI) features are mapped in or within 100-feet of the project site. No waters under the jurisdiction of USACE, Regional Water Quality Control Board (RWQCB) and/or CDFW were identified during the biological field assessment conducted for the BTR.

Wildlife Movement Corridors

The project site is located within the western Mojave Desert with small residential developments, small commercial developments, a solar field, and large fragmented undeveloped areas in the surrounding area. The mostly undeveloped land with sparse development allows for the local movement of wildlife species without obstruction. These undeveloped areas are contiguous west, south, east, and north of the project site. However, the project site is not located within a larger migratory corridor and does not function as a corridor between two larger stands of wildlife habitat.

4.4.3 Regulatory Setting

Federal

Endangered Species Act of 1973 (USC Title 16, Sections 1531–1543)

The FESA and subsequent amendments provides for the conservation and protection of wildlife and plant species that are listed or proposed for listing as endangered or threatened species and the ecosystems upon which they depend. The FESA also provides statutory framework for the conservation and recovery of threatened and endangered species as well as for the conservation of designated critical habitat that USFWS determines is required for the survival and recovery of these listed species.

Section 7 of the FESA requires federal agencies, in consultation with and assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The USFWS and NMFS share responsibilities for administering the FESA. Regulations governing interagency cooperation under Section 7 are found in CCR Title 50, Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing “take” (to harass, harm, pursue, hunt, wound, kill, etc.) that may occur incidental to an otherwise legal activity. Although federal funding is not expected, if the proposed Project were to receive federal funding the funding agency would be required to initiate a consultation with USFWS under Section 7. The consultation process would then lead to issuance of a Biological Opinion from USFWS. In most cases, a Biological Opinion addresses a project’s potential to result in “take” of listed species (as defined below), and includes mandatory conditions that would allow for limited incidental take to occur subject to prescribed conditions.

Section 9 lists those actions that are prohibited under the FESA. Although take of a listed species is prohibited, it is allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish, wildlife, and plants without special exemption. The definition of

“harm” includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. “Harass” is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 10 provides a means whereby a non-federal action with the potential to result in take of a listed species can be allowed under an incidental take permit which may be issued once an HCP is approved. Application procedures are found at 50 CFR 13 and 17 for species under the jurisdiction of USFWS and 50 CFR 217, 220, and 222 for species under the jurisdiction of NMFS.

Migratory Bird Treaty Act (USC Title 16, Sections 703–711)

The MBTA is the domestic law that affirms, or implements, a commitment by the U.S. to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. The MBTA makes it unlawful at any time, by any means, or in any manner to pursue, hunt, take, capture, or kill migratory birds. “Migratory bird” means any bird protected by any of the treaties and currently includes 1,027 bird species in the United States (50 CFR 10.13), regardless of whether the particular species actually migrates. The law also applies to the removal of nests occupied by migratory birds during the breeding season. The MBTA makes it unlawful to take, pursue, molest, or disturb these species, their nests, or their eggs anywhere in the United States.

Bald and Golden Eagle Protection Act of 1940 (USC Title 16, Section 668, enacted by 54 Statute 250)

The Bald and Golden Eagle Protection Act of 1940 protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this act. Take of bald and golden eagles includes to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” 16 U.S.C. § 668c. Disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. (Federal Register [FR], volume 72, page 31132; 50 CFR 22.3).

Federal Clean Water Act (USC Title 33, Sections 1251–1376)

The USACE regulates “discharge of dredged or fill material” into “waters” of the United States, which includes tidal waters, interstate waters, and “all other waters, interstate lakes, rivers, streams (including excluding ephemeral drainages), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce or which are tributaries to waters subject to the ebb and flow of the tide” (33 C.F.R. 328.3(a)), pursuant to provisions of Section 404 of the Clean Water Act (CWA). The CWA also excludes certain features from this regulation, including “wastewater recycling facility constructed on dry land” (see 33 CFR Section 230.3 (o)(2)(vii)). Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not considered waters of the United States.

Fish and Wildlife Conservation Act

The Fish and Wildlife Conservation Act declares that fish and wildlife are of ecological, educational, esthetic, cultural, recreational, economic, and scientific value to the United States. The purposes of this Act are to encourage all federal departments and agencies to utilize their statutory and administrative authority, to the maximum extent practicable and consistent with each agency's statutory responsibilities and to conserve and to promote conservation of non-game fish and wildlife and their habitats. Another purpose is to provide financial and technical assistance to the states for the development, revision, and implementation of conservation plans and programs for nongame fish and wildlife.

State

California Endangered Species Act (CFGC Section 2050 et seq.)

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under the CESA. For projects that would affect a listed species under both the CESA and the FESA, compliance with the FESA would satisfy the CESA if CDFW determines that the federal incidental take authorization is "consistent" with the CESA under CFG Code Section 2080.1. For projects that would result in take of a species listed under the CESA only, the project operator would have to apply for a take permit under Section 2081(b).

California Fish and Game Code Section 1600 et seq.

CDFW is responsible for protecting and conserving fish and wildlife resources, and the habitats upon which they depend. Under Section 1600 of the California Fish and Game Code, CDFW administers the Lake and Streambed Alteration (LSA) Program and regulates all substantial diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake (which typically include reservoirs), which supports fish or wildlife.

Applicants proposing changes to such regulated water resources must submit a Lake or Streambed Alteration Notification to CDFW for such projects. CDFW will then determine if the proposed activity may substantially adversely affect an existing fish or wildlife resource and will issue a final agreement for the applicant's signature that includes reasonable measures necessary to protect the resource. Preliminary notification to CDFW, and project review by CDFW may occur during or after the California Environmental Quality Act (CEQA) environmental review process but prior to project implementation.

California Fish and Game Code Sections 2080 and 2081

Section 2080 of the California Fish and Game Code states that "No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except

as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.” Pursuant to Section 2081, CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through Incidental Take permits or Memoranda of Understanding if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by CDFW, which makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800

Under these sections of the California Fish and Game Code, a project operator is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey; the taking or possessing of any migratory nongame bird as designated in the MBTA; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or nongame birds protected by the MBTA; or the taking of any nongame bird pursuant to California Fish and Game Code Section 3800.

Section 3800 of the CFG Code affords protection to all nongame birds, which are all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds. Section 3513 of the CFG Code upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA.

California Environmental Quality Act Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, California Environmental Quality Act (CEQA) Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section is included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDB as sensitive are considered by CDFW to be significant resources and fall under the State CEQA Guidelines for addressing impacts. Local planning documents such as General Plans often identify these resources as well.

California Water Quality Control Act (Porter-Cologne California Water Code Section 13260)

The State Water Resources Control Board and the RWQCB (together “Boards”) are the principal state agencies with primary responsibility for the coordination and control of water quality. The Boards regulate activities pursuant to Section 401(a)(1) of the federal CWA as well as the Porter-Cologne Water Quality Control Act (Porter-Cologne) (Water Code Section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

In Porter-Cologne, the Legislature declared that the “State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation...” (California Water Code Section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. It is important to note that enforcement of the State’s water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., CDFW) have the ability to enforce certain water quality provisions in state law.

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (procedures), adopted by the State Water Resources Control Board on April 2, 2019, became effective May 28, 2020. The Procedures include a definition for wetland waters of the state that include (1) all wetland waters of the U.S.; and (2) aquatic resources that meet both the soils and hydrology criteria for wetland waters of the U.S. but lack vegetation.

Native Plant Protection Act (CFG Code Sections 1900 through 1913)

The California’s Native Plant Protection Act requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that would otherwise be destroyed. The project operator is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

California Desert Native Plants Act (California Food and Agricultural Code Sections 800071 through 80075)

The California Desert Native Plant Protection Act affords protection to certain native desert plant species to make the harvest, transport, sale, or possession of these species unlawful unless a permit is first obtained. It restricts harvesting of the following plants, except for educational or scientific purposes under a permit issued by the commissioner of the county in which the native plants are growing:

- All species of the genus Burseraceae family (such as elephant tree [*Bursera microphylla*], saguaro cactus [*Carnegiea gigantea*], barrel cactus [*Ferocactus acanthodes*], and panamint dudleya [*Dudleya saxosa*]).

The California Desert Native Plant Protection Act also restricts harvesting of the following species, except under a permit issued by the commissioner of the sheriff of the county in which the native plants are growing:

- All species of the agave family (Agavaceae),
- All species of the genus Prosopis,
- All species of the genus Cercidium,
- All species of the cacti family Cactaceae, besides saguaro and barrel cactus which are protected as described above,
- All species of the ocotillo and candlewood family Fouquieriaceae, and
- Catclaw (*Acacia greggii*), desert-holly (*Atriplex hymenelytra*), smoke tree (*Dalea spinose*), and desert ironwood (*Olneya tesota*).

Although no species covered by the Desert Native Plant Act were observed, mention of this regulation is added due to the proposed project occurring within the same area covered by this act.

Western Joshua Tree Conservation Act

On July 10, 2023, California Governor Gavin Newsom signed into law the Western Joshua Tree Conservation Act (WJTCA). Passage of the WJTCA is the latest in a series of State actions addressing conservation of WJT since the Commission declared the species a candidate for listing under CESA in 2020. Under CESA, candidate species are afforded the same protection from “take” as listed species, meaning that take is prohibited unless authorized by CDFW through issuance of an incidental take permit.

Under the WJTCA, individuals and entities can obtain take authorization by avoiding and minimizing take to the maximum extent practicable and paying a fee established by the WJTCA. The fee is paid on a per-tree basis and varies based on tree height and project location. Standard fees under the WJTCA vary between \$340 and \$2,500 per trunk or stem emerging from the ground, depending on tree height. In the reduced mitigation fee area, which the project site is within, the fees vary between \$150 and \$1000. If the Commission ultimately lists the species as threatened or endangered under CESA, the WJTCA would become inoperative and take authorization would only be available under CESA.

The WJTCA also requires CDFW to develop and implement a WJT conservation plan describing management actions necessary to conserve the species, establishing measurable, objective criteria to assess the effectiveness of those actions, and providing guidance for avoidance and minimization of impacts to the species and tree relocation protocol. CDFW is required to provide a draft plan to the Commission by December 31, 2024, and the Commission is required to take final action on the plan by June 30, 2025. The WJTCA also requires the Commission to consider the effects of the conservation plan, in-lieu fee program, and other relevant information when making a final determination of whether to list the species as threatened or endangered under CESA.

Local

Kern County General Plan

The Kern County General Plan identifies the federal, state, and local statutes, ordinances, or policies that govern the conservation of biological resources that must be considered by Kern County during the decision-making process for any project that could affect biological resources.

The Land Use, Open Space, and Conservation Element of the Kern County General Plan states that the element provides for a variety of land uses for future economic growth while also ensuring the conservation of the County's agricultural, natural, and resource attributes. Section 1.10, *General Provisions*, provides goals, policies, and implementation measures that apply to all types of discretionary projects.

Chapter 1. Land Use, Open Space, and Conservation Element

1.10 General Provisions; 1.10.5 Threatened and Endangered Species

Goal

Goal 1: Ensure that the County can accommodate anticipated future growth and development while a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Policies

- Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with State and Federal laws.
- Policy 28: The County should work closely with State and Federal agencies to assure that discretionary projects avoid or minimize impacts on fish, wildlife, and botanical resources.
- Policy 29: The County will seek cooperative efforts with local, State, and Federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
- Policy 31: Under the provisions of CEQA, the County, as lead agency, will solicit comments from the CDFW and the USFWS when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared.
- Policy 32: Riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

Implementation Measures

- Measure Q: Discretionary projects shall consider effects to biological resources as required by CEQA.
- Measure R: Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.
- Measure S: Pursue the development and implementation of conservation programs with State and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.

Kern County Zoning Ordinance***Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting)***

In November 2011, Kern County approved a Dark Skies Ordinance. The purpose of this ordinance is to maintain the existing character of Kern County by requiring a minimal approach to outdoor lighting, recognizing that excessive illumination can create a glow that may obscure the night sky, and that excessive illumination or glare may constitute a nuisance. The ordinance provides requirements for outdoor lighting within specified unincorporated areas of Kern County in order to accomplish the following objectives:

- Objective 1: Encourage a safe, secure, and less light-oriented night-time environment for residents, businesses and visitors.
- Objective 2: Promote a reduction in unnecessary light intensity and glare, and to reduce light spillover onto adjacent properties.
- Objective 3: Protect the ability to view the night sky by restricting unnecessary upward projections of light.
- Objective 4: Promote a reduction in the generation of greenhouse gases by reducing electricity that can result from excessive or unwanted outdoor lighting.

Kern County Development Standards

The Kern County Development Standards have specific regulations pertaining to lighting standards including the requirement that lighting must be designed so that light is reflected away from surrounding land uses so as not to affect or interfere with vehicular traffic, pedestrians, or adjacent properties.

4.4.4 Impacts and Mitigation Measures

This section evaluates the impacts to biological resources that may occur during construction and operation of the proposed project. It describes the sensitive biological resources located on and adjacent to the project site that may be affected and identifies the thresholds used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, where applicable.

Methodology

The following impact analysis is based on existing and potential biological resources occurring within the project site and vicinity of the project identified by the BTR prepared for the proposed project. Biological resources evaluated include special-status plant and wildlife species. Other resources, (e.g., wetlands, riparian habitat, movement corridors) are not anticipated to occur within the project site. The potential for special-status species to occur on the project site is based on the results of database research, surveys of the project site, presence of suitable habitat, and the proximity of the project site to previously recorded occurrences.

Biological Field Surveys

Reconnaissance Level Survey

A reconnaissance level survey of the of the BSA was conducted on March 17, 2021 by ESA senior biologists. The survey effort involved pedestrian access over the entire site. Areas where foot access was prevented were surveyed with the use of binoculars. All species of plant and animals observed, including sign (e.g., presence of scat, etc.) as well as any audible detections of wildlife, were noted. Vegetation mapping was conducted. No focused surveys for special-status species or aquatic resource delineations were conducted.

Western Joshua Tree Survey

The project site is located in Kern County, which requires the development of a Joshua Tree Impact Plan or Joshua Tree Preservation Plan for developments that have the potential to impact the WJT. Plans shall include a comprehensive inventory of all WJT within the Project Site, an impact analysis, avoidance and preservation measures, and mitigation measures including relocation. Additionally, Kern County requires a Transportation Plan when relocation of WJT is proposed. The WJT was designated a candidate state threatened species on October 9, 2020 by the CDFW. The CDFW provided a recommended WJT survey protocol via email on March 17, 2022. This protocol required the following data points be collected:

- A comprehensive census inventory of every WJT within 290-feet of the Project Site utilizing 100% visual coverage.
- Estimated visual height and crown diameter.
- Mechanism of reproduction – Sexual (flowering and fruiting) or asexual/clonal (branch sprouts, basal sprouts).
- Number of branching terminal flower panicles.
- Individual tree photographs.
- Individual trees will be assessed for relocation potential.
- Conditions of habitat quality.

A Western Joshua Tree Census, Preservation and Relocation Plan is included within the BTR (see Appendix E1 of this EIR).

Mohave Ground Squirrel Survey

Prior to the survey, a literature review of MGS issues in the project vicinity was conducted. A visual/auditory survey for MGS and a habitat assessment was then carried out on the project site

on March 20, 2022 by a biologist who holds a MOU with CDFW for MGS surveys. Per CDFW direction, the survey was conducted using a 100-trap live-trapping grid established around the existing native vegetation in the western side of the project site and the adjoining areas and 27 wildlife cameras established across the project site outside of the live-trapping grid. The cameras were operated from dawn to dusk for three (3), five (5)-day sessions for a total of 15 days; bait was renewed every other day. Traps were checked at least every four (4) hours until they were closed at the end of each day (or until temperature reached 90°F, in accordance with the guideline).

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in of the *CEQA Guidelines* Appendix G, to determine if a project could potentially have a significant adverse effect on biological resources.

A project would have a significant adverse effect on biological resources if it:

- a. Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the USFWS;
- b. Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or the USFWS;
- c. Has a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Project Impacts

Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Special-Status Plants

Though alkali mariposa lily, recurved larkspur, and pale-yellow layia have at least low potential to occur on the project site and association with habitats and soils that do occur in the project site, no individuals were observed on-site during field surveys conducted during the species blooming periods for the BTR. Thus, individuals are not expected to occur on-site and impacts as a result of construction and operation of the proposed project would be less-than-significant.

To supplement the October 2022 BTR estimates for potentially impacted WJT within the project site and site vicinity, a geospatial impact analysis of WJT located within the site was conducted on August 8, 2023, included as Appendix E2 to this EIR. One hundred fifty two (152) WJT were observed within the project site and the 290-foot buffer around the project site. Of these 152 individuals, 99 WJTs will be removed as a result of construction of the proposed project. An additional three (3) WJTs would be encroached upon as a result of proposed project construction. The remaining 50 WJTs would be preserved in place. Though no impacts are expected to occur to those 50 WJTs preserved in place, impacts to the 99 removed and three (3) encroached upon WJTs are potentially significant (Appendix E2).

In compliance with CDFW, USFWS, and Kern County Development Standards, Mitigation Measures MM-4.4-1 and MM 4.4-2 would require retention of a qualified lead biologist to oversee proposed project activities related to special status species, including the implementation of the Western Joshua Tree Census, Preservation, and Relocation Plan developed for the proposed project (see Appendix E1). As shown in the proposed Precise Development Plan and the Figure 4, *Western Joshua Tree Impacts Map*, in the BTR (see Appendix E1), two (2) receiver mitigation sites totaling 6.3-acres of planting space are proposed at the northwestern corner as well as the northeastern corners of the site abutting Sopp Road. With implementation of Mitigation Measures MM 4.4-1 and 4.4-2, impacts to WJT as a result of proposed project construction and operation would be reduced to less than significant.

Special-Status Wildlife

No special-status wildlife species were observed within the project site during field surveys conducted for the BTR. Three special-status wildlife species (desert tortoise, burrowing owl, and Mohave ground squirrel) have a low potential to occur on the project site based on the presence of suitable habitat. While focused surveys for desert tortoise and burrowing owl are not recommended due to poor quality of habitat, no observation of sign, and limited CNDDDB records within the project vicinity, additional focused surveys were conducted for Mohave ground squirrel. These focused surveys were negative for MGS presence. Further, no sign or potential burrows were observed for desert tortoise or burrowing owl during the focused MGS surveys. Though no individuals of any of the species with at least low potential to occur on-site were observed on-site, should individuals enter and be present on the project site at the time of construction, impacts could be potentially significant. Direct impacts may result in direct mortality of individuals, loss or degradation of habitat (short- or long-term), and introduction or increase in noise during the breeding season. Indirect impacts may occur from adjacent nighttime lighting that may introduce predation, habitat fragmentation/edge effects, introduction of non-natives/predators, and increased human disturbance.

With implementation of Mitigation Measures MM 4.1-5, MM 4.1-6, and MM 4.1-7 (see **Section 4.1 Aesthetics**, for full mitigation measures), impacts as a result of nighttime lighting and glare would be less than significant. Additionally, with implementation of Mitigation Measures MM 4.4-1, MM 4.4-3, MM 4.4-4, MM 4.4-5, and MM 4.4-6, which require qualified biologist oversight, pre-construction surveys, exclusion fencing, and development of a common raven management plan, impacts to special status wildlife species as result of proposed project construction and operation would be less than significant.

Nesting Birds

The proposed project would be constructed within vegetated areas that could provide suitable nesting habitat for birds protected under the MBTA and CFG Code Section 3500. Potential impacts to nesting birds may occur as result of proposed project construction during the general avian nesting season from February 15 to August 31 for songbirds and January 15 to August 31 for raptors. Impacts could include direct mortality to individuals, nests, or eggs, and loss of nesting habitat (i.e., tree removal). Indirect impacts to active nests may occur due to construction noise and vibration. This is a potentially significant impact.

With implementation of Mitigation Measure 4.4-7, which requires temporal work restrictions, pre-construction surveys, and avoidance measures should nesting species be detected, impacts to protected nesting birds would be less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines would occur entirely within existing utility easements and corridors that have been disturbed or cleared to accommodate existing infrastructure. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the on-site accessory solar array. Upon completion and activation of the reconducted route, these off-site facilities would be fully maintained by SCE. As such, SCE would comply with all applicable State and federal laws and regulations during construction and operation for improvement areas within the County Jurisdiction, and implement the appropriate adopted minimization measures as identified in the EAFB Environmental Assessment pertaining to on-base utility corridors, including those laws, regulations and construction protocols related to effects on habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS. Impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.1-5, MM 4.1-6, and MM 4.1-7 (see **Section 4.1, Aesthetics**, for full mitigation measures) and:

- MM 4.4-1:** Prior to the issuance of grading or building permits, and prior to decommissioning, the project operator shall retain a Lead Biologist(s) who meets the qualifications of an Authorized Biologist as defined by the California Department of Fish and Wildlife to oversee compliance with protection measures for all listed and other special-status species that may be affected by the construction, operation, and

decommissioning of the project. The contact information for the Lead Biologist(s) shall be provided in writing to the Kern County Planning and Natural Resources Department.

The following measures pertain to the Lead Biologist(s):

- a. The Lead Biologist(s), or their designee, shall be on the project site during all construction activities which include, but are not limited to, installation of perimeter fencing, clearing of vegetation, grading activities, site buildout, and decommissioning.
- b. The Lead Biologist(s) or their designee shall have the right to halt all activities that are in violation of the special-status species protection measures, as well as any regulatory permits from the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife, if applicable. Work shall proceed only after hazards to special-status species are removed and the species is no longer at risk.

MM 4.4-2: Prior to initial ground disturbance, a qualified biologist shall prepare a Joshua Tree Preservation Plan. The Joshua Tree Preservation Plan shall be developed in coordination with the California Department of Fish and Wildlife and shall apply to Joshua trees within the project footprint that cannot be avoided. As part of the Joshua Tree Preservation Plan, all western Joshua trees shall be individually identified and evaluated to determine if preservation or transplantation is appropriate.

The Joshua Tree Preservation Plan shall show which western Joshua trees shall be avoided and protected, and those western Joshua trees shall be protected from construction activities by fencing, flagging, or stakes establishing a buffer to protect the dripline plus no less than 5 feet from the dripline. The project proponent/operator shall maintain and/or replace those temporary protection measures as needed during construction. After construction is complete, the project proponent/operator may remove those temporary protective materials after consulting and receiving written approval from a qualified biologist.

The project proponent/operator shall obtain a Western Joshua Tree Conservation Act Incidental Take Permit if required for those that cannot be avoided or preserved on the project site, and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any incidental take permit issued for the project. All trees removed may be salvaged to the extent feasible and as allowed by issued permits.

MM 4.4-3: Prior to the start of construction activities, the project proponent shall conduct pre-construction wildlife surveys, including for special-status wildlife species such as burrowing owl, desert tortoise, and Mohave ground squirrel, within 100 feet of construction activities. The pre-construction surveys shall be conducted 7 days prior to the start of construction activities. If any of these species are present or determined to be within 100 feet of construction areas, construction best management practices and Worker Environmental Awareness Program training shall be implemented to avoid potential impacts to these species. Best management

practices shall include, but not be limited to, exclusion fencing (see MM 4.4-5), work areas using temporary silt fencing, and cleaning up all trash and debris daily. Additional avoidance measures shall include establishing a buffer around active nests or burrows and on-site monitoring if individuals of a special-status wildlife species is observed. If present, California Department of Fish and Wildlife and United States Fish and Wildlife Service will be contacted for the potential to relocate listed species to suitable offsite habitat. Any relocation of wildlife will be completed by an appropriately permitted wildlife biologist.

Worker Environmental Awareness Program training will be prepared by a qualified biologist to describe species that could be impacted and summarize the construction best management practices to be implemented. Construction personnel will be instructed to not directly harm any wildlife species on-site by halting activities until the species can move to off-site areas or contact a qualified biologist to move non-listed wildlife species out of harm's way.

MM 4.4-4: A project Lead Biologist shall be on-site during all initial ground-disturbing activities to survey and monitor for potential burrowing owl habitat. A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-disturbance surveys of the permanent and temporary impact areas, plus an ISO-meter (approximately 500-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to initial ground-disturbing activities. The survey methodology will be consistent with the methods outlined in the *Staff Report on Burrowing Owl Mitigation* and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. Copies of the survey results shall be submitted to the California Department of Fish and Wildlife and Kern County Planning and Natural Resources Department.

- a. If burrowing owls are detected within the project site, no ground-disturbing activities shall be permitted within the distances listed below in the table titled "Burrowing Owl Burrow Buffers," unless otherwise authorized by the California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

Burrowing Owl Burrow Buffers

Location	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting sites	April 1 – August 15	200 meters	500 meters	500 meters
Nesting sites	August 16 – October 15	200 meters	200 meters	500 meters
Any occupied burrow	October 16 – March 31	50 meters	100 meters	500 meters

California Department of Fish and Game 2012

- b. If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 *Staff Report on Burrowing Owl Mitigation*. Burrowing owls shall not be excluded from burrows unless or until the following circumstances occur:
 1. Occupied burrows shall not be disturbed during the nesting season unless a qualified biologist meeting the Biologist Qualifications set forth in the

2012 *Staff Report on Burrowing Owl Mitigation* verifies through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

2. A Burrowing Owl Exclusion Plan shall be developed and approved by the applicable local California Department of Fish and Wildlife office and submitted to the Kern County Planning and Natural Resources Department. The plan shall include, at a minimum:
 - A. Confirmation by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;
 - B. The type of scope and appropriate timing of scoping to avoid impacts;
 - C. Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors shall be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and cannot escape [i.e., look for sign immediately inside the door]);
 - D. How the burrow(s) will be excavated, including excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow);
 - E. Removal of other potential owl burrow surrogates or refugia on-site;
 - F. Photographs of the excavation and closure of the burrow to demonstrate success and sufficiency;
 - G. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take; and
 - H. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.
3. Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below.
 - A. Temporary exclusion is mitigated in accordance with the measures described below.
 - B. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the

year have fledged if the exclusion will occur immediately after the end of the breeding season.

- C. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band resight).
 - D. In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow. Forty-eight hours after the installation of the one-way doors, the doors can be removed, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation.
- c. During ground-disturbing activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, the Kern County Planning and Natural Resources Department, and other applicable resource agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project.
 - d. Should burrowing owls be found within the project site, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented on-site or off-site in accordance with the *Staff Report on Burrowing Owl Mitigation* guidance and in consultation with the California Department of Fish and Wildlife. At a minimum, the following recommendations shall be implemented:
 - 1. Restore temporarily disturbed habitat, if feasible, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent shall implement “2” below.
 - 2. Mitigate permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced based on a site-specific analysis and shall include permanent conservation of similar vegetation communities (grassland, scrub lands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals. Conservation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls.
 - 3. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area of a

California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project proponent/operator may purchase available burrowing owl conservation bank credits.

4. Develop and implement a mitigation land management plan in accordance with the Staff Report on Burrowing Owl Mitigation guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls.
5. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism, such as an endowment.
6. Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured; are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring, and reporting plans; and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.
7. Mitigation lands shall be on, adjacent to, or in proximity to the impact site, where feasible, and where habitat is sufficient to support burrowing owls.

MM 4.4-5: Prior to issuance of grading or building permits, the project site shall be fenced with a temporary exclusion fence to prevent any special-status species that may be using habitat adjacent to the site from entering during construction phase. This exclusion fencing shall be constructed of metal flashing, plastic sheeting, or other materials that will prohibit desert tortoise, Mohave ground squirrel, and other special-status wildlife species from entering the project site. The fencing shall be buried a minimum of six inches below grade and extend a minimum of 30 inches above grade. The fencing shall be inspected by a qualified biologist on a daily basis during construction activities to ensure fence integrity. Any needed repairs to the fence shall be performed on the day of their discovery. Fencing shall be installed and maintained during all phases of construction and decommissioning but is only required where construction will occur within 200 feet of adjacent habitat suitable for supporting special-status reptiles, rodents, and mammals. Exclusion fencing shall be removed once construction or decommissioning activities are complete.

- a. If any special-status species are found on the site during project construction, operation shall cease in the vicinity of the animal and the animal shall be passively restricted to the area encompassing its observed position on the construction site and its point of entry shall be determined, if possible. The Lead Biologist shall install a temporary exclusion fence around this area. Concurrent with this effort, United States Fish and Wildlife Service and California Department of Fish and Wildlife shall be consulted regarding any additional avoidance, minimization, or mitigation measures that may be necessary. Once the animal is observed leaving the exclusion area, work in the area can resume. A report shall be prepared by the Lead Biologist to document the activities of the animal within the site; all fence construction, modification,

and repair efforts; and movements of the animal once outside the exclusion fence. This report shall be submitted to wildlife and resource agency representatives and the Kern County Planning and Natural Resources Department.

- b. The Lead Biologist or biological monitor will monitor ground-disturbance activities. Work shall only occur during daylight hours. Prior to conducting brushing or grading activities inside the temporarily fenced area, a Lead Biologist or biological monitor under the supervision of a Lead Biologist shall survey the area immediately prior to conducting these activities to ensure that no special-status animals are present.
- c. To prevent inadvertent entrapment of wildlife during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species are trapped, the United States Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted, as appropriate, for appropriate action such as relocation outside the project construction area.
- d. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of four inches or more shall be thoroughly inspected for special-status wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status animal is discovered inside or beneath a pipe, that section of pipe shall not be moved until the appropriate resource agency has been consulted and the animal is safely located out of harm's way. If necessary, under the direct supervision of the Lead Biologist, the pipe may be moved once to remove it from the path of construction activity until the animal has escaped.
- e. Intentional killing or collection of either plant or wildlife species, including listed species, in the project site and surrounding areas shall be prohibited, unless authorized by approved permit or entitlement. The Lead Biologist, wildlife and resource agency representatives and Kern County Planning and Natural Resources Department shall be notified of any such non-permitted occurrences within 24 hours.
- f. Construction monitoring shall be conducted by either the Lead Biologist or by biological monitors under the Lead Biologist's supervision. The biological monitors shall have experience in monitoring for special-status wildlife.
- g. Initial ground disturbance activities should commence within the interior of the Project, as practicable, to allow for the wildlife escape to outside the active construction area. Working from the center of the project site out to the exclusion fenced areas.

- h. During construction, daily monitoring reports summarizing daily activities shall be prepared by the monitoring biologists. The Lead Biologist shall prepare a summary monitoring report for the wildlife and resource agencies and Kern County Planning and Natural Resources Department on a monthly basis, documenting the effectiveness and practicality of the protection measures that are in place and making recommendations for modifying the measures to enhance species protection, as needed. The report would also provide information on the overall biological resources-related activities conducted, including the worker awareness training, clearance/pre-activity surveys, monitoring activities, and any observed special-status species, including injuries and fatalities.

MM 4.4-6: The project operator shall develop a site-specific Common Raven Management Plan in accordance with United States Fish and Wildlife Service guidelines and shall implement management measures for ravens in the project site. These measures may include but are not limited to designing structures to eliminate perches, waste management, road kill management, management of ponded water during construction and operations, and nest removal on structures within the project site.

MM 4.4-7: If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors 30 days prior to the start of construction, and then weekly, within 500-feet of the construction limits to determine and map the location and extent of breeding birds that could be affected by the proposed project. Nesting bird surveys shall be conducted at appropriate nesting times. Weekly surveys will take place with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.” If proposed project activities are delayed or suspended for more than 7 days after the last survey, surveys shall be repeated before work can resume.

If an active nest is located, clearing and construction within appropriate buffers as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Due to the disturbed nature of the project site, 300-feet for raptors and 150-feet for passerine birds could suffice for nesting bird buffers however it will be at the discretion of the qualified biologist. The buffer zone from the nest shall be established in the field with flagging and stakes. The qualified biologist shall retain the ability to increase buffers if needed to protect the nesting birds. Temporary fencing and signage shall be maintained for the duration of the proposed project. Construction personnel shall be instructed on the sensitivity of the area and be advised not to work, trespass, or engage in activities that would disturb nesting birds near or inside the buffer. On-site construction monitoring may also be required to ensure that no direct or indirect impacts occur to the active nest. Project activities may encroach into the buffer only at the discretion of the qualified biologist.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.1-5, MM 4.1-6, and MM 4.1-7 (see **Section 4.1, *Aesthetics***, for full mitigation measure) and Mitigation Measures MM 4.4-1 through MM 4.4-7, impacts would be less than significant.

Impact 4.4-2: The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.

The project site does not support any riparian or other sensitive natural communities, nor does it overlap with any designated critical habitat. The project would have no impacts to these resources and no measures are warranted. Similarly, the previously described off-site improvement work required to re-pole and re-conductor approximately 13 miles of existing SCE transmission lines would occur entirely within existing and previously disturbed utility easements and corridors that currently do not support any riparian or other sensitive natural communities. Impacts in this regard would not occur.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

There would be no impact and no mitigation is required.

Impact 4.4-3: The project would have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Based on observations during the field surveys for the BTR and a review of aerial photography and topographic maps, there are no natural drainage features or potentially jurisdictional resources located on or immediately adjacent to the project site. Additionally, due to unsuitable soils and lack of surface hydrology, no wetlands occur or have the potential to occur within the project site. As no wetland resources exist or have the potential to exist on-site, construction and operation of the proposed project would not result in any impacts to State or federally protected waters or wetlands. Similarly, the previously described off-site improvement work required to re-pole and re-conductor approximately 13 miles of existing SCE transmission lines would occur entirely within existing and previously disturbed utility easements and corridors that currently do not within protected wetlands. Impacts in this regard would not occur.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

There would be no impact and no mitigation is required.

Impact 4.4-4: The project would interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Locally, the undeveloped project site and adjacent undeveloped areas located south and north of the site could allow for the movement of terrestrial and avian wildlife species. As there are no aquatic features on or adjacent to the project site, aquatic species would not utilize the project site for movement. However, the project site is physically confined by EAB security fencing and the completed commercial-scale solar facility to the east, railroad tracks and Sierra Highway to the west, and Sopp Road to the north. Further, the project site does not serve as a lone corridor between fragmented portions of open space. Thus, construction and operation of the proposed project would not substantially interfere with the movement of any wildlife species. There would be no impact.

The predominant established movement paths in the region are the Tehachapi Connection and the Sierra Madre-Castaic Connection. These primary linkages are located at least 12 miles to the northwest and at least 25 miles to the southwest of the project site, respectively. Construction and operation of the proposed project would not impact these established wildlife corridors as the project site is not located within or adjacent to the linkages. There would be no impact.

As discussed in **Impact 4.4-1** above, construction of the proposed project would require the removal of existing vegetation and introduce noise, dust, and human activity that could impacts nesting avian species. Potential impacts to nesting avian species would be less-than-significant with implementation of Mitigation Measure MM 4.4-7 that requires pre-construction surveys should work occur during the nesting season and nest avoidance measures should any nests be detected. With implementation of MM 4.4-7, impacts to wildlife nursery sites would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE.

Currently, it is noted that these existing SCE transmission corridors do not intersect with either the Tehachapi Connection or the Sierra Madre-Castaic Connection. Nonetheless, SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to potential interference with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. During construction and maintenance of these upgraded facilities, SCE would implement any existing best management practices and adopted minimization measures. As such, impacts would be less than significant in this regard.

Mitigation Measures

Implement Mitigation Measure MM 4.4-7.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.4-7, impacts would be less than significant.

Impact 4.4-5: The project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

As currently designed, the proposed project is considered consistent with the Land Use, Open Space, and Conservation Element of the Kern County General Plan. As described above, the project would implement mitigation measures to reduce potential project-related impacts to sensitive biological resources. With the implementation of the mitigation measures, identified above, impacts to environment from a violation of a local policies or ordinances would be less than significant.

Kern County requires the development of a Joshua Tree Impact Plan or Joshua Tree Preservation Plan for developments that have the potential to impact the WJT. Plans shall include a comprehensive inventory of all WJT within the Project Site, an impact analysis, avoidance and preservation measures, and mitigation measures including relocation. Additionally, Kern County requires a Transportation Plan when relocation of WJT is proposed. With implementation of MM 4.4-2, which requires the preparation of such plans, the proposed project would comply with the local policy for protection of WJT. Thus, the proposed project would have a less-than-significant impact related to compliance with local policies or ordinances protecting biological resources.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. Given the already disturbed state of these existing rights-of-way and utility corridors, the temporary ground disturbance to occur as part of constructing and installing new poles and transmission lines is not expected to conflict with any local policies or ordinances protecting biological resources, including tree preservation policies or ordinances. Nonetheless, SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to such policies and ordinances pertaining to biological resources. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.4-2.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.4-2 impacts would be less than significant.

Impact 4.4-6: The project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.

The proposed project is not located within the boundaries of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Thus, no impact would occur from proposed project construction or operation. Similarly, the previously described off-site improvement work required to re-pole and re-conductor approximately 13 miles of existing SCE transmission lines would occur entirely within existing and previously disturbed utility easements and corridors that currently do not fall within the boundaries of any adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or state habitat conservation plan. No impacts would not occur in this regard.

Mitigation Measures

No mitigation would be required.

Level of Significance after Mitigation

There would be no impact and no mitigation is required.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative impacts for a project would be significant if the incremental effects of the individual project are considerable when combined with the effects of past projects, other current projects, and probable future projects. As described above, the project-specific impacts of the project would be less than significant with implementation of Mitigation Measures MM4.1-5, MM 4.1-6, and MM 4.1-7 from Section 4.1 *Aesthetics* and MM 4.4-1 through MM 4.4-7.

As urbanization pressures increase within Kern County, impacts to biological resources at a cumulative level within the region are anticipated. As described in **Table 3-3, Cumulative Projects List**, in Chapter 3, *Project Description*, of this EIR, other projects that result in the conversion of undeveloped land to development and the associated habitat loss are all proposed within the same region as the proposed project. In general, bioregions are defined through physical and environmental features, including watershed boundaries and soil and terrain characteristics. Areas to the north and west of the Tehachapi Mountains, and to the south of the San Gabriel Mountains, are within a different bioregion and are separated from the project site by the natural geography that these ranges present. State Route 14, at the eastern end of the western Antelope Valley, also acts as a barrier to wildlife movement.

As described above, there are several special-status species that could occupy the project site and vicinity including burrowing owl, desert tortoise, MGS, raptors and migratory birds, alkali mariposa lily, recurved larkspur, pale-yellow layia, and WJT. Implementation of the project, along with related projects, has the potential to impact these plant and wildlife species. The project site contains habitat that can support plants, insects, rodents, and small birds that provide a prey base for raptors and terrestrial wildlife. In addition, based on the literature review and database search completed for the project, the region is known to support a diversity of special-status species, most of which are not expected to utilize the project site on a transient basis, if at all.

Given the number of present and reasonably foreseeable future development projects in the Antelope Valley, the proposed project, when combined with other projects, would contribute to cumulative loss of habitat for special-status species. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7 would reduce impacts to habitat to less than significant for the proposed project. However, the proposed project, when combined with other related development projects proposed throughout the County, would cumulatively impact habitat for special-status species. Thus, cumulative impacts would be significant and unavoidable.

Off-site Improvements

As discussed previously, the re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines involves installation of new poles and circuits that are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. Although this off-site work is a component of the overall proposed project, and would be constructed concurrently with the overall proposed project, upon completion and activation of the reconductored route, these off-site facilities would continue being fully maintained by SCE. Construction of new transmission equipment would involve temporary ground disturbance around the new structure locations, and there exists potential for the use of these areas for these project elements would not exacerbate the potential result in a cumulative impact on biological resources. The upgraded transmission structures and lines are expected to use existing pole sites, new poles, and/or below ground installations, and lines would be placed within areas that are not expected to interfere or intersect with: wildlife corridors, wetlands or riparian habitats, migratory patterns, local policies or ordinances protecting biological resources. Nonetheless, SCE would comply with all applicable State and federal laws and regulations during construction and operation for improvement areas within the County Jurisdiction, and implement the appropriate adopted minimization measures as identified in the EAFB Environmental Assessment pertaining to on-base utility corridors. These necessary improvements are small parts of the proposed project, and when considered with other past, present and future projects, these improvements would not be cumulatively considerable and would be less than significant with implementation of the mitigation measures listed below.

Mitigation Measures

Mitigation Measures MM4.1-5, MM 4.1-6, and MM 4.1-7 from Section 4.1 *Aesthetics* and MM 4.4 1 through MM 4.4 7.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM4.1-5, MM 4.1-6, and MM 4.1-7 from Section 4.1 *Aesthetics* and MM 4.4 1 through MM 4.4 7, cumulative impacts would be significant and unavoidable.

Section 4.5

Cultural Resources

4.5.1 Introduction

This section of the EIR provides contextual background information on cultural resources in the project site, including the site's prehistoric, ethnographic, and historical settings of the region. This section also summarizes the results of a cultural resources assessment, including background research, cultural resources survey of the project site, and significance evaluation of identified resources. The project's potential impacts on tribal cultural resources, are addressed in **Section 4.18, Tribal Cultural Resources**.

This section is based on the *Cultural Resources Assessment Report* prepared by Environmental Science Associates (ESA) for the Mojave Micro Mill project which is included as Appendix F to this EIR. Additionally, see the *Geotechnical Investigation* prepared for the project for information related to geologic setting (Appendix H). Native American consultation was conducted by the County for purposes of compliance with CEQA requirements pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18. The *Cultural Resources Assessment Report* (ESA, 2022) details the results of a cultural resources records search and field survey for the project. The report was conducted in compliance with California Public Resources Code (PRC) Section 5024.1 and CEQA to identify archaeological, historic built architectural, and other cultural resources in the project area. Due to the confidential nature of the location of cultural resources, information regarding locations of cultural resources has been removed from these reports and is not included in the appendix.

Cultural Resource Terminology

For the purposes of CEQA, "cultural resources" generally refer to prehistoric and historical archaeological sites, isolates, and the built environment. Cultural resources can also include areas determined to be important to Native Americans. Below are definitions of key cultural resources terms used in this section.

- **Alluvium:** a fine-grained fertile soil consisting of mud, silt, and sand deposited by flowing water on flood plains, in river beds, and in estuaries.
- **Archaeological site:** A site is defined as the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains. Archaeological remains usually take the form of artifacts (e.g., fragments of tools, vestiges of utilitarian, or nonutilitarian objects), features (e.g., remnants of walls, cooking hearths, or midden deposits), and ecological evidence (e.g., pollen remaining from plants that were in the area when the activities occurred). Prehistoric archaeological sites generally represent the material remains of Native American groups and their activities dating to the period before European contact. In some cases, prehistoric sites may contain evidence of trade contact with Europeans. Ethnohistoric archaeological sites are defined as Native American settlements occupied after the arrival of European settlers in California. Historic archaeological sites reflect activities during the Historic period.

- **Artifact:** An object that has been made, modified, or used by a human being.
- **Cultural resource:** Cultural resources are expressions of human culture and history in the physical environment, and may include archaeological sites, buildings, structures, objects, districts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains, but also may include areas where significant human events occurred, even though evidence of the events no longer remains. Cultural resources also include places that are considered to be of traditional cultural or religious importance to social or cultural groups.
- **Ethnographic:** Relating to the study of human cultures. “Ethnographic resources” represent the heritage resource of a particular ethnic or cultural group, such as Native Americans or African, European, Latino, or Asian immigrants. They may include traditional resource-collecting areas, ceremonial sites, value-imbuéd landscape features, cemeteries, shrines, or ethnic neighborhoods and structures.
- **Historic period:** The period that begins with the arrival of the first nonnative population and thus varies by area. In 1772, Commander Don Pedro Fages was the first European to enter Kern County, initiating the historic period in the project study area.
- **Historical resource:** This term is used for the purposes of CEQA and is defined in the CEQA *Guidelines* (Section 15064.5) as: (1) a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency’s determination is supported by substantial evidence in light of the whole record.
- **Holocene:** Of, denoting, or formed in the second and most recent epoch of the Quaternary period, which began 10,000 years ago at the end of the Pleistocene.
- **Isolate:** An isolated artifact or small group of artifacts that appear to reflect a single event or activity. Because isolates may lack identifiable context and may not have the potential to add important information about a region, culture, or person, they are generally not considered under CEQA to be historical or unique archaeological resources (PRC Section 21083.2 and CEQA *Guidelines* Section 15064.5).
- **Lithic:** Of or pertaining to stone. Specifically, in archaeology lithic artifacts are chipped or flaked stone tools, and the stone debris resulting from their manufacture.
- **Pleistocene (Ice Age):** An epoch in the Quaternary period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciation, during which continental glaciers covered nearly one fifth of the earth’s land.
- **Prehistoric period:** The era prior to 1772. The later part of the prehistoric period is also referred to as the protohistoric period in some areas, which marks a transitional period during which native populations began to be influenced by European presence resulting in gradual changes to their lifeways.

- **Quaternary age:** The most recent of the three periods of the Cenozoic Era in the geologic time scale of the ICS. It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: The Pleistocene and the Holocene Epochs.
- **Stratigraphy:** The natural and cultural layers of soil that make up an archaeological deposit, and the order in which they were deposited relative to other layers.
- **Tribal cultural resource:** These are defined in AB 52 as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources (PRC § 21074 (a)(1)).
- **Unique archaeological resource:** This term is used for the purposes of CEQA and is defined in PRC Section 21083.2(g) as an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it either contains information needed to answer important scientific research questions and that there is demonstrable public interest in that information; has a special and particular quality such as being the oldest of its type or the best available example of its type; or, is directly associated with a scientifically recognized important prehistoric or historic event or person.

4.5.2 Environmental Setting

The 174-acre project area is located in the Mojave Desert in the southwest portion of Kern County, along Highway 14 equidistant between the communities of Mojave to the north and Rosamond to the south. The project includes APNs 431-010-02 and 431-030-02 and is bounded by Sopp Road to the north, a segment of the Union Pacific Railroad to the west, and Edwards Air Force Base to the east and undeveloped land to the south. Specifically, the project is located in Section 27 of Township 10 North, Range 12 West of the Soledad Mountain, CA 7.5-minute USGS topographic quadrangle.

The project area lies within the Western Mojave Desert, specifically the Antelope Valley. The Antelope Valley occurs within the Mojave Desert geomorphic province. The Mojave Desert province is characterized primarily by a broad interior region of isolated mountain ranges separated by expanses of desert plains. The Mojave Desert province is wedged between the Garlock Fault and the San Andreas Fault, which have uplifted the surrounding mountains relatively rapidly, isolating the Mojave Desert from the Pacific Coast and creating the interior drainage basins of the western Mojave Desert, such as the Antelope Valley. The west end of the Antelope Valley is defined by the Tehachapi and San Gabriel Mountains, forming the v-shaped basin of the western Mojave Desert.

The Antelope Valley floor is mantled in thick deposits of Quaternary alluvial and lacustral (lakebed) sediments that have filled the West Antelope, East Antelope and Kramer structural basins. The alluvial sediments are subdivided into two units: older (Pleistocene) Quaternary sediments, and younger (Holocene) alluvial surface deposits. These alluvial sediments are derived from nearby granitic mountains and have been deposited on the valley floor over the course of thousands of years.

Prehistoric Setting

The prehistory of the Mojave Desert is generally described in terms of cultural “complexes.” A complex is a specific archaeological manifestation of a general mode of life, characterized by distinct technologies, artifact types, economic systems, trade and burial practices, and other aspects of culture. Complexes are typically associated with particular chronological periods. The prehistory of the Mojave is generally divided into the following time-periods/complexes: Paleo-Indian, Lake Mojave Complex, Pinto Complex, Gypsum Complex, Rose Springs Complex, and Late Prehistoric (ESA, 2023).

Paleo-Indian (10,000-8,000 B.C.)

The Paleo-Indian period is represented in the Mojave primarily by large, fluted Clovis projectile points. This limited evidence suggests that early human occupants of the Mojave probably lived in small, mobile groups in temporary camps in the vicinity of permanent water sources. In the vicinity of the project area, a fragment of a fluted Clovis point was recorded on the southern slopes of the Tehachapi Mountains. In addition, the earliest occupation of CA-KER-2821/H, also known as the Bean Springs complex, an extensive archaeological site near Willow Springs, has been radiocarbon dated to 9,020-9,430 RCYBP (radiocarbon years before present) (Appendix F).

Lake Mojave Complex (8000–6000 B.C.)

In terms of material culture, the Lake Mojave Complex is typified by stone tools such as stemmed Lake Mojave and Silver Lake projectile points, bifaces, steep-edged unifaces, crescents, and some ground stone implements (Appendix F). Lake Mojave groups were organized in relatively small, mobile groups and practiced a forager-like subsistence strategy. Some trade with coastal groups was practiced, as evidenced by the presence of shell beads. Lake Mojave sites have been found primarily around Fort Irwin, Lake Mojave, China Lake, Rosamond Lake, and Twentynine Palms.

The Pinto Complex (6000–3000 B.C.)

Archaeological deposits ascribed to the Pinto Complex suggest that Pinto settlement patterns consisted of seasonal occupation by small, semi-sedentary groups that were dependent upon a combination of big and small-game hunting and collection strategies, which could include the exploitation of resources associated with streams or other water sources. Typically, sites of this period, which are far more geographically widespread than the Lake Mojave complex sites, are found along lakeshores and streams or springs, some of which are now dry. Material culture representative of this period in California prehistory includes roughly formed projectile points, “heavy-keeled” scrapers, choppers, and a greater prevalence of flat millingsstones and manos, indicating more intensive use and processing of plant resources. At the end of the middle Holocene, around 3,000 B.C., environmental conditions became much drier and hotter, and few sites in the Mojave date to the period between 3000 and 2000 B.C., suggesting that the area’s population may have decreased during this period of unfavorable climate (Appendix F).

Gypsum Complex (c. 2000 B.C.–A.D. 200)

Many archaeological sites of this period are small and surficial, probably indicative of temporary occupation. It is during this time, however, that more archaeological evidence suggestive of inter-tribal trade appears, particularly between the desert and the coast. At a site at Lovejoy Springs (CA-LAN-192), which has a prominent Gypsum component, a group inhumation with at least nine individuals was uncovered, including a child buried with more than 3,000 Olivella shell beads from the southern Californian coast. The artifact assemblage associated with this period also includes an increased number of millingstones and manos, and it is believed that it was during this period that the pestle and mortar were introduced. These technological developments may point to the increased consumption of seeds and mesquite. Other artifacts associated with the Gypsum Complex include Humboldt Concave Base, Gypsum Cave, Elko Eared, and Elko Corner-notched projectile points (Appendix F).

Rose Springs Complex (c. A.D. 200–1200)

The general cultural pattern for this period is a continuation of that of the preceding Gypsum Complex. Rose Springs archaeological sites are more numerous than sites dating to previous periods and contain more well-developed middens, indicating an increase in population and a more permanent settlement pattern. In addition, the archaeological record attests to established trade routes between desert and coastal populations, evidenced by shell beads and steatite, as well as an introduction of Anasazi influence from the eastern Great Plains as seen in the appearance of turquoise and pottery. Material culture related to this complex includes obsidian artifacts, Rose Spring and Eastgate projectile points, millingstones, manos, mortars and pestles, slate pendants, and incised stones. These projectile points, which are smaller than those in preceding periods, are thought to reflect the adoption of the bow and arrow.

The prevalent use of obsidian is a defining feature of the Rose Springs period. Obsidian from the Coso volcanic field, approximately 70 miles north of Mojave, was imported in near-finished form for use in making lithic tools. The importing of obsidian seems to have dropped sharply at the end of the Rose Springs period, possibly associated with the Medieval Climatic Anomaly, a period of climate change between A.D. 800 to 1350, and the concurrent migration of Numic-speaking populations out of southeastern California and into the Great Basin. Several periods of drought affected the Mojave in the Rose Springs period, associated with the Medieval Climatic Anomaly, and subsequent Late Prehistoric Period. Drops in the lake levels at Mono Lake attest to dry periods in A.D. 900–1100 and A.D. 1200–1350 (Appendix F).

Several major Rose Springs villages or site complexes exist in the vicinity of the project area. A complex of 15 sites exists near Rosamond Lake, many of which are characterized solely by evidence of lithic reduction. Some of these sites have been dated to the Rose Springs Complex. A number of sites have been identified along the shores of Koehn Lake, including one site that retains evidence of a pit-house (Appendix F).

The Late Prehistoric Period (A.D. 1200–European Contact)

Following periods of drought during the Rose Springs Period, wetter conditions returned between A.D. 1350 and 1600, associated with a climatic event known as the Little Ice Age. By the Late Prehistoric Period, an extensive network of established trade routes wound their way through the

desert, routing goods to populations throughout the Mojave region. It is also believed that these trade routes encouraged or were the motivating factors for the development of an “increasingly complex socioeconomic and sociopolitical organization” among Protohistoric peoples in southern California. Housepit village sites are prevalent during this period, as are the presence of Desert Side-notched and Cottonwood projectile points, brownware and buffware ceramics, steatite shaft straighteners, painted millings, and, to a lesser degree, coastal shell beads. Beginning around A.D. 1300, however, a decline in trade occurred and well-established village sites were abandoned (Appendix F).

Ethnographic Setting

At the time of European contact, numerous groups occupied the area in and surrounding the Antelope Valley. The southeastern portion of the valley, around the Mojave River, was inhabited by the Serrano and Vanyume. The territory of the Tataviam centered on the southwestern extent of the Antelope Valley, the Santa Clara River drainage, and possibly the Sierra Pelonas and the Palmdale area. The Kitanemuk inhabited the southern Tehachapi Mountains and the northern and central portion of the Antelope Valley. To the north, the Kawaiisu occupied the southern Sierra Nevada and the northern Tehachapi Mountains, and may have also inhabited part of the western Mojave Desert (Appendix F). Finally, during the historic period, there is some evidence for the occupation of the Western Mojave by the Chemehuevi. The Serrano and Kitanemuk, the two groups that have the most well-documented association with the project vicinity, are described in more detail below.

Serrano

The Serrano occupied territories that ranged from low or moderately low desert to the mountain regions of the Transverse and Peninsular ranges. Serrano territory was bordered to the west roughly by the Cajon Pass in the San Bernardino Mountains, to the east by Twenty-Nine Palms and to the south by Yucaipa Valley. Their territory extended north of the San Bernardino Mountains into the desert near Victorville, along the Mojave River. According to Kroeber (1925) Serrano territory may have extended at least 20 miles to the west of Mount San Antonio.

The Serrano were organized into clans, with the clan being the largest autonomous political entity. They lived in small villages where extended families lived in circular, dome-shaped structures (called *Kiič*) made of willow frames covered with tule thatching. Each clan had one or more principal villages in addition to numerous smaller villages associated with the principal village. Villages located at higher elevations were placed near canyons that received substantial precipitation or were adjacent to streams and springs. Villages situated at lower elevations were also located close to springs or in proximity to the termini of alluvial fans where the high water table provided abundant mesquite and shallow wells could be dug. The Serrano subsistence strategy relied upon hunting and gathering, and occasionally fishing. Villages divided into smaller, mobile gathering groups during certain seasons to gather seasonally available foods. The division of labor was split between women gathering and men hunting and fishing. Mountain sheep, deer, rabbits, acorns, grass seeds, piñon nuts, bulbs, yucca roots, cacti fruit, berries, and mesquite were some of the more common resources utilized. Despite early European and Spanish contact in 1771, the

Serrano remained relatively autonomous until the period between 1819 and 1834 when most of the western Serrano were removed and placed into missions (Appendix F).

Kitanemuk

The Kitanemuk occupied a territory that extended from the Tehachapi Mountains into the western end of the Antelope Valley. While most of their recorded villages were located in the Tehachapi Mountains, their settlement pattern is poorly understood. Some scholars posit that the Antelope Valley's desert floor was used only on a seasonal basis, while others point to archaeological evidence of permanent occupation of the desert floor during the Late Prehistoric Period. While the Kitanemuk maintained friendly relations with their other neighbors such as the Chumash, historic evidence indicates that their relationship with the Tataviam was generally hostile (Appendix F). Like other Takic-speaking groups, such as the Serrano, Kitanemuk society had a patrilineal organization. Families grouped together into villages, which were headed by a team of "administrative elite" composed of a chief, messengers, and shamans. Kitanemuk subsistence was similar to their neighbors the Tataviam. Primary vegetable food sources included acorns, juniper berries, seeds, and yucca buds. Small game such as antelope and deer supplemented these foods.

Historic Setting

The first Europeans known to have visited the Mojave were Pedro Fages in 1772, and Juan Bautista de Anza and Father Francisco Garcés in 1774. In 1775, Father Garcés separated from de Anza and crossed the Mojave along the ancient Mojave Trail from Needles west to the San Gabriel Mission. Garcés may have crossed the playa of Rogers Dry Lake in the Antelope Valley in 1776.

The Spanish missions that dotted the California coast never spread inland to the Mojave, and the desert remained relatively unexplored and unsettled by Europeans for much of the next century. The Romero-Estudillo Expedition of 1823-24 was an attempt by the Spanish to establish a secure route between the California Coast and Tucson; however, despite two attempts, the expedition never managed to make it as far as the Colorado River (Appendix F).

The first recorded American visitors to the Mojave were the party of Jedediah Smith, who crossed the Mojave along the Mojave Trail in 1826. Ewing Young and Kit Carson followed his route in the 1820s and 1830s. Kit Carson, who had participated in Jedediah Smith's 1828 expedition, later was the guide for John C. Fremont in 1844. This expedition was one of the first to document the Antelope Valley in detail.

In 1862, the Homestead Act was passed, allowing settlement of public lands and requiring only residence, improvement, and cultivation of the land. Although settlement had been encouraged by the Homestead Act of 1862 and the Desert Land Act of 1877, which permitted disposal of 640-acre tracts of arid public lands at \$1.25 per acre to homesteaders if they proved reclamation of the land by irrigation, the Antelope Valley did not see much growth until after the coming of the railroad. In 1876, the Southern Pacific Railroad line (now the Union Pacific Railroad) that ran south from the San Joaquin Valley was connected to the line from Los Angeles, running through the Fremont and Antelope Valleys. Stops along this line were located at Cantil and Cinco, north of the project area, and Mojave, south of the project area. In 1884, this line joined the Atchison, Topeka, & Santa Fe line that ran east through Needles (Appendix F).

In the 1880s, a number of groups established colonies in the Antelope Valley, including the Quakers, German Lutherans, and Utopian Socialists. However, fluctuating water levels and years of severe drought brought a quick end to many of these colonies. By 1930, over 80 settlements had been established in the region, most along railroad lines. The town of Rosamond was established approximately 5 miles south of the project area in 1877 along the Southern Pacific line and named for the daughter of a Southern Pacific executive (Appendix F).

Agriculture and ranching were the primary economic focus of homesteaders in the Antelope Valley. During the initial wave of settlement in the 1880 and 1890s, dry-farming methods proved fairly successful. However, this was in large part because these were unusually wet years. A severe drought between 1894 and 1904 brought an end to most agricultural enterprises. After the drought, irrigation was used with some success, particularly for the cultivation of alfalfa, which became the valley's primary crop (Appendix F). However, the lack of reliable water prevented agriculture from becoming a major industry. In the arid environment of the high desert, water sources were always a factor in the success of agriculture. Farms were generally located near dependable sources of water such as rivers or springs. Some farmers, however, used wells for irrigation or located their farms near dry lake beds, which periodically flooded during the wet season.

Brief History of the Project Area

This section provides a brief historic context for the project area and its immediate vicinity. It is based on a desktop review of archival materials including the Bureau of Land Management's (BLM) General Land Office (GLO) records, newspaper articles, census data, city directories, and military records (Appendix F).

The BLM's GLO records indicate Section 27 of Township 10 North, Range 12 West, within which the project area is located, was patented to the Southern Pacific Railroad in 1903 and no homesteads were established within the project area as a result of the railroad's ownership of the land. However, two homesteads were established within the project area's vicinity in the early 20th century. One 160-acre homestead located in the southeast quarter of section 28, located approximately 200 feet west of the project area's southwest corner, was established by John D. Faires in 1921 (Appendix F). Faires was born in Ohio in 1876 and spent his youth and young adulthood in Oklahoma and Kansas. By 1910, Faires and his family were living in Los Angeles and he was a brakeman for the railroad. By 1920, Faires re-located to Kern County, established his homestead and was listed as a farmer in the census of that year. It is unclear as to what types of agricultural products Faires' homestead produced and how long Faires cultivated his homestead, but by 1929 Faires passed away and no further information regarding his homestead could be discerned.

The second homestead, comprised of 160 acres within the southwest quarter of Section 22, approximately 300 feet north of the project area's northwest corner, was patented to Frank Bossaert in 1921. It is unclear as to whether Bossaert ever occupied the homestead given a lack of information regarding his presence in Kern County. Bossaert appears to have been born in Belgium in the mid-1860s and became a naturalized citizen of the United States in 1902 having immigrated to Los Angeles via New York (Appendix F). Much of the available census and city directory information indicates Bossaert largely resided in Los Angeles County and there is no documentation of him having lived in Kern County.

Existing Cultural Resources

To evaluate the project's potential effects on significant cultural resources, ESA conducted a Cultural Resources Assessment Report of the project site, which includes archival research, an initial Phase I Cultural Resources Survey, and an extended Phase I Investigation. The methodology and results of these studies are summarized below.

Archival Research

A records search for the project was conducted on March 29, 2021 at the California Historical Resources Information System (CHRIS) Southern San Joaquin Valley Information Center (SSJVIC) housed at California State University, Bakersfield. The records search included a review of all recorded cultural resources and previous studies within the project area and a 0.5-mile radius of the project area. The results of the SSJVIC records search are located in a Confidential Appendix.

Previous Cultural Resources Investigations

The records search results indicate that seven cultural resources studies have been conducted within a 0.5-mile radius of the project area, see **Table 4.5-1: Previous Cultural Resources Investigations** below. Of the seven previous studies identified by the SSJVIC, three (KE-01028, -02323, and -02526) overlap the project area. These three studies cover approximately 5 percent of the project area.

Table 4.5-1: Previous Cultural Resources Investigations

Authors	SSJVIC No. (KE-)	Title	Date
Demos-Petropoulos, Francine, Dana McGowan, Barry Scott, Teresa O'Brien, Bill Norton, and Wendy Rause	02323*	Cultural Resources Inventory Report for the AT&T Corp. Cable Upgrade Project, Los Angeles, Kern, and San Luis Obispo Counties, California	1999
Giambastiani, Mark, Sinead Ní Ghabhláin, Micah Hale, Andrea Catacora, Dave Iversen, Mark Becker, and Susan Hogan-Conrad,	03878	Phase II Cultural Resource Evaluations at 21 Sites Along the Northwestern and West Boundaries, Edwards Air Force Base, Kern and Los Angeles Counties, California	2007
Holmes, Amy	02942	Final: A Phase II Evaluation of 22 Archaeological Sites Located Within Management Region 1 Edwards AFB, Kern County, CA	2004
O'Brien, Teresa	02526*	Cultural Resources Monitoring Report for the AT&T Corp. Cable Upgrade Project for Los Angeles, Kern, and San Luis Obispo Counties, California	2001
Pruett, Catherine Lewis	00937	Archaeological Assessment for 350 Acres, North of Rosamond, Kern County, California	1990

Ronning, Margaret	00015	Phase I Historic Property Inventory for Fast II Tortoise Test, Edwards AFB, Kern County	1994
Unknown	01028*	Cultural Resources Investigation Pacific Pipeline Emidio Route (Including West Liebre Gulch Ridge Alignment and Mojave Alternatives) L.A. and Kern Counties, CA	1996

*Indicates study overlaps with project area.

Previously Recorded Cultural Resources

The records search results indicate that 105 cultural resources have been previously recorded within a 0.5-mile radius of the project area including six prehistoric archaeological sites, 29 historic-period archaeological sites, three historic-period built resources, 10 prehistoric isolates, and 57 historic-period isolates, see **Table 4.5-2: *Previously Recorded Cultural Resources*** below. Of these 105 previously recorded resources, 23 overlap or are located immediately adjacent to (within 100 feet of) the project area and include one prehistoric archaeological site (P-15-015942), 12 historic-period archaeological sites (P-15-008768, P-15-010171, -011740, -015933, -015934, -015935, -015936, -015937, -015938, -015939, -015940, and -015941), one historic-period built resource (P-15-002050), two prehistoric isolates (P-15-015947 and -015950), and seven historic-period isolates (P-15-015944, -015945, -015946, -015948, -015949, -015951, and -015952). These 23 resources are described in detail below.

Table 4.5-2: Previously Recorded Cultural Resources

Primary No. (P-15-)	Permanent Trinomial (CA-KER-)	Description	Dates Recorded	Eligibility Status	Distance from Project
002050*	2050H	Historic-period built resource: Southern Pacific Railroad alignment	1985, 1987, 1994, 1995, 1996, 1998, 1999, 2009, 2010, 2011, 2012, 2016, 2018, 2019	Determined National Register ineligible; Potentially California Register eligible	100 feet
002285	2285H	Historic-period archaeological site: refuse scatter	1980, 1988, 2001, 2008, 2011, 2014	Not evaluated	1,295 feet
003921	3921H	Historic-period archaeological site: refuse scatter	1994, 2002, 2011	Not evaluated	750 feet
004047	-	Prehistoric isolate: rhyolitic debitage	1994, 2011	Not evaluated	1,065 feet
004048	-	Historic-period isolate: three fragments of sun colored amethyst glass	1994, 2011	Not evaluated	1,735 feet
004049	-	Historic-period isolate: one sun colored amethyst glass fragment	1994, 2011	Not evaluated	1,810 feet
004767	-	Historic-period built resource: iron well cover	1995	Not evaluated	1,090 feet
005593	4787H	Historic-period archaeological site: remnants of well	1994	Not evaluated	1,860 feet
005594	4788H	Historic-period archaeological site: remnants of well	1994	Not evaluated	950 feet
005595	4789H	Historic-period archaeological site: remnants of well with associated refuse scatter	1994, 2011	Not evaluated	1,050 feet
005877	5001	Prehistoric archaeological site: temporary camp site	1997, 2003	Determined National Register ineligible	1,695 feet
007554	-	Prehistoric isolate: chalcedony flake	1990	Not evaluated	2,525 feet
008768*	5560	Historic-period archaeological site: refuse scatter	1998	Not evaluated	Within
010171*	5984	Historic-period archaeological site: refuse scatter	2000	Not evaluated	Within
010402	-	Historic-period built resource: water tank	2001	Not evaluated	175 feet
011740*	6795H	Historic-period archaeological site: refuse scatter	2005, 2007, 2011	Not eligible	40 feet
011751	6806H	Historic-period archaeological site: refuse scatter	2005	Not eligible	125 feet
011755	6810H	Historic-period archaeological site: refuse scatter	2005	Not eligible	1,350 feet
011756	6811H	Historic-period archaeological site: refuse scatter	2005	Not eligible	1,480 feet
011771	-	Historic-period isolate: coffee can	2005	Not evaluated	165 feet
011772	-	Historic-period isolate: paint can	2005	Not evaluated	200 feet

Primary No. (P-15-)	Permanent Trinomial (CA-KER-)	Description	Dates Recorded	Eligibility Status	Distance from Project
011773	-	Historic-period isolate: coffee can	2005	Not evaluated	210 feet
011774	-	Historic-period isolate: sanitary can	2005	Not evaluated	130 feet
011775	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	150 feet
011776	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	350 feet
011777	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	110 feet
011778	-	Historic-period isolate: evaporated milk can	2005	Not evaluated	140 feet
011779	-	Historic-period isolate: crushed metal bucket	2005	Not evaluated	375 feet
011780	-	Historic-period isolate: sanitary can	2005	Not evaluated	150 feet
011781	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	320 feet
011782	-	Historic-period isolate: hole-in-top can	2005	Not evaluated	150 feet
011783	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	255 feet
011784	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	600 feet
011785	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	1,040 feet
011786	-	Historic-period isolate: glass insulator	2005	Not evaluated	1,180 feet
011787	-	Historic-period isolate: two beverage cans	2005	Not evaluated	1,305 feet
011788	-	Historic-period isolate: three glass insulators	2005	Not evaluated	1,440 feet
011789	-	Prehistoric isolate: chert flake	2005	Not evaluated	1,535 feet
011790	-	Historic-period isolate: sanitary can	2005	Not evaluated	1,570 feet
011791	-	Historic-period isolate: sanitary can	2005	Not evaluated	1,735 feet
011795	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	2,170 feet
011796	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	1,670 feet
011797	-	Historic-period isolate: sanitary can	2005	Not evaluated	1,230 feet
011798	-	Prehistoric isolate: chert flake	2005	Not evaluated	725 feet
011799	-	Historic-period isolate: baking powder can	2005	Not evaluated	815 feet
011800	-	Historic-period isolate: beverage can	2005	Not evaluated	720 feet
011801	-	Historic-period isolate: oil can	2005	Not evaluated	645 feet
011802	-	Historic-period isolate: oil can	2005	Not evaluated	505 feet
011803	-	Historic-period isolate: sanitary can	2005	Not evaluated	530 feet
011804	-	Historic-period isolate: oil can	2005	Not evaluated	610 feet
011805	-	Historic-period isolate: bucket	2005	Not evaluated	657 feet
011806	-	Historic-period isolate: beverage can	2005	Not evaluated	1,290 feet
011807	-	Historic-period isolate: beverage can	2005	Not evaluated	1,290 feet
011833	-	Historic-period isolate: beverage can	2005	Not evaluated	1,765 feet

Primary No. (P-15-)	Permanent Trinomial (CA-KER-)	Description	Dates Recorded	Eligibility Status	Distance from Project
011834	-	Historic-period isolate: sun colored amethyst glass fragments	2005	Not evaluated	940 feet
011850	-	Historic-period isolate: beverage can	2005	Not evaluated	1,560 feet
011851	-	Historic-period isolate: beverage can	2005	Not evaluated	1,705 feet
011859	-	Historic-period isolate: sanitary can	2005	Not evaluated	250 feet
011860	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	215 feet
011861	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	975 feet
011862	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	260 feet
011863	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	250 feet
011864	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	2,035 feet
011865	-	Historic-period isolate: sanitary can	2005	Not evaluated	2,465 feet
011866	-	Historic-period isolate: sanitary can	2005	Not evaluated	2,250 feet
011867	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	575 feet
011868	-	Historic-period isolate: sanitary can	2005	Not evaluated	455 feet
011869	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	195 feet
011870	-	Historic-period isolate: matchstick filler can	2005	Not evaluated	270 feet
014308	8006	Prehistoric archaeological site: temporary camp site	2008	Not evaluated	745 feet
014317	8015	Prehistoric archaeological site: lithic scatter	2008	Not evaluated	2,005 feet
014318	8016	Prehistoric archaeological site: lithic scatter	2008	Not evaluated	1,940 feet
014319	-	Prehistoric isolate: rhyolitic debitage	2008	Not evaluated	1,820 feet
014320	-	Prehistoric isolate: rhyolitic biface	2008	Not evaluated	2,425 feet
014335	-	Prehistoric isolate: chert debitage	2008	Not evaluated	1,615 feet
015929	8769	Prehistoric archaeological site: lithic scatter	2011	Not evaluated	1,070 feet
015930	8770H	Historic-period archaeological site: refuse scatter	2011	Not evaluated	2,610 feet
015933*	8773H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015934*	8774H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015935*	8775H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015936*	8776H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015937*	8777H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015938*	8778H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015939*	8779H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015940*	8780H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within

Primary No. (P-15-)	Permanent Trinomial (CA-KER-)	Description	Dates Recorded	Eligibility Status	Distance from Project
015941*	8781H	Historic-period archaeological site: refuse scatter	2010	Not evaluated	Within
015942*	8782	Prehistoric archaeological site: lithic scatter	2010	Not evaluated	Within
015943	8783H	Historic-period archaeological site: refuse scatter	2011	Not evaluated	510 feet
015944*	-	Historic-period isolate: sanitary can	2010	Not evaluated	Within
015945*	-	Historic-period isolate: coffee can	2010	Not evaluated	Within
015946*	-	Historic-period isolate: hole-in-cap can	2010	Not evaluated	Within
015947*	-	Prehistoric isolate: projectile point	2010	Not evaluated	Within
015948*	-	Historic-period isolate: hole-in-cap can	2010	Not evaluated	Within
015949*	-	Historic-period isolate: hole-in-cap can	2010	Not evaluated	Within
015950*	-	Prehistoric isolate: rhyolitic flake	2010	Not evaluated	Within
015951*	-	Historic-period isolate: matchstick filler can	2010	Not evaluated	Within
015952*	-	Historic-period isolate: hole-in-cap can	2010	Not evaluated	Within
015953	-	Prehistoric isolate: two rhyolitic tools	2011	Not evaluated	2,415 feet
018659	-	Historic-period archaeological site: refuse scatter	2011	Not evaluated	1,875 feet
018660	-	Historic-period archaeological site: mine shaft	2011	Not evaluated	1,585 feet
020209	11064H	Historic-period archaeological site: refuse scatter	2005	Not evaluated	105 feet
020210	11065H	Historic-period archaeological site: refuse scatter	2004	Not evaluated	1,405 feet
020211	11066H	Historic-period archaeological site: refuse scatter	2005	Not evaluated	910 feet
020212	11067H	Historic-period archaeological site: refuse scatter	2004	Not eligible	1,925 feet
020213	11068H	Historic-period archaeological site: refuse scatter	2005	Not evaluated	2,220 feet

*Indicates resource is within or immediately adjacent to project area

Resource Descriptions

P-15-002050 (Within 100 feet)

Resource P-15-002050 is a historic-period built resource consisting of the Union Pacific Railroad right-of-way. The railroad was constructed in 1876 by the Southern Pacific Railroad who operated the right-of-way until 1996, at which point the Union Pacific Railroad retained ownership. Resource P-15-002050 is located 85 feet west of the project area and has been previously determined not eligible for listing in the National Register (OHP 2012) but has not been evaluated for inclusion in the California Register (National Register Status Code 6Y).

P-15-008768 (Within)

Resource P-15-008768 is historic-period archeological site recorded by Jones and Stokes in 1998 as a refuse scatter containing 200-300 cans, glass fragments, and ceramic fragments (Norton 1998). Based on the presence of sun-colored amethyst glass, Jones and Stokes concluded the site dates prior to 1920 and likely represents opportunistic roadside dumping. The site's western boundary overlaps the east-central portion of the project area. Resource P-15-008768 has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-010171 (Within)

Resource P-15-010171 is historic-period archaeological site recorded by Jones and Stokes in 2000 as a sparse refuse scatter containing three concentrations (Concentrations 1-3) (O'Brien and Thomas 2000). The site includes: over 1,000 cans including sanitary cans, hole-in-top cans, seasoning cans, and tobacco tins; glass fragments including cobalt, green, sun-colored amethyst, and yellow glass; and ceramic fragments including white glazed earthenware, fiesta ware, and thick pipe fragments. Jones and Stokes concluded the site represents opportunistic dumping dating to the 1930s and 1940s (O'Brien and Thomas 2000). Much of the site is located outside of the project area, with the exception of Concentration 3, which is located with the project area's northeastern boundary. Resource P-15-010171 has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-011740 (Within 100 feet)

Resource P-15-015933 is a historic-period archaeological site originally recorded in 2005 by ASM as a large diffuse refuse scatter containing two concentrations (Concentrations A and B) likely representing episodic road-side dumping dating to the early 1900s (Hale et al. 2005). The concentrations are described as follows:

- Concentration A consists of over 500 cans, 75 percent of which are matchstick-filler and sanitary crimped end food cans, and the remaining 25 percent consists of church-key opened beverage cans, key-wind coffee cans, and internal friction spice cans. The concentration also includes over 30 colorless, green, and brown glass fragments, as well as beer bottle, milk glass, and mason jars.
- Concentration B consists of more than 250 cans, primarily comprise of crushed matchstick-filler and sanitary crimped end milk and food cans, as well as one Hershey's cocoa tin with an

embossed internal friction lid, several spice cans, beverage cans, internal friction coffee and oil cans, and a variety of amethyst and colorless glass shards.

The site was updated in 2010 by ECORP and was found to largely match ASM's 2005 documentation; however, ECORP noted Concentration A contained only 50-100 cans, many of which were crushed or deteriorated (ESA 2022).

Resource P-15-011740 is located in the same mapped location for P-15-010171, and both site descriptions are similar. Therefore, it is likely that P-15-011740 and -010171 are the same resource. Resource P-15-011740 is located approximately 25 feet east of the project area's northeastern corner and has been determined not eligible for listing in the National Register, California Register, and local register (National Register Status Code 6z).

P-15-015933 (Within)

Resource P-15-015933 is a historic-period archaeological site recorded in 2010 as a refuse scatter consisting of seven sanitary cans, seven hole-in-top cans, one church key-opened beverage can, two cone top beverage cans, three bottle bases, and one bottleneck fragment (ESA 2022). Diagnostic artifacts include: one hole-in-top can with dimensions of 315/16 in length by 3 inches in diameter, indicating it was manufactured from 1950 to present (ESA 2022); and one amber glass Clorox bottle fragment with "[T overlapping M and C]" embossed on it indicating it was manufactured by the Thatcher Manufacturing Company between 1944 and 1983 (ESA 2022). Resource P-15-015933 partially overlaps the project area's east-central boundary and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015934 (Within)

Resource P-15-015934 is a historic-period archaeological site recorded in 2010 by ECORP consisting of a large dispersed refuse scatter comprised of sanitary cans, hole-in-cap cans, hole-in-top cans, one Log Cabin Syrup can in the shape of a cabin, glass bottle fragment, glass insulator fragments, paint cans, and corroded sheet metal (ESA 2022). Diagnostic artifacts include the following: hole-in-cap cans with soldered seams and dimensions of 26/16 inches in length by 3 inches in diameter, indicating a manufacture range of 1885 to 1903 (ESA 2022); hole-in-cap cans with crimped seams and dimension of 412/16 in height by 4 inches in diameter, indicating a manufacture range of 1903 to 1908 (ESA 2022); the Log Cabin Syrup can, which dates to as early as 1897 (ESA 2022); and a deteriorated coffee can with "'STEEL CUT COFFEE/ M.J. BRANDENSTEIN" embossed on it, which dates as early as 1899 (ESA 2022). Resource P-15-015934 is located along the project area's northwestern boundary and has not been previously evaluated for inclusion in the California Register or National Register.

P-15-015935 (Within)

Resource P-15-015935 is a historic-period archaeological site recorded in 2010 by ECORP as a dispersed refuse scatter comprised of sanitary cans, one hole-in-cap can, one hole-in-top can, metal sheet fragments, and two aqua glass insulator fragments (ESA 2022). The site is located within the project area's southeastern corner and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015936 (Within)

Resource P-15-015936 is a historic-period archaeological site recorded in 2010 by ECORP as a refuse scatter comprised of knife and ice pick-opened hole-in-top cans, C-cut-opened sanitary cans, and corroded sheet metal fragments (ESA 2022). Diagnostic artifacts include one hole-in-cap can with dimension of 28/16 in height by 28/16 in diameter indicated a manufacture date range of 1903 to 1914 (ESA 2022). The site is located within the project area's southeastern corner and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015937 (Within)

Resource P-15-015937 is a historic-period archaeological site recorded in 2010 by ECORP as a refuse concentration with an associated diffuse refuse scatter (ESA 2022). The concentration consists of glass bottles fragments, sanitary cans and glass fragments. The associated refuse scatter includes hole-in-cap cans, hole-in-top cans, sanitary cans, bottle glass fragments, bottle glass bases, glass bottle base, one Log Cabin Syrup can made in the shape of a log cabin, one large metal drum, and one paint can. Diagnostic artifacts include: one hole-in-cap with dimensions of 33/16 inches in height by 3 15/16 inches in diameter, with a cap diameter of 112/16 indicating they were manufactured 1887 to 1885 (ESA 2022); and the Log Cabin Syrup can, which dates to as early as 1897 (ESA 2022). The site is located in the south-central portion of the project area and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015938 (Within)

Resource P-15-015938 is a historic-period archaeological site documented in 2010 by ECORP as a refuse scatter, comprised of one glass liquor bottle, one cone-top beverage can, and one hole-in-top can (ESA 2022). The hole-top-can has dimensions of 314/16 inches in height and 3 inches indicating it was manufactured between 1917 and 1929 or 1950 to the present (ESA 2022). The site is located along the project area's northern margin and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015939 (Within)

Resource P-15-015939 is a historic-period archaeological site documented in 2010 by ECORP as refuse scatter consisting of four refuse concentrations (Concentrations C1-C4) with an associated refuse scatter (ESA 2022). The concentrations are described as follows:

- Concentration 1 includes glass fragments, mason jar lids, a bottle based with an Anchor Hocking maker's mark, and a crushed matchstick-filler.
- Concentration 2 includes hinge-lid tobacco tins, solvent cans, sanitary cans, matchstick-filler cans, tableware fragments, one enameled water basin, plate glass, and one fuel container.
- Concentration 3 includes metal pipes, barrel straps, automotive debris, wire, transferware ceramic plate fragments, glass fragments, sanitary cans, hole-in-cap cans, one matchstick-filler can, sun-colored amethyst glass, mason jar fragments, and tableware fragments. Diagnostic artifacts include: one matchstick-filler can with dimensions of 3 15/16 inches in height and 3 inches in diameter indicating it was manufactured between 1917 and 1929 (ESA 2022); two bottle bases with "[Letter M inside a circle]," embossed on them, with one having "EMERSON DRUG/BROMOSELTZER" embossed around the base indicating they were manufactured by

the Maryland Glass Corporation after 1916 (Toulouse 1972); and two bottle bases with suction scars indicating they were manufactured between 1919 and 1929 (ESA, 2022).

- Concentration 4 includes sanitary cans, hinge-lid tobacco tins, one Maxwell House Coffee can with lithograph partially legible, one wooden pipe bowl, circuit tubes, one enamel basin, ironware fragments, milled lumber, as well as a number beverage bottle glass comprised of sun-colored amethyst glass, aqua glass, colorless glass, and green glass, and amber glass. Diagnostic artifacts include one colorless bottle with “Sierra Club” embossed on its shoulder in cursive script with “stylized S within a diamond” embossed on the base it was manufactured between 1930 and 1950 (ESA 2022).

ECORP concluded that the site represents multiple episodes of roadside dumping. Resource P-15-015939 is located in the project area’s northeastern portion and has not been previously evaluated for inclusion in either the California Register or the National Register.

P-15-015940 (Within)

Resource P-15-015940 is a historic-period archaeological site recorded by ECORP in 2010 a refuse scatter comprised of four hole-in-top cans, one aqua glass insulator, two amber glass bottles, one green glass wine bottle base, and one aqua glass mason jar fragment (ESA 2022). Based on the artifact present, ECORP concluded the site represents a single episode of road side dumping. Resource P-15-015940 is located in the project area’s northeastern corner and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015941 (Within)

Resource P-15-015941 is a historic-period archaeological site recorded by ECORP in 2010 as consisting of one refuse concentration (Concentration 1) with an associated sparse refuse scatter (ESA 2022). Concentration 1 includes crushed and deteriorated sanitary cans, one hole-in-top can, three terra cotta pipe fragments, one battery, three bottle bases, as well as colorless, green, aqua, and sun-colored amethyst beverage bottle glass fragments. Diagnostic artifacts associated with Concentration 1 include: a bottle base with “[I within a circle and a diamond shape]/ 5” embossed on it indicating it was manufactured by Owens Illinois between 1935 or 1945 (ESA 2022); and one bottle base with a Hazel Atlas maker’s mark indicating it was manufactured between 1920 and 1964 (ESA 2022). The sparse scatter consists of two artifacts including one shoe heel with tacks and one green glass bottle base with “[I within a circle and a diamond shape]/5] embossed on it indicating it as manufactured by Owens Illinois sometime between 1935 and 1945 (ESA 2022). ECORP concluded the site represents a single-episode of roadside dumping. Resource P-15-015941 is located in the project area’s northeast corner and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015942 (Within)

Resource P-15-015942 is a prehistoric archaeological site recorded by ECORP in 2010 as a lithic scatter comprised of 25 flakes (ESA 2022). Artifacts noted included secondary and tertiary flakes, including 23 rhyolitic flakes and two chert flakes. Resource P-15-015942 is located in the central portion of the project area and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015944 (Within)

Resource P-15-015944 is a historic-period isolate recorded by ECORP in 2010 as one crushed hole-in-top can (ESA 2022). The isolate is located in the project area's northeastern portion and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015945 (Within)

Resource P-15-015945 is a historic-period isolate recorded by ECORP in 2010 as one coffee tin lid and one hole-in-cap can (ESA 2022). The coffee tin lid is embossed with a drinking figure surrounded by the words "Hills Bros." indicating it was manufactured between 1922 and 1932 (ESA 2022). Resource P-15-015945 is located in the north-central portion of the project area and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015946 (Within)

Resource P-15-015946 is a historic-period isolate recorded by ECORP in 2010 as one C-cut-opened hole-in-cap can (ESA 2022). The isolate is located in the northeastern portion of the project area and has not been previously evaluated for inclusion in the California Register or National Register.

P-15-015947 (Within)

Resource P-15-015947 prehistoric isolate recorded by ECORP in 2010 as one rhyolitic projectile point fragment (ESA 2022). The isolate is located in the southwest portion of the project area and has not been previously evaluated for inclusion in the California Register or National Register.

P-15-015948 (Within)

Resource P-15-015948 is a historic-period isolate recorded by ECORP in 2010 as one hole-in-cap can and one crushed sanitary can (ESA 2022). The isolate is located in the south-central portion of the project area and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015949 (Within)

Resource P-15-015949 is a historic-period isolate recorded in 2010 by ECORP as one hole-in-cap can (ESA 2022). The isolate is located in the project area's southwestern corner and has not been previously for evaluated for inclusion in the California Register in National Register.

P-15-015950 (Within)

Resource P-15-015950 is a prehistoric isolate documented by ECORP in 2010 as one rhyolite secondary flake (ESA 2022). The isolate is located in the project area's southwestern corner and has not been previously evaluated for inclusion in the California Register or the National Register.

P-15-015951 (Within)

Resource P-15-015951 is a historic-period isolate recorded by ECORP in 2010 as one crushed hole-in-top can (ESA 2022). The isolate is located in the project area's southeastern corner and has not been previously evaluated for inclusion in the California Register and National Register.

P-15-015952 (Within)

Resource P-15-015952 is a historic-period isolate documented by ECORP in 2010 as one crushed hole-in-cap can (ESA 2022). The isolate is located in the project area's southwestern corner and has not been previously evaluated for inclusion in the California Register or the National Register.

Sacred Lands File Search

The California Native American Heritage Commission (NAHC) maintains a confidential Sacred Lands File (SLF) which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on March 15, 2021 to request a search of the SLF. The NAHC responded to the request in a letter dated April 7, 2021. In addition, as part of the County's government-to-government responsibilities pursuant to both SB 18 and AB 52, a SLF request was submitted by the County to the NAHC on October 21, 2021. The NAHC responded to the County on December 3, 2021. The results of the SLF search conducted by the NAHC indicate that Native American cultural resources are not known to be located within the project area or its vicinity (Appendix F). See **Section 4.18, Tribal Cultural Resources**, of the EIR for a full analysis of potential impacts to Tribal Cultural Resources.

Historic Maps and Aerial Photographs

Historic maps and aerial photographs were examined to provide historical information regarding the project area, in order to contribute an assessment of the project area's archaeological sensitivity. Available topographic maps include the 1915 and 1917 Elizabeth Lake 30-minute quadrangles, the 1943 and 1956 Rosamond 15-minute quadrangles, the 1947 and 1973 Soledad Mountain 7.5-minute quadrangles. Historic aerial imagery of the project area was available for the years 1952, 1972, 1994, 2005, 2009, 2010, 2012, 2014, 2016 and 2018 (Appendix F).

The historic aerial imagery largely shows what is depicted by the topographic maps in that the project area remained largely undeveloped throughout the 20th century. However, by 2017, the scrap yard located within the project area's northern boundary and by 2018 a large circular-shaped area south of the scrap yard has been cleared and graded in the project area's north-central portion.

In sum, the historic map and aerial review indicate very little development within the project area during the 20th century aside from a single structure located in the project area's northwestern corner on the 1917 topographic map, but no longer present on the 1943 map. Additional development within the project area does not occur until 2017 when a scrap yard located within the project area's northern boundary was established.

Subsurface Archaeological Resource Sensitivity Review

A desktop analysis was undertaken to assess the potential for subsurface archaeological resources within the Project area. Sources reviewed include geologic maps, soil maps, geologic reports, as well as the results of the SSJVIC records search and historic map and aerial review.

A review of geologic mapping (Diblee and Minch 2008) indicates recent Quaternary alluvial deposits (Qa) are mapped at the surface within the project area. The deposits formed as a result of alluvial fan activity originating from the Rosamond Hills located approximately 1.6 miles southeast of the Project area. The alluvium dates to the Holocene (11,650 years BP to present), a period of time that encompass the entirety of human occupation in the western Mojave Desert.

Soils within the project area are mainly comprised of Cajon loamy sand and Desatzo loamy sand with a lesser degree of Garlock loamy sandy. The Cajon loamy sand soil type is comprised of alluvium derived from granite parent material that forms at the bases of slopes along flood plains or alluvial fans. The Desatzo loamy sandy soil type is comprised of alluvium derived from granite parent material that form at the bases of slopes along flood plains and basin floors. The Garlock loamy sand soil type is comprised of alluvium derived from granite parent material that forms at the bases of slopes along terraces and alluvial fans. The Cajon and Desatzo soils encompass much of the project area's central portion, with the Garlock soils being present solely in the project area's southeastern corner.

The SSJVIC records search identified 16 previously recorded prehistoric archaeological resources within 0.5 miles of the project area. These resources included four lithic scatters (P-15-014317, -014318, -015929, and -015942), two temporary camp sites (P-15-005877 and -014308), and 10 isolated artifacts (-004047, -007554, -011789, -011798, -014319, -014320, -014335, -015947, -015950, and -015953) primarily comprised of rhyolitic and chert debitage. Of these previously recorded resources, one of the temporary camps (P-15-005877) was subject to testing and was found to contain a sparse subsurface component comprised of lithic debitage, faunal remains, and a hearth feature, which yielded Carbon-14 samples dating to 1,460±30 years before present (Jones et al. 2003). Based on the excavations, it was postulated that the site represents a temporary campsite inhabited on a seasonal basis.

The number and distribution of prehistoric archaeological resources in the Project area's vicinity indicate a moderate degree of activity in the area throughout prehistory. The two temporary camps sites are located in the vicinity of seasonal drainages, with P-15-014308 being located just south series of seasonal drainages that converge just northwest of the Project area, and P-15-005877 being located near a number of drainages emanating from the Rosamond Hills to the southeast of the project area. These drainages may have attracted peoples to the area on a seasonal basis when water was present, and the intervening areas may have been used for resource procurement, including the gathering of plant resources and toolstone material.

The subsurface archaeological sensitivity review indicates Holocene-age Quaternary alluvial deposits are mapped at surface within the project's area. These deposits encompass the entirety of human occupation within the western Mojave Desert, and are, therefore, of suitable age to preserve subsurface archaeological deposits. The soil types present in the project area are sandy in composition and are derived from alluvial processes that, overtime, may cover previously surficial archaeological resources. Further, the project area and its vicinity appear to have seen a moderate degree of activity throughout the prehistoric period as indicated by the number of seasonal campsites and lithic scatters in the project area's vicinity. Based on these variables, the project area has a moderate to high sensitivity for the presence of subsurface archaeological resources.

Phase I Cultural Resources Survey

A cultural resources survey of the project area was conducted by ESA cultural resources specialists on May 3-4, 2021. The survey was aimed at identifying surface evidence of archaeological materials and historic-period built features within the project area. Survey methodology largely consisted of systematic survey with transects spaced at no greater than 15-meter intervals (approximately 50 feet). In inaccessible portions of the project area were subject to opportunistic and reconnaissance-level survey strategies. Sites were defined as consisting of one or more cultural

features or three or more artifacts (45 years old or older) within an approximate 25-square-meter area. Fewer than three artifacts within 25-square-meter area were considered isolates.

Much of the project area is comprised of flat terrain that has been subject to a handful of disturbances in the recent past including: vegetation clearing and grading in project area's northwestern and central areas, large areas that had recently been mowed and were largely denuded of vegetation, and the presence of a scrap yard and pallet staging yard in the project area's north-central portion. Ground surface visibility was largely 100 percent, however, small pockets of sparse vegetation consisting of salt brush, creosote, and Joshua tree were present in the project area's northeastern portions and along its western margin. These areas had ground surface visibility of 90 percent. The scrap yard was not subject to survey given that it was fenced and guard dogs were present. The pallet staging yard was subject to opportunistic survey wherein all accessible areas with ground surface not obscured by pallets were inspected for the presence of cultural resources.

Of the 23 cultural resources identified within and immediately adjacent to the project area as part of the SSJVIC records search, 10 were relocated within the project area and updated.

- P-15-002050 [Southern Pacific Railroad]
- -008768 [refuse scatter]
- -011740 [refuse scatter]
- -015933 [refuse scatter]
- -015934 [refuse scatter]
- -015935 [refuse scatter]
- -015937 [refuse scatter and debitage]
- -015938 [refuse scatter and debitage]
- -015941 [refuse scatter]
- -015942 [lithic scatter]

The remaining 13 previously recorded cultural resources identified by the records search could not be relocated.

- P-15-010171 [refuse scatter]
- -015936 [refuse scatter]
- -015939 [refuse scatter]
- -015940 [refuse scatter]
- -015944 [historic-period isolate]
- -015945 [historic-period isolate]
- -015946 [historic-period isolate]
- -015947 [prehistoric isolate]
- -015948 [historic-period isolate]
- -015949 [historic-period isolate]
- -015950 [prehistoric isolate]
- -015951 [historic-period isolate]
- -015952 [historic-period isolate]

In addition to the 10 previously recorded resources, three newly recorded resources were also identified within the project area and are discussed in detail below following the table.

- ESA-MMM-Site-001H [refuse scatter]
- ESA-MMM-Site-002H [refuse scatter]
- ESA-MMM-ISO-001P [prehistoric isolate]

These resources are summarized in **Table 4.5-3: Cultural Resources Survey Results Summary** below.

Table 4.5-3: Cultural Resources Survey Results Summary

Primary No. (P-15-)	Permanent Trinomial (CA-KER-)	Other Identifier	Description	Relocated/ Recorded?
<i>Previously Recorded Resources</i>				
002050	2050H	-	Historic-period built resource: Southern Pacific Railroad alignment	Yes
008768	5560	-	Historic-period archaeological site: refuse scatter	Yes
010171	5984	-	Historic-period archaeological site: refuse scatter	No -Presumed destroyed
011740	6795H	-	Historic-period archaeological site: refuse scatter	Yes
015933	8773H	-	Historic-period archaeological site: refuse scatter	Yes
015934	8774H	-	Historic-period archaeological site: refuse scatter	Yes
015935	8775H	-	Historic-period archaeological site: refuse scatter	Yes
015936	8776H	-	Historic-period archaeological site: refuse scatter	No -Presumed destroyed
015937	8777H	-	Multicomponent archaeological site: historic-period refuse scatter and prehistoric debitage	Yes
015938	8778H	-	Multicomponent archaeological site: historic-period refuse scatter and prehistoric debitage	Yes
015939	8779H	-	Historic-period archaeological site: refuse scatter	No -Presumed destroyed
015940	8780H	-	Historic-period archaeological site: refuse scatter	No -Presumed destroyed
015941	8781H	-	Historic-period archaeological site: refuse scatter	Yes
015942	8782	-	Prehistoric archaeological site: lithic scatter	Yes
015944	-	-	Historic-period isolate: sanitary can	No -Presumed destroyed
015945	-	-	Historic-period isolate: coffee can	No -Presumed destroyed
015946	-	-	Historic-period isolate: hole-in-cap can	No – Possibly subsumed by ESA-MMM- Site-002H

015947	-	-	Prehistoric isolate: projectile point	No -Presumed destroyed
015948	-	-	Historic-period isolate: hole-in-cap can	No -Presumed destroyed
015949	-	-	Historic-period isolate: hole-in-cap can	No -Presumed destroyed
015950	-	-	Prehistoric isolate: rhyolitic flake	No -Presumed destroyed
015951	-	-	Historic-period isolate: matchstick filler can	No -Presumed destroyed
015952	-	-	Historic-period isolate: hole-in-cap can	No -Presumed destroyed
<i>Newly Recorded Resources</i>				
-	-	ESA- MMM- Site-001H	Historic-period archaeological site: refuse scatter	Yes
-	-	ESA- MMM- Site-002H	Historic-period archaeological site: refuse scatter	Yes
-	-	ESA- MMM- ISO-001P	Prehistoric isolate: one piece of debitage	Yes

Newly Recorded Resources

ESA-MMM-Site-001H (Within)

Resource ESA-MMM-Site-001H is a historic-period archeological site consisting of two refuse concentrations (Concentration -1 and -2) with an associated refuse scatter. The concentrations are located approximately 30 feet apart on a generally northwest-southeast axis with Concentration-1 located in the northern portion of the site and Concentration-2 in the southern portion. The following describes both concentrations:

- Concentration-1 is comprised of brown, green, sun-colored amethyst, and colorless bottle glass fragments, as well as five bottle bases, and four deteriorated sanitary cans. Diagnostic artifacts include: one bottle base with “R105/2846/457/[Stylized T overlapping M and C]5” embossed on it indicating it was manufactured by the Thatcher Glass Manufacturing Company between 1944 and 1980 (ESA 2022); one ovular bottle base with “-/22/-54 [Stylized A within a circle over a dashed line]” embossed on it indicating it was manufactured by the Armstrong Cork Company between 1938 and 1969 (ESA 2022); and one bottle base with “NET contents/20 [I inside of O]6/1526-BW/6 fluid ozs” indicating it was manufactured by the Owens Illinois Glass Company from 1954 onward (ESA 2022).
- Concentration-2 is comprised of brown and colorless bottle glass fragments, crockery fragments, tableware fragments, one cone-top can, and deteriorated sanitary cans.

The site is located in the project area’s northeastern corner and has not been previously evaluated for inclusion in the California Register or National Register.

ESA-MMM-Site-002H (Within)

Resource ESA-MMM-Site-002H is a historic-period archaeological site consisting of a diffuse refuse scatter. Artifacts noted included over 25 sun-colored amethyst glass fragments, over 25 aqua glass fragments, over 15 tableware fragments, four brown glass fragments, three green glass bottle fragments, one small metal pail, and one aqua glass bottle fragment with “Tonic/Vermifuge” embossed on it. The presence of sun-colored amethyst glass indicates the site dates to 1915 or earlier (Appendix F).

The site is located in the project area’s central portion in an area that has been subject to vegetation clearing and grading. Given that the site is located within a highly disturbed area, it may represent a secondary deposit of refuse that may have been pushed into its present location by grading activities. The site has not been previously evaluated for inclusion in the California Register or National Register.

ESA-MMM-ISO-001P (Within)

Resource ESA-MMM-ISO-001P is a prehistoric isolate consisting of two flakes located approximately 30 feet apart. The flakes include one rhyolitic secondary flake and one mottled brown-red chert tertiary flake with edge modification. The isolate is located in the project area’s southwestern portion and has not been previously evaluated for inclusion in the National Register or California Register.

Extended Phase I Survey

As outlined in Appendix J2, ESA archaeologists conducted an Extended Phase I Investigation (XP1 Investigation) at P-15-015942 on December 12, 2021 under the supervision of the Principal Investigator. The investigation was aimed at identifying the presence/absence of subsurface archaeological materials associated with the site, and to assess the site’s eligibility for listing in the California Register under Criterion D.

A total of 12 hand auger bores (HABs) were excavated. The HABs were laid out on cardinal axes oriented north to south and east to west within the boundary of P-15-015492 and spaced at 25-meter intervals. None of the 12 HABs excavated produced cultural materials. Of the 12 HABs, six were excavated to a depth of 40 centimeters and 6 were excavated to a depth of 20 centimeters. Observed soils and sediments within the site’s boundary were largely consist and were comprised of loose yellowish brown sandy silt with less than 1 to 1 centimeter diameter pebbles.

Potential for Unknown Buried Cultural Resources

The subsurface archaeological sensitivity review indicates Holocene-age Quaternary alluvial deposits are mapped at surface within the project area. These deposits encompass the entirety of human occupation within the western Mojave Desert, and are, therefore, of suitable age to preserve subsurface archaeological deposits. The project area has a moderate to high sensitivity for the presence of subsurface archaeological resources. Therefore, project-related ground disturbing activities have the potential to encounter previously unknown subsurface archaeological resources.

4.5.3 Regulatory Setting

Federal

Section 106 of the National Historic Preservation Act (NHPA)

The NHPA of 1966, as amended (16 USC 470f), and its implementing regulation- Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979- legislates the protection of archaeological resources. Prior to implementing an “undertaking” (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria in 36 Code of Federal Regulations [CFR] 60.4.

National Register of Historic Places

The NRHP was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2). The NRHP recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels.

To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria established by the U.S. Department of the Interior:

- A. Are associated with events that have made a significant contribution to the broad patterns of our history;
- B. Are associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for NRHP listing (U.S. Department of the Interior 1995). In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior 1995). The NRHP recognizes seven qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

State

California Register of Historical Resources (CRHR)

Created in 1992 and implemented in 1998, the California Register is “an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” Certain properties, including those listed in, or formally determined eligible for listing in, the National Register of Historic Places (NRHP) and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR (also referred to as the California Register). Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys or designated by local landmarks programs, may be nominated for inclusion in the California Register. A resource, either an individual property or a contributor to a historic district, may be listed in the California Register if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on National Register criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4. It has yielded, or may be likely to yield, information important in history or prehistory.

Furthermore, under PRC Section 5024.1, Title 14 California Code of Regulations [CCR], Section 4852(c), a cultural resource must retain integrity to be considered eligible for the California Register. Specifically, it must retain sufficient character or appearance to be recognizable as a historical resource and convey reasons of significance. Integrity is evaluated with regard to retention of such factors as location, design, setting, materials, workmanship, feeling, and association.

Typically, an archaeological site in California is recommended eligible for listing in the California Register based on its potential to yield information important in prehistory or history (Criterion 4). Important information includes chronological markers such as projectile point styles or obsidian artifacts that can be subjected to dating methods or undisturbed deposits that retain their stratigraphic integrity. Sites such as these have the ability to address research questions.

California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have Statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use

were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the California Register.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

1. It is the first, last, only, or most significant of its type in the State or within a large geographic region (Northern, Central, or Southern California);
2. It is associated with an individual or group having a profound influence on the history of California; or
3. It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California PHI are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. PHI designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a PHI, a resource must meet at least one of the following criteria:

1. It is the first, last, only, or most significant of its type within the local geographic region (city or county);
2. It is associated with an individual or group having a profound influence on the history of the local area; or
3. It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act

Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. The CEQA *Guidelines* (Title 14 CCR Section 15064.5) recognize that an historical resource includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of

the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of CEQA Section 21084.1 and CEQA *Guidelines* Section 15064.5 apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (CEQA *Guidelines* Sections 15064.5(b)(1), 15064.5(b)(4)).

If an archaeological site does not meet the historical resource criteria contained in the CEQA *Guidelines*, then the site may be treated in accordance with the provisions of Section 21083, which is a unique archaeological resource. As defined in CEQA Section 21083.2, a “unique” archaeological resource is an archaeological artifact, object, or site, for which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.2(b)). If preservation in place is not feasible, mitigation measures shall be required.

The CEQA *Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (CEQA *Guidelines* Section 15064.5(c)(4)).

Native American Heritage Commission

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

California Public Records Act

California Public Records Act Sections 6254(r) and 6254.10 were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public related to “Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.” Section 6254.10 specifically exempts from disclosure requests for “records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency.”

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the NAHC within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

California PRC Section 5097.98, as amended, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. The MLD has 48 hours from the time of being granted access to the site by the landowner to inspect the discovery and provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

California Government Code Sections 6254(r) and 6254.10

These sections of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to “Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.” Section 6254.10 specifically exempts from disclosure requests for “records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency.”

Assembly Bill 52 and Related Public Resources Code Sections

Assembly Bill (AB) 52 was approved by California State Governor Edmund Gerry “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 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 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 (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project’s impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes

any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Local

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for cultural resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use, Open Space and Conservation Element

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

Policy 25: The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

- Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.
- Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.
- Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- Measure O: On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

4.5.4 Impacts and Mitigation Measures

Methodology

Impacts on cultural resources could result from ground-disturbing activities in conjunction with the proposed project. Ground-disturbing activities include project-related excavation, grading,

trenching, vegetation clearance, the operation of heavy equipment, or other surface and sub-surface disturbance that could damage or destroy surficial or buried cultural resources including prehistoric or historic-period archaeological resources or human burials. To evaluate the project's potential effects on significant cultural resources, ESA conducted a Cultural Resources Assessment of the project site which included archival research, a cultural resources survey, and a second extended cultural resources survey (Appendix F). Using these resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in *CEQA Guidelines* Appendix G, to determine if a project could potentially have a significant adverse effect on cultural resources.

A project would have a significant adverse effect on cultural resources if it would:

- a. Cause a substantial adverse change in the significance of a historical resource, as defined in *CEQA Guidelines* Section 15064.4;
- b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to *CEQA Guidelines* Section 15064.4; or
- c. Disturb any human remains, including those interred outside of dedicated cemeteries.

All of the above impact thresholds are addressed in the project impacts section below. Impacts to tribal cultural resources have been addressed in Section 4.18, *Tribal Cultural Resources*, of this EIR.

Project Impacts

Impact 4.5-1: The project would cause a substantial adverse change in the significance of a historical resource, as defined in *CEQA Guidelines* Section 15064.5.

As identified above in Section 4.5.2, *Environmental Setting*, of the 23 cultural resources identified within and immediately adjacent to the project area as part of the SSJVIC records search, 10 were relocated as part of the survey conducted for the project, and 13 could not be relocated and are presumed to have been destroyed or displaced. In addition to the 10 relocated resources, three newly recorded resources were identified as a result of the cultural resources survey.

Of the total 13 cultural resources (10 previously recorded and 3 newly recorded) identified within and immediately adjacent to the project area, one has been previously recommended not eligible for inclusion in the California Register (P-15-011740), with the remaining 12 resources having not been previously evaluated. The following paragraphs evaluate each of the 12 previously unevaluated resources as historical resources based on California Register Criteria 1-4, as well as unique archaeological resources under Public Resources Code 21803.2(g). An assessment of potential impacts the project may have on these resources is also included. The resource evaluations and impacts assessments are organized by resource type including: historic-period built resources, historic-period archaeological sites, prehistoric archaeological sites, multicomponent archaeological sites, and isolates. **Table 4.5-4: Summary of Evaluation Status and Potential Impacts** summarizes the evaluation recommendations and impacts assessments for these resources.

Table 4.5-1: Summary of Evaluation Status and Potential Impacts

Primary No. (P-15-)	Permanent Trinomial (CA-KER-)	Other Identifier	Description	Eligibility Status	Potential for Significant Project Impacts
<i>Previously Recorded Resources</i>					
002050	2050H	-	Historic-period built resource: Southern Pacific Railroad alignment	Determined National Register ineligible; Potentially California Register eligible	No
008768	5560	-	Historic-period archaeological site: refuse scatter	Recommended not eligible	No
011740	6795H	-	Historic-period archaeological site: refuse scatter	Recommended not eligible	No
015933	8773H	-	Historic-period archaeological site: refuse scatter	Recommended not eligible	No
015934	8774H	-	Historic-period archaeological site: refuse scatter	Recommended not eligible	No
015935	8775H	-	Historic-period archaeological site: refuse scatter	Recommended not eligible	No
015937	8777H	-	Multicomponent archaeological site: historic-period refuse scatter and prehistoric debitage	Recommended not eligible	No
015938	8778H	-	Multicomponent archaeological site: historic-period refuse scatter and prehistoric debitage	Recommended not eligible	No
015941	8781H	-	Historic-period archaeological site: refuse scatter	Recommended not eligible	No
015942	8782	-	Prehistoric archaeological site: lithic scatter	Recommended not eligible	No
<i>Newly Recorded Resources</i>					
-	-	ESA-MMM-Site-001H	Historic-period archaeological site: refuse scatter	Recommended not eligible	No
-	-	ESA-MMM-Site-002H	Historic-period archaeological site: refuse scatter	Recommended not eligible	No

-	-	ESA-MMM-ISO-001P	Prehistoric isolate: one piece of debitage	Recommended not eligible	No
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Historic-Period Built Resources

One historic-period built resource consisting of a segment of the Southern Pacific Railroad (P-15-002050) is located approximately 85 feet west of the project's western boundary. The resource has been previously determined not eligible for listing in the National Register, but has not been evaluated for inclusion in the California Register (National Register Status Code 6Y). Because the resource has not been previously evaluated for inclusion in the California Register it has the potential to qualify as a historical resource pursuant to CEQA.

The railroad segment is not located within the project area and, therefore, would not be subject to direct impacts as a result of project implementation. However, given the resource's proximity to the project, indirect visual impacts may occur as a result of project implementation. Given that the project would introduce industrial visual elements similar to those which already exist adjacent to other segments of the railroad alignment, and the relatively small portion (approximately 0.2 percent) of the railroad that would be subject to new visual elements, the visual changes to the resource as a result of project implementation would be virtually imperceptible to the overall setting of the railroad's alignment within Kern County. Therefore, project implementation would not result in indirect visual impacts to P-15-002050 and no additional impacts are anticipated.

Historic-Period Archaeological Sites

As part of the cultural resources survey conducted for the project, seven previously unevaluated historic-period archaeological sites consisting of refuse scatters were identified within the project area (P-15-008768, -015933, -015934, -015935, -015941, and ESA-MMM-Site-001H and -002H). Many of these are comprised of domestic refuse such as sanitary cans, hole-in-top cans, hole-in-cap cans, beverage bottle fragments, and tableware fragments. Based on the presence of diagnostic artifacts, it appears the refuse scatters within the project area largely date to the early to mid-20th century.

Given the lack of clear associations with significant individuals or events, the Cultural Resources Assessment (Appendix F) recommends all seven previously unevaluated historic-period refuse scatters within the project area are not eligible for listing in the California Register under Criteria 1 and 2. Moreover, given that these are archaeological sites that lack architectural elements, the Cultural Resources Assessment (Appendix F) recommends these sites are not eligible for listing in the California Register under Criterion 3. Finally, given the surficial nature of these refuse scatters coupled with their lack of associations, their data potential has been exhausted as part of their recordation. Therefore, the Cultural Resources Assessment found these refuse scatters to not be eligible for listing in the California Register under Criterion 4 (Appendix F).

Moreover, based on the arguments provided above, these seven historic-period archaeological sites do not qualify as unique archaeological resources because they do not contain information needed to answer important scientific research questions, they have no special or particular quality such as being the oldest of its type or the best available example of its type, nor are they directly associated with a scientifically recognized important historic event or person.

Prehistoric Archaeological Sites

One prehistoric archaeological site, P-15-015942, was identified within the project area as a result of the SSJVIC records search and cultural resources survey. Based on the result of the current survey and XP1 investigation, the site is comprised of a sparse lithic scatter containing no subsurface deposits. Prehistoric archaeological sites of this nature are typically evaluated for inclusion for the California Register under Criterion 4 based on the site's potential to contain data that can answer regional research questions including but not limited to settlement and mobility, subsistence patterns, trade networks, and technology. Based on the results of the XP1 Investigation described above in Section 4.5.2, Environmental Setting, the HABs excavations failed to identify the presence of intact subsurface deposits associated with P-15-015942. Given the absence of subsurface deposits, the site contains no data potential and, therefore, is not eligible for listing in the California Register under Criterion 4 (Appendix F).

Moreover, based on the argument provided above, this prehistoric archaeological site does not qualify as unique archaeological resources because it does not contain information needed to answer important scientific research questions, it has no special or particular quality such as being the oldest of its type or the best available example of its type, nor is it directly associated with a scientifically recognized important prehistoric event or person.

Multicomponent Archaeological Sites

Two resources within the project area, P-15-015937 and -015938, are multicomponent archaeological sites consisting of historic-period refuse scatters and one piece of lithic debitage each. As discussed above, the refuse scatters within the project area are recommended not eligible for listing in the California due to a lack of clear associations and data potential. Therefore, the historic-period components of these two sites are both recommended not eligible based on the same reasoning.

The prehistoric components of these sites consist of one piece of lithic debitage at each site. These are isolated artifacts that lack clear cultural and chronological context. Therefore, the prehistoric components of these two sites are recommended not eligible for listing in the California Register.

Moreover, based on the arguments provided above, these two multicomponent archaeological sites do not qualify as unique archaeological resources because they do not contain information needed to answer important scientific research questions, they have no special and particular quality such as being the oldest of its type or the best available example of its type, nor are they directly associated with a scientifically recognized important prehistoric or historic event or person.

Isolates

One newly recorded isolate, ESA-MMM-ISO-001P, was within the project area. Due to the isolated nature and lack of clear cultural context, isolates are generally considered not to be significant resources. As such, ESA-MMM-ISO-001P is not recommended eligible for listing in the California Register.

Conclusion

As identified above, 12 of the 13 identified cultural resources within and immediately adjacent to the project area are recommended not eligible for listing in the California Register, and therefore

do not qualify as historical resources. Nor do they qualify as unique archaeological resources under Public Resources Code 21803.2(g).

One resource, P-15-002050 (Southern Pacific Railroad), may be eligible for listing in the California Register and, therefore, may qualify as a historical resource. However, this resource, located 85 feet outside of the project area and within the 200-foot Union Pacific Rail Road easement as identified on the proposed plans, would not be subject to direct or indirect impacts as a result of project implementation. Therefore, the project would not result in significant impacts to known cultural resources that qualify as historical resources pursuant to CEQA.

However, subsurface archaeological sensitivity review indicates Holocene-age Quaternary alluvial deposits are mapped at surface within the project area. These deposits encompass the entirety of human occupation within the western Mojave Desert, and are, therefore, of suitable age to preserve subsurface archaeological deposits. Further, the project area and its vicinity appear to have seen a moderate degree of activity throughout the prehistoric period as indicated by the number of seasonal campsites and lithic scatters in the project area's vicinity. Based on these variables, the project area has a moderate to high sensitivity for the presence of subsurface archaeological resources. Therefore, project-related ground disturbing activities have the potential to encounter previously unknown subsurface archaeological resources that may qualify as historical resources pursuant to CEQA. To reduce potentially significant impacts to previously unidentified historic cultural resources mitigation measures MM 4.5-1 through MM 4.5-3 would be implemented. Mitigation includes retaining a lead archaeologist, cultural sensitivity training, steps for discovery of a paleontological resources and historical resource, and a Cultural Resources Treatment Plan. With the incorporation of MM 4.5-1 through MM 4.5-3, impacts would be less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. Potential impacts to historic resources within these areas would be minimal. The construction and operation of the SCE upgraded structures and materials are not anticipated to result in impacts on cultural resources. SCE measures would be implemented, which include compliance with all applicable state and federal laws and regulations during construction and operation, including those regulations that relate to cultural resources. As such, impacts would be less than significant.

Mitigation Measures

MM 4.5-1: The project proponent/operator shall retain a Lead Archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior, 2011), to carry out all mitigation measures related to archaeological and historical resources during ground-disturbing activities. The contact information for this Lead Archaeologist shall be provided to the Kern County Planning and Natural Resources Department prior to the commencement of any construction activities on-site. Further, the Lead Archaeologist shall be responsible for ensuring the following employee training provisions are implemented during implementation of the project:

- a. Prior to commencement of any ground disturbing activities, the Lead Archaeologist, in consultation with the Native American Monitor(s), shall prepare Cultural Resources Sensitivity Training materials, including a Cultural Resources Sensitivity Training Guide, to be used in an orientation program given to all personnel working on the project. The training guide may be presented in video form. A copy of the proposed training materials, including the Cultural Resources Sensitivity Training Guide, shall be provided to the Planning and Natural Resources Department prior to the issuance of any grading or building permit.
- b. The project proponent/operator shall ensure all new employees or onsite workers who have not participated in earlier Cultural Resources Sensitivity Trainings shall meet provisions specified above.
- c. The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the Lead Archaeologist for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources.
- d. A copy of the Cultural Resources Sensitivity Training Guide/Materials shall be kept on-site and available for all personnel to review and be familiar with as necessary. It is the responsibility of the Lead Archaeologist to ensure all employees receive appropriate training before commencing work on-site.
- e. During implementation of the project, the services of Native American Monitors, as identified through consultation with appropriate Native American tribes, working under the supervision of the Lead Archaeologist, shall be retained by the project to monitor project-related ground-disturbing activities as identified in Mitigation Measure MM 4.5-2.

MM 4.5-2: Prior to the issuance of any grading or building permit, the project proponent shall submit to the Kern County Planning and Natural Resources Department a Cultural Resources Treatment Plan. The plan shall:

- a. Require that prior to conducting initial ground disturbance in the vicinity of prehistoric archaeological sites, and in coordination with the Lead Archaeologist and Native American Monitor(s), exclusion areas (i.e., the recorded boundaries of the archaeological sites and all areas within 50 feet thereof) shall be temporarily marked with exclusion markers or protective fencing as determined by the Lead Archaeologist in consultation with the Native American Monitor.
- b. Require that the construction zone shall be narrowed or otherwise altered to avoid any exclusion areas.
- c. Provide an overview of best management practices to be utilized during ground-disturbing construction activities to ensure protection of cultural resources.
- d. Outline the process for evaluation of any unanticipated cultural discoveries during project construction activities.

- e. Provide a Data Recovery Plan, if required, prepared by the Lead Archeologist in consultation with the Native American Monitor(s), for the recovery of known and unanticipated cultural discoveries that cannot be avoided or preserved in place.

MM 4.5-3: During implementation of the project, in the event that archaeological materials are encountered during the course of grading or construction, the project contractor shall cease any ground-disturbing activities within 50 feet of the find. The area of the discovery shall be marked off by temporary fencing that encloses a 50-foot radius from the location of the discovery. Signs shall be posted that establish it as an Environmentally Sensitive Area, and all entrance into the area shall be avoided until the discovery is assessed by the Lead Archaeologist and Native American Monitor. The Lead Archaeologist, in consultation with any Native American Monitor, shall evaluate the significance of the resources and recommend appropriate treatment measures. If further treatment of the discovery is necessary, the Environmentally Sensitive Area shall remain in place until all work is completed. Per California Environmental Quality Act (CEQA) Guidelines Section 15126.4(b)(3), project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources.

Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the Lead Archaeologist, in consultation with any Native American Monitor, shall develop additional treatment measures in consultation with the County of Kern (County), which may include data recovery or other appropriate measures. The County shall consult with appropriate Native American representatives in determining appropriate treatment for unearthened cultural resources if the resources are prehistoric or Native American in nature. Diagnostic archaeological materials with research potential recovered during any investigation shall be curated at an accredited curation facility. The Lead Archaeologist, in consultation with a designated Native American Monitor, shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to the Kern County Planning and Natural Resources Department and to the Southern San Joaquin Valley Information Center at California State University, Bakersfield.

Level of Significance after Mitigation

With implementation of the Mitigation Measures MM 4.5-1 through MM 4.5-3, impacts would be less than significant.

Impact 4.5-2: The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5.

As discussed above under Impact 4.5-1, part of the cultural resources survey conducted for the Project, seven previously unevaluated historic-period archaeological sites consisting of refuse scatters were identified within the project area (P-15-008768, -015933, -015934, -015935, -015941, and ESA-MMM-Site-001H and -002H). Many of these are comprised of domestic refuse such as sanitary cans, hole-in-top cans, hole-in-cap cans, beverage bottle fragments, and tableware

fragments. Based on the presence of diagnostic artifacts, it appears the refuse scatters within the project area largely date to the early to mid-20th century.

Given the lack of clear associations with significant individuals or events, the seven previously unevaluated historic-period refuse scatters within the Project area are recommended not eligible for listing in the California Register under Criteria 1 and 2. Moreover, given that these are archaeological sites that lack architectural elements, these sites are recommended not eligible for listing in the California Register under Criterion 3. Finally, given the surficial nature of these refuse scatters coupled with their lack of associations, their data potential has been exhausted as part of their recordation. Therefore, these refuse scatters are not eligible for listing in the California Register under Criterion 4.

Moreover, based on the arguments provided above, these seven historic-period archaeological sites do not qualify as unique archaeological resources because they do not contain information needed to answer important scientific research questions, they have no special or particular quality such as being the oldest of its type or the best available example of its type, nor are they directly associated with a scientifically recognized important historic event or person.

One prehistoric archaeological site, P-15-015942, was identified within the project area as a result of the SSJVIC records search and cultural resources survey. Based on the result of the current survey and XP1 investigation, the site is comprised of a sparse lithic scatter containing no subsurface deposits. Based on the results of the XP1 Investigation described in the previous section, the HABs excavations failed to identify the presence of intact subsurface deposits associated with P-15-015942. Given the absence of subsurface deposits, the site contains no data potential and, therefore, is not eligible for listing in the California Register under Criterion 4.

Two resources within the Project area, P-15-015937 and -015938, are multicomponent archaeological sites consisting of historic-period refuse scatters and one piece of lithic debitage each. As discussed above, the refuse scatters within the project area are recommended not eligible for listing in the California due to a lack of clear associations and data potential. Therefore, the historic-period components of these two sites are both recommended not eligible based on the same reasoning.

One newly recorded isolate, ESA-MMM-ISO-001P, was within the project area. Due to the isolated nature and lack of clear cultural context, isolates are generally considered not to be significant resources. As such, ESA-MMM-ISO-001P is not recommended eligible for listing in the California Register. Therefore, the project would not result in significant impacts to a known archaeological cultural resources pursuant to CEQA.

As indicated above, impacts to unknown resources could constitute a significant impact to the unidentified resource. However, with implementation of Mitigation Measures MM 4.5-1 through MM 4.5-3 listed above, as well as MM 4.5-4 below, which require cultural resources sensitivity training for construction workers, archaeological and Native American monitoring during construction, and appropriate treatment of unearthed archaeological resources during construction, potential impacts would be reduced to less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. While the majority of the improvement areas are flat and would require minimal to no ground disturbance, it is understood that some ground disturbance will be required, establishing temporary pull/splice sites, temporary landing zones, temporary guard structures, crossing structure temporary work areas, replacement structure temporary work areas, and underground temporary work areas. Therefore, there is the potential for ground disturbance to impact previously unknown archeological resources, which would represent a potential significant impact. However, implementation of SCE's existing maintenance and operation protocols, as well as adopted minimization measures for utility corridors within Edwards Air Force Base, any potential impacts would be reduced to less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-3, as well as MM 4.5-4 listed below.

MM 4.5-4: During implementation of the project, the services of both an Archaeological and Native American Monitor, working under the supervision of the Lead Archaeologist as identified through consultation with appropriate Native American tribes, shall be retained by the project proponent/operator to monitor, on a full-time basis, during ground-disturbing activities associated with project-related construction activities, as follows:

- a. All initial ground-disturbing activities within 50 feet of prehistoric archaeological sites within the project site shall be monitored by Native American Monitor(s) and Archaeological Monitor(s).
- b. During implementation of the project, Archaeological and Native American monitoring shall be conducted for all initial excavation or ground-disturbing activities. If no archaeological discoveries are made during the course of this monitoring, no additional monitoring will be required. If the Lead Archaeologist can demonstrate that the level of monitoring should be reduced or discontinued, or a need for continuing monitoring, the Lead Archaeologist, in consultation with the Kern County Planning and Natural Resources Department, may adjust the level of monitoring to circumstances as warranted.
- c. All ground disturbing activities within 100 feet of a grave site shall be monitored by Native American Monitor(s) and Archeological Monitor(s).
- d. The Lead Archaeologist and Native American Monitor(s) shall be provided all project documentation related to cultural resources within the project site prior to commencement of ground disturbance activities. Should the services of any additional individuals be retained (as the Lead Archaeologist, Archaeological Monitor, or Native American Monitor) subsequent to commencement of ground disturbing activities, such individuals shall be provided all proposed project documentation related to cultural resources within the project area,

prior to beginning work. Documentation shall include but not be limited to previous cultural studies, surveys, maps, drawings, etc. Any modifications or updates to project documentation, including construction plans and schedules, shall immediately be provided to the Lead Archaeologist, Archaeological Monitor, and Native American Monitor.

- e. The Archaeological Monitor(s) shall keep daily logs and the Lead Archaeologist shall submit monthly written updates to the Kern County Planning and Natural Resources Department and Native American Monitor. After monitoring has been completed, the Lead Archaeologist shall prepare a monitoring report that details monitoring results; assessment of inadvertent discoveries; communication with Tribal representatives; installation of, maintenance of, and guidance for environmentally sensitive areas; and general implementation of the required mitigation. The final monitoring report shall act as a record of compliance with guiding documents and mitigation and shall be submitted to the Kern County Planning and Natural Resources Department and the Southern San Joaquin Valley Information Center at California State University, Bakersfield.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.5-1 through 4.5-4, impacts would be less than significant.

Impact 4.5-3: The project would disturb any human remains, including those interred outside of formal cemeteries.

There is no indication, either from the archival research results of the archaeological survey, that any particular location in the project area has been used for human burial purposes in the recent or distant past. However, given the sensitivity for buried archaeological resources, the project could inadvertently uncover, or damage human remains, which would be a significant impact. Implementation of MM 4.5-5, would ensure that any human remains encountered are appropriately addressed, thus reducing impacts to less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. Because moderate site grading and fill would occur during construction activities, there is a potential for impacts to unknown buried human remains. Nonetheless, SCE would implement standard protocol and minimization measures which includes compliance with all applicable state and federal laws and regulations during construction and operation, including those regulations that relate to cultural resources and inadvertent discovery of human remains. Impacts are expected to be less than significant.

Mitigation Measures

MM 4.5-5: If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the California Environmental Quality Act Guidelines. Notification shall be made to the Kern County Planning and Natural Resources Department within 12 hours of contacting the Coroner. If the County Coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply. No work shall recommence on the site until all provisions of these reviews have occurred.

Level of Significance after Mitigation

With implementation of MM 4.5-5, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

An analysis of cumulative impacts takes into consideration the entirety of impacts that the projects discussed in **Chapter 3, Project Description**, and as shown in **Table 3-4, Cumulative Projects List**, of this EIR, would have on cultural resources. The geographic area of analysis of cumulative impacts for cultural resources includes the western Antelope Valley. This geographic scope of analysis is appropriate because the archaeological and historical resources within this area are expected to be similar to those that occur on the project site because of their proximity, and because the similar environments, landforms, and hydrology would result in similar land-use—and thus, site types. Similar geology within this vicinity would likely yield fossils of similar sensitivity and quantity. This is a large enough area to encompass any effects of the project on cultural resources that may combine with similar effects caused by other past, current, and reasonably foreseeable future projects, and provides a reasonable context wherein cumulative actions could affect cultural resources. Cumulative impacts to cultural resources in the western Antelope Valley could occur if other related projects, in conjunction with the proposed project, had or would have impacts on cultural resources that, when considered together, would be significant.

Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant cultural resources impact due to the potential loss of historical and archaeological cultural resources unique to the region. However, mitigation

measures are included in this EIR to reduce potentially significant project impacts to cultural resources during construction of the proposed project, which would reduce the project's incremental contribution to cumulative impacts. Implementation of Mitigation Measure MM 4.5-1 requires retention of a qualified archaeologist and MM 4.5-2 would require cultural resources sensitivity training for construction workers. Mitigation Measures MM 4.5-3 and MM 4.5-4 would require appropriate treatment and protection of unearthed paleontological and archaeological resources, should they be located during construction. This would include those that qualify as historical resources. Implementation of these four mitigation measures would reduce potential impacts to historical and archaeological cultural resources to a less-than-significant level. Additionally, although project construction is not anticipated to disturb human remains, the implementation of Mitigation Measures MM 4.5-5 would ensure the appropriate protocol is followed with regard to identifying and handling remains should they be inadvertently discovered.

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5 as described above, the project site would not result in significant impacts to cultural resources. Given this minimal impact and similar mitigation requirements for other projects in the western Antelope Valley, cumulative impacts to cultural resources would be less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The re-poling and re-conductoring of approximately 13 miles of existing SCE transmission lines do not include any occupied structures and all would be constructed in accordance with all applicable regulatory standards, including building codes and earthquake safe designs. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the re-conducted route, these off-site facilities would be fully maintained by SCE. Construction of new transmission structure would involve temporary ground disturbance around the new structure locations. Because moderate site grading and fill would occur during construction activities, there is a potential for impacts to historical and archaeological resources, as well as inadvertent discovery of not previously known human remains within these areas. Although there may be potential for impacts to unknown buried archaeological deposits, SCE will comply with all applicable state and federal laws and regulations during construction and operation, and will implement standard protocols within their right-of-way as previously adopted for both County land as well as utility corridors within Edwards Air Force Base (see Appendix B). As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts, and these necessary improvements are small parts of that overall project. Consequently, these impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-5.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.5-1 through 4.5-5, cumulative impacts would be less than significant.

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Section 4.6 Energy

4.6.1 Introduction

In accordance with the requirements under CEQA, this section provides a summary of the proposed project's anticipated energy needs, impacts, and conservation measures to determine the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The section includes relevant information and analyses that address the energy implications of the proposed project, the calculation procedures used in the analysis, and any assumptions or limitations.

The section of the EIR analyzes the energy implications of the project, focusing on the following energy resources: electricity, natural gas, and transportation energy. Specifically, each of these are evaluated in context with the construction and operation phases. Within the construction phase, activities associated with construction of proposed project are analyzed. This includes analyzing energy demand as a result of the use of heavy-duty construction equipment, on-road trucks, and construction workers commuting to and from the project site.

Within the operation phase, activities from the operation of proposed project are analyzed. This includes analyzing the required energy in the form of electricity and natural gas for scrap metal recycling, rebar production, building heating, cooling, lighting in the ancillary buildings (i.e. office, storeroom, vehicle maintenance, power control rooms, etc.), water demand and wastewater treatment, electronics, and other energy needs; transportation-fuels, primarily gasoline, for vehicles traveling to and from the proposed project.

This section provides the content and analysis required by Public Resources Code, Section 21100(b)(3), and described in Section 15126.2(b) and Appendix F of the *CEQA Guidelines* (AEP, 2021). Public Resources Code Section 21100(b) and Section 15126.4 of the *CEQA Guidelines* require that an EIR identify mitigation measures to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Section 15126.2(b) and Appendix F state that the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives.

In late 2018, the California Natural Resources Agency finalized updates to the 2018 *CEQA Guidelines* (California Natural Resources Agency, 2018). Appendix G was amended to now include the analysis of energy. Previously included in Appendix F, the Appendix G Checklist now provides energy criteria for the analysis of wasteful energy consumption and conflicts with state or local energy efficiency plans (California Natural Resources Agency, 2018).

4.6.2 Environmental Setting

Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, the capacity of a generator is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is 1 billion watt-hours.

Southern California Edison (SCE) is the utility provider for the project site. SCE provides electricity to approximately 15 million people, 180 incorporated cities, 15 counties, 5,000 large businesses, and 280,000 small businesses throughout its 50,000-square-mile service area (SCE, 2023). In 2021, SCE's total electricity sales in the SCE service area was estimated to be 82,048 GWh (Edison, 2021). SCE produces and purchases their energy from a mix of conventional and renewable generating sources. **Table 4.6-1: Electric Power Mix Delivered to Retail Customers in 2021**, shows the electric power mix that was delivered to retail customers for SCE compared to the statewide 2021 power mix. Total electricity sales/usage for SCE is shown in **Table 4.6-1** compared to the statewide electricity sales/usage from the most recent year for which data is available. SCE is required to commit to the use of renewable energy sources for compliance with the Renewable Portfolio Standards (RPS). In 2021, SCE procured 35.8 percent of its energy portfolio from renewable sources which compiles with the RPS of 33 percent by 2020 (SCE, 2022a).

Table 4.6-1: Electric Power Mix Delivered to Retail Customers in 2021

Energy Resource	2021 SCE	2021 CA Power Mix (for comparison)
Electricity Total Sales/Usage (million kilowatt-hours)	85,048	277,764
Eligible Renewable	31.4%^a	33.6%^a
Biomass & bio-waste	0.1%	2.3%
Geothermal	5.7%	4.8%
Eligible hydroelectric	0.5%	1.0%
Solar	14.9%	14.2%
Wind	10.2%	11.4%
Coal	0.0%	3.0%
Large Hydroelectric	2.3%	9.2%
Natural Gas	22.3%	37.9%
Nuclear	9.2%	9.3%
Other	0.2%	0.2%
Unspecified sources of power^b	34.6%	6.8%
Total^c	100%	100%

NOTES:

^a Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the previous year. The renewable percentage above does not reflect Renewable Portfolio Standard compliance, which is determined using a different methodology.

^b “Unspecified sources of power” means electricity from transactions that are not traceable to specific generation sources.

^c Totals may not add up exactly due to rounding.

SOURCES:

California Energy Commission, Total System Electric Generation. Available at: <https://www.energy.ca.gov/data-reports/energyalmanac/california-electricity-data/2021-total-system-electric-generation>. Accessed October 2022. Southern California Edison. SCE’s Power Content Label. Available at: <https://www.sce.com/sites/default/files/customfiles/Web%20files/2021%20Power%20Content%20Label.pdf>. Accessed October 2022.

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs but relies upon out-of-state imports for nearly 90 percent of its natural gas supply (CEC, 2022b). A majority of natural gas consumed in California is for electricity generation, along with the industrial, residential, and commercial sections (CEC, 2022b). Among energy commodities consumed in California, natural gas accounts for about one-third of the total primary energy consumption in terms of British thermal units (BTU) (USEIA, 2022). Natural gas is typically measured in terms of cubic feet (cf) or BTU.

The annual natural gas sale to customers in 2021 (the most recent year for which data is available) is shown in **Table 4.6-2, Natural Gas Delivered to Retail Customers in 2021**. Total natural gas sales/usage for SoCalGas is compared to the statewide natural gas sales/usage from the corresponding year in **Table 4.6-2**. It should be noted the project does not include the use of Natural Gas.

Table 4.6-2: Natural Gas Delivered to Retail Customers in 2019

Energy Resource	2021 SoCalGas ^a	2021 California (for comparison) ^b
Natural Gas Total Sale/Usage (million cubic feet)	891,695	2,092,612

SOURCES:

^a Annual amount calculated based on total throughput per day for 365 days. 2022 California Gas Report, California Gas and Electric Utilities, p. 184; Available at:

https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf. Accessed October 2022.

^b United States Energy Information Administration, Natural Gas Consumption by End Use. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm. Accessed October 2022.

Transportation

According to the Energy Information Administration (EIA), transportation accounts for approximately 34 percent of California’s total energy consumption (USEIA, 2020). The annual transportation fuel consumption of diesel and gasoline in 2021 in California (the most recent year for which statewide data is available) is shown in **Table 4.6-3, Transportation Fuel Consumption in 2021**. Total transportation fuel consumption of diesel and gasoline for Kern County is shown in

Table 4.6-3 and is compared to statewide values. The estimated Kern County and Statewide transportation fuel consumption is based on retail sale data from the CEC.

Table 4.6-3: Transportation Fuel Consumption in 2021

Energy Resource	Kern County	California (for comparison)
Diesel (million gallons)	272.4	3,744
Gasoline (million gallons)	406	13,818

SOURCE:

CEC California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2021b. Available at: <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>. Accessed October 2022. Diesel is adjusted to account for retail (50.3%) and non-retail (49.7%) diesel sales.

4.6.3 Regulatory Setting

Federal

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described below in Section 2.a(1)(d), (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.

Executive Order 13432

In response to the Massachusetts v. Environmental Protection Agency ruling, President Bush signed Executive Order 13432 on May 14, 2007, directing the USEPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the

Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation.

Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards

On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. In August 2012, standards were adopted for model year 2017 through 2025 passenger cars and light-duty trucks. By 2020, new vehicles are projected to achieve 41.7 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 213 grams of CO₂ per mile (Phase II standards). By 2025, vehicles will achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile. According to the USEPA, under these standards a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle (NHTSA, 2012). In 2017, the USEPA recommended no change to the GHG standards for light-duty vehicles for model years 2022–2025.

In August 2018, the USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule that would maintain the Corporate Average Fuel Economy (CAFE) and CO₂ standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO₂ standards for model year 2020 are 43.7 mpg and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. The proposal, if adopted, would also exclude CO₂-equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020 (NHTSA, 2018). The proposed SAFE Vehicles Rule's public comment period was extended to October 26, 2018 (NHTSA, 2020).

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the state's GHG and zero-emissions vehicle programs under CAA Section 209 (USEPA, 2019). The withdrawal of the waiver became effective November 26, 2019. The USEPA also published the final rule for the One National Program on Federal Preemption of State Fuel Economy Standards that finalizes critical parts of the SAFE Vehicles Rule and makes clear that federal law preempts state and local tailpipe GHG emissions standards as well as zero-emissions vehicle mandates. In November 2019, California and 23 other states, environmental groups, and the cities of Los Angeles and New York, filed a petition with the U.S. Court of Appeals for the District of Columbia Circuit, for the USEPA to reconsider the published rule (State of California v. Chao, 2019). In April 2020, the final USEPA and NHTSA SAFE Vehicles Rule was published in the Federal Register, setting fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026 (USEPA, 2019).

On January 20, 2021, President Biden issued Executive Order 13990 "Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis" directing the USEPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks," promulgated in April 2020. On February 8, 2021, the United

States Court of Appeals for the District of Columbia Circuit issued an order granting the Biden Administration's motion to stay litigation over Part 1 of SAFE Rule. Consistent with President Biden's executive order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, USEPA and NHTSA are now evaluating whether and how to replace the SAFE Rule (*Union of Concerned Scientists v. NHTSA*, 2021). On April 28, 2021, the EPA reconsidered the withdrawal of the waiver of preemption for California's zero emission vehicle (ZEV) programs and GHG emission standards within California's Advanced Clean Car program for purposes of rescinding that action under the Clean Air Act. On March 14, 2022, EPA rescinded their 2019 waiver withdrawal, thus bringing back into force the 2013 Advanced Clean Car program waiver, including a waiver of preemption for California's ZEV sales mandate and GHG emissions standards (FR, 2022). EPA ruled to revise the greenhouse gas emissions standards under the Clean Air Act section 202(a) for light-duty vehicles for 2023 and later model years to make the standards more stringent (FR, 2021). Moreover, on August 5, 2021, the President signed an executive order that targets making half of all new vehicles sold in 2030 zero-emissions vehicles, including battery electric, plug-in hybrid electric, or fuel cell electric vehicles (White House, 2021).

On December 30, 2021, the USEPA finalized the federal greenhouse gas emissions standards for passenger and light trucks for model years 2023 through 2026 (USEPA, 2021). This rule prompts auto makers to use clean technologies available today and incentivizes them to produce vehicles with zero and near-zero emissions technology. The final rule revises the current SAFE rules standards, beginning in model year 2023 and increases in stringency year over year through model year 2026. The standards finalized for model year 2026 establish the most stringent GHG standards ever set for the light-duty vehicle sector. The final rule sets a stringency increase in model year 2023 by almost 10% (compared to the SAFE rule standards of model year 2022), followed by stringency increases of 5% for model year 2024, 6.6% for model year 2025, and 10% for model year 2026. The USEPA projects that the final standards will result in a reduction of 3.1 billion tons of GHG emissions by 2050 and will also reduce emissions of some criteria pollutants and air toxics.

Heavy-Duty Engines and Vehicles Fuel Efficiency Standards

On October 25, 2010, the USEPA and the United States Department of Transportation (USDOT) proposed the first national standards to reduce GHG and improve fuel efficiency of heavy-duty trucks and buses (also known as "Phase 1"). For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and up to a 15 percent reduction for diesel vehicles by 2018 model year (12% and 17% respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles (includes other vehicles like buses, refuse trucks, concrete mixers; everything except for combination tractors and heavy-duty pickups and vans), the agencies are proposing engine and vehicle standards starting in the 2014 model year, which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by the 2018 model year. Building on the success of the standards, the USEPA and USDOT jointly finalized additional standards (called "Phase 2") for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons.

State

Senate Bill 1137

SB 1137 (CLI, 2022h) prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.

Title 24 of the California Code of Regulations (California Building Code)

Title 24 of the California Code of Regulations is the California Building Code. It governs all aspects of building construction. Part 6 of the Building Code includes standards mandating energy efficiency measures in new construction. The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The 2022 update to the Title 24 standards became effective January 1, 2023.

The Energy Efficiency Standards for Residential and Nonresidential Buildings focuses on several key areas to improve the energy efficiency of renovations and addition to existing buildings as well as newly constructed buildings and renovations and additions to existing buildings. The most significant efficiency improvements to the residential Standards include the encouragement of electric heat pumps, expands solar photovoltaic (PV) and battery storage standards, establishes electric-ready requirements for new homes, and improvements for attics, walls, water heating, ventilation, and lighting (CEC, 2021a). The most significant efficiency improvements to the nonresidential Standards include alignment with the ASHRAE 90.1 2017 national standards, battery storage standards, and strengthens ventilation standards. The 2022 updates to the Title 24 standards also include changes made throughout all of its sections to improve the clarity, consistency, and readability of the regulatory language. Furthermore, the standards require that enforcement agencies determine compliance with state regulations (24 CCR Part 6) before issuing building permits for any construction (CEC, 2021a).

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and

resource efficiency; and (5) Environmental air quality” (CBSC, 2022). The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the State and establishes mandatory measures for new residential and nonresidential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality (CBSC, 2022). The CALGreen Code was most recently updated in 2022 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2023.

The State has adopted regulations to increase the proportion of electricity from renewable sources. On September 10, 2018, Governor Brown signed SB 100, which increased California’s RPS from 33 percent by 2020 renewable resources to 50 percent by December 31, 2026, and 60 percent by December 31, 2030, while requiring retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. In addition, SB 100 requires that CARB plan for 100 percent eligible renewable energy resources and zero carbon resources by December 31, 2045. Electricity providers, including the provider for the project site, SCE, is required to update future plans to meet applicable SB 100 requirements.

Senate Bill 1020, Clean Energy, Jobs, and Affordability Act of 2022, approved September 16, 2022, revises SB 100, to require that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to end use customers by December 31, 2035, 95 percent of all retail sales to end users by December 31, 2040, and 100 percent of all retail sales to end users by December 31, 2045, and 100 percent of electricity procured to serve all state agencies by December 31, 2035 (CLI, 2022f).

On September 16, 2022, Governor Gavin Newsom signed SB 1075, Hydrogen: green hydrogen: emissions of greenhouse gases, which requires CARB, CEC, California Public Utilities Commission (CPUC), and the California Workforce Development Board to conduct an evaluation on hydrogen by June 1, 2024, including policy recommendations to accelerate the production and use of hydrogen, and specifically green hydrogen, and its role in decarbonizing the electrical and transportation sectors (CLI, 2022g).

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state’s electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state’s economy; and protect public health and safety (Public Resources Code Section 25301[a]). The 2021 Integrated Energy Policy Report (CEC, 2022a), the latest published report from CEC, provides the results of the CEC’s assessments related to energy sector trends, building decarbonization, energy reliability, decarbonizing California’s gas system, the California energy demand forecast, and quantifying the benefits of the Clean Transportation Program.

Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase the procurement of electricity from renewable sources from 33 percent to 50 percent; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

Cap-and-Trade Program

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as a key strategy CARB employed to help California meet its GHG reduction targets for 2020 and will continue to assist in the efforts to achieve the GHG reduction goals in 2030, and potentially beyond. Pursuant to its authority under AB 32, CARB has designed and adopted a California Cap-and-Trade Program to reduce GHG emissions from major sources (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32’s emission-reduction mandate of returning to 1990 levels of emissions by 2020 (17 CCR Sections 95800 to 96023).

Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 metric tons CO₂e per year [MT CO₂e/year]) and declines over time, and facilities subject to the cap may trade permits to emit GHGs. The statewide cap for GHG emissions from the capped sectors commenced in 2013 and declines over time, achieving GHG emission reductions throughout the Program’s duration (17 CCR Sections 95811, 95812). On July 17, 2017, the California legislature passed Assembly Bill 398, extending the Cap-and-Trade Program through 2030.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 and 2030 statewide emission limits will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. In other words, as climate change is a global occurrence and the effects of GHG emissions are considered cumulative in nature, a focus on aggregate GHG emissions reductions, rather than source-specific reductions, is warranted.

If California’s direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California’s direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state’s emissions forecasts and the effectiveness of direct regulatory measures.

With the passage of AB 1279, the state has a statutory target to achieve carbon neutrality by 2045 and it is clear that additional GHG reductions will be required over this decade to achieve the accelerated 2030 target (CARB, 2022o). This will require changes to all major programs to increase their stringency between now and 2030 resulting in reductions in GHG emissions. As these GHG

reductions increase, there will be less reliance on the Cap-and-Trade Program to “fill the gap” to meet the accelerated 2030 reduction target. Since the timing of major program changes is uncertain, the Cap-and-Trade Program must continue to be able to scale across a range of possibilities, including potential program design and annual cap changes (CARB, 2022o).

California Environmental Quality Act

In accordance with CEQA and Appendix F, Energy Conservation, of the State CEQA Guidelines, and to assure that energy implications are considered in project decisions, EIRs are required to include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. In addition, while not described or required as significance thresholds for determining the significance of impacts related to energy, Appendix F provides the following topics for consideration in the discussion of energy use in the CEQA Compliance Checklist as well as in the supporting documentation to the extent the topics are applicable or relevant to the proposed project:

The proposed project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;

- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and
- The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Local

Kern County General Plan

The goals, policies, and implementation measures in the Energy Element of the Kern County General Plan (Kern, 2009) applicable to energy, as related to the project, are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the project. Therefore, they are not listed below.

Chapter 5. Energy Element

5.4.5. Solar Energy Development

Goal

Goal 1: Encourage safe and orderly commercial solar development.

Policies

- Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuel and improve air quality.
- Policy 2: The County should attempt to identify and remove disincentives to domestic and commercial solar energy development.
- Policy 3: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.
- Policy 4: The County should encourage solar development in the desert and valley regions previously disturbed, and discourage development of energy projects on undisturbed land supporting State or federally protected plant and wildlife species.

Implementation Measures

- Measure A: The County shall continue to maintain, and update as necessary, provisions in the Kern County Zoning Ordinance to provide adequate development standards for commercial solar energy development.
- Measure B: The County should work with affected State and federal agencies and interest groups to establish consistent policies for solar energy development.

4.6.4 Impacts and Mitigation Measures

Methodology

This analysis addresses the proposed project's (both on-site and off-site) potential energy usage associated with the on-site activities as well as the off-site improvements associated with a water line, traffic improvements, and power and telecommunication lines. The electricity and fuel consumption for both on-site and off-site for both construction and operation is assessed. Specific analysis methodologies are discussed below. The assessment presented herein is based in part on the *Greenhouse Gas and Energy Technical Report* (ESA, 2023e) prepared for the project. A full copy of the report is provided in Appendix G1 of this EIR.

Construction

Construction of the proposed project would be implemented in subphases. Project construction is expected to commence in 2024 and last for 24 months with operations beginning in 2026. Construction energy consumption would result primarily from transportation fuels (e.g., diesel and gasoline) used for haul trucks, heavy-duty construction equipment, and construction workers traveling to and from the project site. Construction activities can vary substantially from day to day, depending on the specific type of construction activity and the number of workers and vendors traveling to the project site (see Appendix G1 for detailed construction assumptions). This analysis considers these factors and provides the estimated maximum construction energy consumption for the purposes of evaluating the associated impacts on energy resources from both the on-site and off-site construction activities.

Electricity

Construction electricity was estimated for the energy consumed off-site related to treatment and conveyance of water to the project site for dust control. In addition, electricity from water conveyance for dust control was also calculated based on the estimated exposed area and water needs to cover the area during construction activity. Default CalEEMod water electricity intensity factors were used to convert the volume of water needed to electricity demand from water conveyance.

Natural Gas

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas is not expected to be consumed during project construction or off-site improvement construction activities. Therefore, natural gas associated with construction activities was not calculated.

Transportation Fuels

Fuel consumption from on-site and off-site heavy-duty construction equipment were calculated based on the equipment mix and usage factors provided in the CalEEMod construction output files included in Appendix G1. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour from CARB's off-road vehicle (OFFROAD) model. Fuel consumption from construction on-road worker, vendor, and delivery/haul trucks was calculated using the trip rates and distances provided in the emissions modeling worksheets and CalEEMod construction output files. Total VMT for these on-road vehicles were then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using CARB's EMFAC2021 model. EMFAC provides the total annual VMT and fuel consumed for each vehicle type. CalEEMod default trip lengths were used for worker commutes while vendor, management visits, concrete, and haul truck trips were taken from emissions modeling worksheets that used EMFAC2021 emission factors. Consistent with CalEEMod, construction worker trips for the proposed project were assumed to include a mix of light-duty gasoline automobiles and light-duty gasoline trucks. Construction vendor trucks were assumed to be a mix of medium-heavy-duty and heavy-duty diesel trucks and concrete and haul trucks were assumed to be heavy-duty diesel trucks. Refer to Appendix G1 for detailed energy calculations.

The energy usage required for project construction as well as the off-site improvements have been estimated based on the number and type of construction equipment that would be used during project construction by assuming a conservative estimate of construction activities (i.e., maximum daily equipment usage levels) during the relevant timeframe for such construction activities. Energy for construction worker commuting trips has been estimated based on the predicted number of workers for the various phases of construction and the estimated VMT based on the conservative values in the CalEEMod and EMFAC2021 models. The assessment also includes a discussion of the proposed project's compliance with relevant energy-related regulatory requirements that would minimize the amount of energy usage during construction.

The construction equipment and haul trucks would likely be diesel-fueled, while the construction worker commute vehicles would primarily be gasoline-fueled. For the purposes of this assessment, it is conservatively assumed that all heavy-duty construction equipment and haul trucks would be

diesel-fueled. The estimated fuel economy for heavy-duty construction equipment is based on fuel consumption factors from the CARB OFFROAD emissions model, which is a State-approved model for estimating emissions from off-road heavy-duty equipment. The estimated fuel economy for haul trucks and worker commute vehicles is based on fuel consumption factors from the CARB EMFAC emissions model, which is a State-approved model for estimating emissions on-road vehicles and trucks. Both OFFROAD and EMFAC are incorporated into CalEEMod. However, emissions for worker, vendor, and concrete/haul trucks were calculated outside of CalEEMod using emission factors from EMFAC2021 to provide a more detailed and accurate account of truck emissions.

Operation

On-Site

Operation of the proposed project would require energy in the form of electricity for building heating, cooling, lighting, water demand and water and wastewater treatment, electronics, and other energy needs, and transportation-fuels, primarily gasoline, for vehicles traveling to and from the project site.

Offsite Improvements

Water Line

Although the new water line would transport water to the proposed site there would not be any energy consumption associated with the pipeline itself. Therefore, no operational energy uses are anticipated from the water line.

Traffic Improvements

Once completed, the traffic improvements would not consume energy except for minimal amounts of energy consumed from the addition of traffic signals and from periodic inspections and maintenance. However, operational inspection and maintenance activities for the traffic improvements would be conducted as part of the overall inspection and maintenance activities of the existing roads. Thus, the net change in operational energy consumption and inspection and maintenance emissions from the traffic improvements would be minimal and are addressed qualitatively.

Power and Telecommunication

The power and telecommunication lines would convey electricity and data, they would not consume energy directly. During operation of the power and telecommunication lines, minimal amounts of energy could be consumed from indirect activities including periodic inspections and maintenance. However, operational inspection and maintenance activities for the new power and telecommunication lines would be conducted as part of the overall inspection and maintenance activities of the existing lines. Thus, the net change in operational inspection and maintenance emissions from the project's new power and telecommunication lines would be minimal and are addressed qualitatively.

Electricity

The proposed project would include approximately 63 acres of ground-mounted solar panels, which is intended to generate 25,550-megawatt hours (MWh) per year of electricity for on-site use to power the electric arc furnace (EAF) and the ladle metallurgy station (LMS). Additional energy sourced from SCE would be required to power the remaining portions of the facility. A substation would be installed on the project site to support the ground-mounted solar panels. SCE will be also connected to the same substation, but the project will not be able to export power to the grid. The proposed project's estimated electricity demand to be sourced from SCE was analyzed relative to SCE's existing energy supplies available to serve the project site in 2022 to determine if the utilities would be able to meet the proposed project's energy demands. Annual consumption of electricity (including electricity usage associated with the supply and conveyance of water) from project operations was calculated using demand factors provided in CalEEMod, which are based on the 2019 Title 24 standards, which went into effect on January 1, 2020. Energy usage from water demand (e.g., electricity used to supply, convey, treat, and distribute) are estimated herein based on the new buildings and facilities proposed by the project. The assessment also includes a discussion of the proposed project's compliance with relevant energy-related regulatory measures, that would minimize the amount of energy usage during operation.

Natural Gas

The proposed project would not include natural gas infrastructure and thus would not have any building natural gas demand.

Transportation Fuels

Energy for transportation from workers and visitors traveling to and from project site is estimated based on the predicted number of trips to and from the site. Mobile emissions were estimated based on emissions factors from EMFAC along with VMT values based on the Transportation Impact Study to estimate on-road mobile source emissions (LAV, 2023). The VMT associated with the Traffic Impact Study are based on local trip distances to and from the project site. Diesel fuel consumption accounts for fuel reduction from the incorporation of electric vehicles under the Advanced Clean Truck Program prior to 2035. Refer to VMT data and energy calculations in Appendix G1. The proposed project consumption is compared to both supply and infrastructure availability.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify, per Appendix G of the *CEQA Guidelines*, a project would have a significant impact on energy and energy resources if it would:

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Project Impacts

Impact 4.6-1: The project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Construction

On-Site and Off-Site

It is anticipated that construction activities would commence as early as the second quarter of 2024 with full build-out occurring in the second quarter of 2026, for a total of 24 months of construction. During construction of the proposed project, energy would be consumed in the form of electricity for powering the construction trailers (lights, electronic equipment, and heating and cooling) and exterior uses, such as lights, water conveyance for dust control, and other construction activities. Natural gas would not be for construction purposes. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the project site, approximately 515 construction workers per day travel to and from the project site, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities). **Table 4.6-4: Proposed Project Construction Energy Usage**, provides a summary of the annual average electricity, gasoline fuel, and diesel fuel estimated to be consumed during construction of the proposed project.

Table 4.6-4: Proposed Project Construction Energy Usage

Energy Type	Total Quantity ^a	Annual Average Quantity During Construction ^{b, c}
Electricity		
Temporary Construction Trailer	52 MWh	26 MWh
Electricity from Water (Dust Control)	292 MWh	146 MWh
Electric Offroad Equipment	2,044 MWh	1,022 MWh
Off-Site (Power & Telecommunication)	27 MWh	13 MWh
Total Electricity	2,415 MWh	1,217 MWh
Gasoline		
On-Site On-Road Construction Equipment	472,179 gallons	236,090 gallons
Off-Site (Power & Telecommunication)	8,165 gallons	7,147 gallons
Total Gasoline	480,344 gallons	243,237 gallons
Diesel		
On-Road Construction Equipment	488,595 gallons	244,297 gallons
Off-Road Construction	3,380,569 gallons	1,690,285 gallons
Off-Site (Power & Telecommunication)	183,046 gallons	160,220 gallons
Total Diesel	4,052,210 gallons	2,094,802 gallons

^a Detailed calculations are provided in Appendix G1 and information regarding energy consumption for the power and telecommunication lines can be found in Appendix G2.

^b Totals may not add up due to rounding of decimals.

^c Fuel totals include water line construction, traffic improvements, and power and telecommunication line construction that occur in 2025. Traffic improvements occurring in 2041 would last less than 20 days and fuel consumption would be negligible.

SOURCE: ESA, 2023e; CalEEMod, 2022; EMFAC2021.

Electricity

During construction of the proposed project, electricity would be consumed, on a limited basis, to power lighting, electric equipment, and supply and convey water for dust control. Electricity would be supplied to the project site by SCE and would be obtained from the existing electrical lines that connect to the project site.

As shown in **Table 4.6-4**, annual average construction electricity usage would be approximately 1,194 MWh. The electricity demand would be within the supply and infrastructure capabilities of SCE (which reported 82,048 GWh of total energy sales in 2021) (SCE, 2022a). The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. Electricity use from construction would be short-term, limited to working hours, used for necessary construction-related activities, and represent a small fraction of the proposed project's net annual operational electricity. Therefore, the proposed project would not result in a wasteful, inefficient, and unnecessary consumption of energy associated with electricity used for construction, and impacts would be less than significant.

Natural Gas

As previously stated above, construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support project construction activities; thus, there would be no expected demand generated by construction of the proposed project. Therefore, the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy associated with natural gas used for construction and impacts would be less than significant.

Transportation Energy

Table 4.6-4 reports the estimated amount of petroleum-based transportation energy that could potentially be consumed during project construction based on the conservative set of assumptions provided in Appendix G1. During project construction, on- and off-road vehicles would consume an estimated annual average of approximately 236,090 gallons of gasoline fuel and approximately 1,934,582 gallons of diesel over the approximately 24 months of construction.

Construction of the proposed project would utilize fuel-efficient trucks and equipment consistent with federal and State regulations, such as fuel efficiency regulations in accordance with CARB's Pavley Phase I and II standards and the revised SAFE Vehicles Rule, the anti-idling regulation in accordance with CCR, Title 13, Section 2485, and fuel requirements in accordance with CCR, Title 17, Section 93115, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation (CARB, 2022h). As such, the proposed project would comply with State measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels. While these regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations discussed above would also result in fuel savings from the use of more fuel-efficient engines. Diversion of mixed construction and demolition debris would reduce truck trips to landfills and increase the amount of waste recovered (e.g., recycled, reused, etc.) at material recovery facilities, thereby further reducing transportation fuel consumption.

Based on the analysis above, construction would utilize energy only for necessary on-site activities and to transport construction materials, excavated fill, and demolition debris to and from the project site. As discussed above, idling restrictions and the use of cleaner, energy-efficient equipment would result in less fuel combustion and energy consumption and, thus, reduce the proposed project's construction-related energy use. Therefore, the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy and impacts associated with transportation fuels for construction would be less than significant.

Operation

On-Site

During operation of the proposed project, energy would be consumed for multiple purposes, including, but not limited to, the manufacturing of rebar (micro mill), HVAC, refrigeration, lighting, and the use of electronics, equipment, and appliances. Energy would also be consumed during project operations related to water usage, solid waste disposal, and vehicle trips. **Table 4.6-5, Proposed Project Operational Electricity Usage**, displays the proposed project's energy demand from electricity, gasoline, and diesel.

Table 4.6-5: Proposed Project Operational Electricity Usage

Energy Type	Annual Quantity ^{b,c}
Electricity	
Proposed Project	
Building Energy	248,256 MWh
Water Treatment and Conveyance	1,102 MWh
Offroad Mobile Equipment	173 MWh
Solar Array	(25,550 MWh)
Proposed Project Subtotal	250,361 MWh
Diesel and Gasoline	
Proposed Project	
Gasoline – Mobile Sources	335,751 gallons
Diesel – On-road Mobile Sources	1,567,458 gallons
Diesel – Offroad Mobile Sources	301,831 gallons
Diesel – Fuel Tanks	52,000 gallons
Diesel – Emergency Generators	959 gallons
Gasoline – Total	335,751 gallons
Diesel – Total	1,922,248 gallons

MWh = megawatt-hours

cf = cubic feet

^aDetailed calculations are provided in Appendix G1.

^bTotals may not add up due to rounding of decimals.

^cSolar PV generation not included in electricity totals.

SOURCE: ESA, 2023e.

Electricity

Project operation will increase the demand for electricity resources including for water supply, conveyance, distribution, and treatment. The proposed project's estimated operational electricity demand, including from water demand, is provided in **Table 4.6-5**. As shown in **Table 4.6-5**, the proposed project would result in a projected consumption of electricity totaling approximately

250,361 MWh per year. Upon activation of the solar array, the proposed project would generate approximately 25,550 MWh of solar-generated electricity annually to power the EAF and LMS within the micro mill facility.

For the 2021 fiscal year, SCE had an annual electric sale to customers of approximately 82,048,000 MWh (SCE, 2022a). The proposed project represents approximately 0.3 percent of the SCE network sales for 2021. In addition, the CEC forecasts that SCE's peak demand in the project buildout year of 2026, would be approximately 26,000 MW (CEC, 2018). Under peak conditions, the proposed project would consume a net increase of 250,361 MWh on an annual basis which is equivalent to a peak of 29.8 to 56.8 MW (assuming 8,760 hours or 4,380 hours per year of active electricity demand). To further reduce potential impacts the project would implement MM 4.6-1 which would require the project to incorporate energy conservation features to reduce operational energy consumption of the project. The design features could include but are not limited to LEED Silver designed buildings, light colored buildings, LED lighting fixtures, increased EV parking stalls, and utilizing high efficiency electric motors. Thus, with MM 4.6-1 impacts related to electrical supply and infrastructure capacity would be less than significant.

As discussed previously, the proposed project would comply with the applicable provisions of Title 24 and the CALGreen Code in effect at the time of building permit issuance. The proposed project would be designed to include numerous energy saving features that would allow the proposed project to comply with the Title 24 standards and achieve energy savings required by state regulations. Per compliance with the CALGreen Code, new construction requires energy and water efficient fixtures and fittings, energy efficient mechanical systems, light pollution reduction, site development best practices, sub metering, water efficient landscapes, recycling, and superior weather resistance and moisture management for buildings. Therefore, with the incorporation of these features, operation of the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of electricity.

Natural Gas

The proposed project would not include any natural gas infrastructure and thus would not have any building natural gas demand. Therefore, operation of the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of natural gas.

Transportation Energy

The proposed project's estimated operational transportation fuel demand is provided in **Table 4.6-5**. As discussed previously, the proposed project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The proposed project would encourage alternative modes of transportation.

Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption (BP, 2021). The proposed project would comply with CAFE and SAFE standards, which would result in more efficient use of transportation fuels (lower consumption). Project-related vehicles would also comply with Pavley Standards, which are designed to reduce vehicle GHG emissions by mandating

increasingly stringent emissions standards on new vehicles but would also result in fuel savings from more efficient engines in addition to compliance with CAFE standards.

The proposed project would locate a rebar plant in California which would deliver product to California and Mexico. As discussed in the traffic impact study report (LAV, 2023), without the proposed project bulk steel materials need to be imported from out of state (Washington, Utah, Oregon, and Arizona) into California. The proposed project location would generate a 41 percent reduction in average miles traveled by the Pacific Steel Group fleet and would reduce annual VMT by approximately 7,015,071 miles, thus reducing GHG emissions (LAV, 2023). Thus, the proposed project supports a reduction in VMT over the state, in accordance with the goals of the 2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS).

As discussed in detail above, the proposed project would not conflict with the 2022 RTP/SCS goals and strategies intended to reduce VMTs and meet CARB's GHG reduction goals. Therefore, the proposed project would not conflict with the actions and strategies contained in the 2022 RTP/SCS.

Based on the above, the proposed project would minimize operational transportation fuel demand in line with state, regional, and County goals. Therefore, operation of the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy and with the implementation of Mitigation Measures MM 4.3-1 through MM 4.3-4, as described in Section 4.3, *Air Quality*, impacts would be less than significant.

Off-site Improvements

Long-term operation of the off-site improvements would not result in direct consumption of energy. Rather, during operation of the power and telecommunication lines minimal amounts of fuel could be generated from periodic inspections and maintenance operations. Typical operational maintenance activities of both the power and telecommunication lines would include the use of service vehicles traveling on existing access roads. The project would result in limited lengths of new power and telecommunications lines and as such the new segment is already part of an existing inspection and maintenance schedule. Operational inspection and maintenance activities for the new power and telecommunication lines would be conducted as part of the overall inspection and maintenance activities of the existing lines. Thus, the net change in operational inspection and maintenance fuel consumption from the project's new power and telecommunication lines would be minimal.

As previously stated, once completed, the traffic improvements would not generate emissions except for minimal amounts of energy consumed from the addition of traffic signals and from periodic inspections and maintenance. Minimal indirect emissions would be generated from the operation of the signal lights. Operational inspection and maintenance activities for the new signal lights would be conducted as part of the overall inspection and maintenance activities of the existing signal lights in the area. Thus, the net change in operational inspection and maintenance emissions from the project's new signal lights would be minimal.

Although the new water line would transport water to the proposed site there would not be any operational emissions associated with the pipeline itself. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through MM 4.3-4, (see **Section 4.3**, *Air Quality* for full Mitigation Measure), as well as **MM 4.6-1** below:

MM 4.6-1: The proposed Project, shall to the extent feasible and to the satisfaction of the Kern County Planning Department incorporate the following energy conservation and design features to reduce the level of energy consumption of the proposed project. The following list is non-inclusive of all potential mitigation that may be included and may be added to at the discretion of Kern County as new technologies become available and feasible to be incorporated:

- a. Solar photovoltaics (PV) mounted on proposed structure's roofs to provide a portion of the future electrical demand and offset emissions from fossil fuel fired power plants. Encourage green building measures that contribute to reducing energy use to 25% less than Title 24 requirements;
- b. Solar water heating to provide non-industrial water heating;
- c. Ground mounted solar PV arrays to provide a portion of the estimated electrical demand for the proposed project;
- d. Commercial buildings shall be designed to meet LEED Silver standards;
- e. Roofs on all buildings shall be of a light color to reduce heat generation;
- f. Portions of parking lots (drive aisles) may be paved with concrete versus asphalt to reduce initial solar reflectance;
- g. Depending on the usage, portions of parking lots may be covered, and the parking lot roofs contain solar PV;
- h. Use LED lighting fixtures on all indoor and exterior site lighting;
- i. Use LED lighting fixtures on all public streets and site lighting;
- j. Include dedicated EV parking at a rate more than required by current codes;
- k. Include EV charging facilities to encourage the usage of electric vehicles;
- l. Encourage the utilization of electric forklifts and other material handling vehicles to reduce usage of fossil fuels;
- m. Design circulation features into the public street improvements to include bus stops and/or other public transportation;
- n. Include bicycle friendly features to reduce Vehicle Miles Traveled (VMT) and to encourage non-vehicular transportation;
- o. Encourage the usage of high efficiency electric motors for industrial uses.

Level of Significance after Mitigation

Impacts would be less than significant for the project with the implementation of Mitigation Measures MM 4.6-1, as well as MM 4.3-1 through MM 4.3-4 (see **Section 4.3**, *Air Quality* for full Mitigation Measure).

Impact 4.6-2: The project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.***Construction*****On-Site and Off-Site**

The proposed project would utilize construction contractors who must demonstrate compliance with applicable regulations. Construction equipment would be required to comply with federal, state, and regional requirements where applicable. With respect to truck fleet operators, USEPA and NHTSA have adopted fuel-efficiency standards for medium- and heavy-duty trucks that will be phased in over time. Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (USEPA, 2011b). USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (USEPA, 2016). The energy modeling for trucks does not take into account specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of 5 minutes per occurrence. Additionally, off-road emissions standards will increase equipment efficiencies as they are phased-in over time and less-efficient equipment is phased out of construction fleets. These limitations would result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these requirements are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy. Thus, based on the information above, construction and operation of the proposed project would comply with existing energy standards.

The proposed project's construction equipment used would be consistent with the energy standards applicable to construction equipment including limiting idling fuel consumption and using contractors that comply with applicable CARB regulatory standards that affect energy efficiency. Therefore, the proposed project would comply with existing energy standards and impacts would be less than significant.

Operation**On-Site**

The proposed project would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. The proposed project would comply with CALGreen and Title 24 requirements to reduce energy consumption by implementing energy efficient building designs, pre-wiring residences with electric vehicle charging ports, implementing solar-ready rooftops, reducing indoor and outdoor water demand, and installing energy-efficient appliances and equipment. These measures are

consistent with the County's Green Building Standards of improving energy and water efficiency in buildings, decreasing water use, and using energy efficient appliances and equipment.

With respect to operational transportation-related fuel usage, the proposed project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The proposed project would comply with CAFE fuel economy standards and the Pavley Standards, which are designed to result in more efficient use of transportation fuels. The proposed project would reduce overall VMTs for trucks versus not siting the project in California. The proposed project would support KCOG's 2022 RTP/SCS as discussed above.

The proposed project would comply with the CALGreen, and Title 24. Overall, the proposed project's features would support and promote the use of renewable energy through the implementation of the solar array to power the EAF and LMS and energy efficiency through compliance with CALGreen and Title 24 requirements and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the proposed project impacts would be less than significant.

Off-Site

The addition of the off-site improvements would result in a minimal increase in operation-related vehicle trips from periodic inspections and maintenance operations and minimal increase in electricity consumption. The off-site improvements would not result in unplanned growth in VMT and thus would not result in adverse impacts to transportation energy consumption. The off-site improvements would also implement vehicle standards, like the CAFE standards and the Pavley Standards, which are designed to result in more efficient use of transportation fuels.

CARB has outlined a number of potential strategies for achieving energy consumption reduction goals. The traffic improvements would result in minimal electricity consumption from the addition of signal lights. Although the power and telecommunication lines would convey electricity, they would not consume electricity. The potential strategies include reducing petroleum use in cars and trucks and reducing the carbon content of transportation fuels. The project would comply with these future regulations, as promulgated by the U.S. Environmental Protection Agency and CARB. Therefore, the operational impacts from the off-site improvements would not result in a substantial increase energy consumption and impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance after Mitigation

Impacts would be less than significant for the project.

Cumulative Setting, Impacts, and Mitigation Measures

Electricity

As identified above the project was found to have a less than significant impact to Energy with MM 4.6-1 incorporated. As noted above MM 4.6-1 would reduce potential impacts associated with

operation energy consumption. MM 4.6-1 would require the project to implement design features that could include but are not limited to LEED Silver designed buildings, light colored buildings, LED lighting fixtures, increased EV parking stalls, and utilizing high efficiency electric motors. Thus project level impacts to Energy would be less than significant.

Buildout of the proposed project, related projects, and additional forecasted growth in SCE's service area would cumulatively increase the demand for electricity supplies and on infrastructure capacity. It is expected that SCE would continue to expand delivery capacity as necessary to meet demand increases within its service area. Development projects within the SCE service area would also be anticipated to incorporate site-specific infrastructure improvements, as necessary. Each cumulative project would be reviewed by SCE to identify necessary power facilities and service connections to meet individual project needs.

Related projects, as with the proposed project, would be required to evaluate electricity conservation features and compliance with applicable electricity efficiency plans and standards including the Title 24 standards and CALGreen Code, and incorporate mitigation measures, as necessary under CEQA. Related projects, as with the proposed project, would also be required to evaluate potential impacts related to conflicts with the County's General Plan, and local and regional supplies or capacity based on regional growth plans, such as the SCE energy supply projections for long-term planning.

As such, the proposed project's contribution to cumulative impacts due to conflicts with or obstruction of a state or local plan for renewable energy or energy efficiency would not be cumulatively considerable.

Natural Gas

Buildout of the proposed project, related projects, and additional forecasted growth in SoCalGas' service area would cumulatively increase the demand for natural gas supplies and on infrastructure capacity. However, as discussed above, SoCalGas forecasts take into account projected population growth and development based on local and regional plans, and thus the proposed project's growth and development in the vicinity pursuant to the cumulative projects would not conflict with those projections.

Related projects, as with the proposed project, would be required to evaluate natural gas conservation features and compliance with applicable regulations including the Title 24 standards and CALGreen Code, and incorporate mitigation measures, as necessary under CEQA. Related projects, as with the proposed project, would also be required to evaluate potential impacts related to consistency with the County's General Plan, and local and regional supplies or capacity based on regional growth plans, such as the SoCalGas energy supply projections for long-term planning. Further, SoCalGas expects overall natural gas demand to decline through 2035, even accounting for population and economic growth, with efficiency improvements and the State's transition away from fossil fuel-generated electricity to increased renewable energy. The 2022 California Gas Report states, "SoCalGas projects total gas demand to decline at an annual rate of 1.5 percent per year from 2022 to 2035.¹⁷⁰ "The forecasted, accelerated decline in throughput demand is being driven by modest economic growth and the forecasted energy efficiency and fuel substitution."

As such, cumulative project demand for natural gas would decline since future projects would have to comply with RPS and the State's efforts to increase electrification. As such, the proposed

project's contribution to cumulative impacts due to conflicts with or obstruction of a state or local plan for renewable energy or energy efficiency would not be cumulatively considerable.

Transportation Energy

Buildout of the proposed project, related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the state and region. However, as discussed above, the proposed project would not conflict with the energy efficiency policies emphasized by the 2022 RTP/SCS. As discussed previously, the proposed project would be consistent with and not conflict with KCOG's land use type for the area and would encourage employees to use alternative modes of transportation to reduce commute trips. The 2022 RTP/SCS is a regional planning tool that addresses cumulative growth and resulting environmental effects and is applicable to the proposed project, and related projects with respect to transportation energy efficiency. Related projects would be required under CEQA to evaluate if their respective developments would conflict with the energy efficiency policies emphasized by the 2022 RTP/SCS. Furthermore, related projects would be required to implement mitigation measures, as needed, if found to be in conflict with applicable provisions of the 2022 RTP/SCS for the land use type.

Since the proposed project would not conflict with the 2022 RTP/SCS with respect to energy use, the proposed project's contribution to cumulative impacts with respect to potentially significant environmental impacts due to conflicts with or obstruction of a state or local plan for transportation energy efficiency would not be cumulatively considerable and with the implementation of Mitigation Measures MM 4.3-1 through MM 4.3-4, as described in Section 4.3, *Air Quality*, cumulative impacts would be less than significant.

Off-site Improvements

The off-site improvements would result in the installation of upgraded poles and circuits, and improvements to traffic flow resulting in greater fuel efficiency and energy transmission to the site. Impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded off-site infrastructure is not expected to result in the wasteful, inefficient or unnecessary consumption of energy and would not result in a cumulatively considerable contribution to cumulative impacts. Therefore, impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.6-1, as well as MM 4.3-1 through MM 4.3-4 (see **Section 4.3**, *Air Quality* for full Mitigation Measure).

Level of Significance after Mitigation

Cumulative impacts would be less than significant for the project with the implementation of Mitigation Measures MM 4.6-1, as well as MM 4.3-1 through MM 4.3-4, (see **Section 4.3**, *Air Quality* for full Mitigation Measure).

Section 4.7 Geology and Soils

4.7.1 Introduction

This section of the EIR describes the geologic and soil characteristics of the project site and potential geology and soils impacts associated with construction and operation of the project and mitigation measures that would reduce these impacts, if applicable. The analysis in this section is largely based on the *Geotechnical Investigation* (RMA GeoScience, 2022) (Appendix H), and the *Paleontological Resources Assessment Report* (ESA, 2022) (Appendix I), that were prepared for the project.

4.7.2 Environmental Setting

Regional Geologic Setting

The subject site is located within the Mojave Desert Geomorphic Province a wedge-shaped area bounded by the San Andreas Fault and the San Gabriel and San Bernardino Mountains to the southwest, the Garlock fault and the southern limits of the Tehachapi Mountains, the Sierra Nevada's Basin and Ranges to the north-northwest. The eastern portion of the province extends into Nevada and Arizona. The province is characterized by an enclosed drainage with many desert plains, playas, and mountain ranges. The site is situated in Antelope Valley the western most region of the Mojave Desert Geomorphic Province. Antelope Valley formed as a down dropped block between the Garlock Fault and the San Andreas Faults and has accumulated Quaternary and Holocene-aged alluvial sediments of up to 5,000 feet in places. The Antelope Valley has been subdivide into 12 groundwater sub basins essentially based on impermeable pre-Cenozoic igneous and metamorphic rocks along the margins of the Valley and outcroppings within the basin and along fault zones. The subject project is located within the Gloster subbasin, located north of the Rosamond Hills. The Gloster subbasin has approximately 3,000 to 3,500 feet of alluvial sediments. Beneath the subject site approximately 130 feet of alluvial deposits have been identified (Appendix H).

The site soils are described as Holocene aged Alluvial Deposits consisting of silt, sand and gravel of valley areas and flood plains. The regional geology is shown on **Figure 4.7-1: Regional Geologic Map**. In addition, Wind Blown Deposits (Qs) were noted on site. Previous vegetation stripping of the project site, likely from past agricultural use, has allowed the site's loose topsoil to be blown away by the region's notable strong winds and these deposits have accumulated along portions of the ground surface and along the fencing placed throughout the property.

No known active faults have been mapped at the subject site location. This site is not located within a Alquist-Priola Fault Zone or a liquefaction hazard zone. The closest zoned fault is the Garlock Fault located approximately 15 miles to the north-northwest (Appendix H).

Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

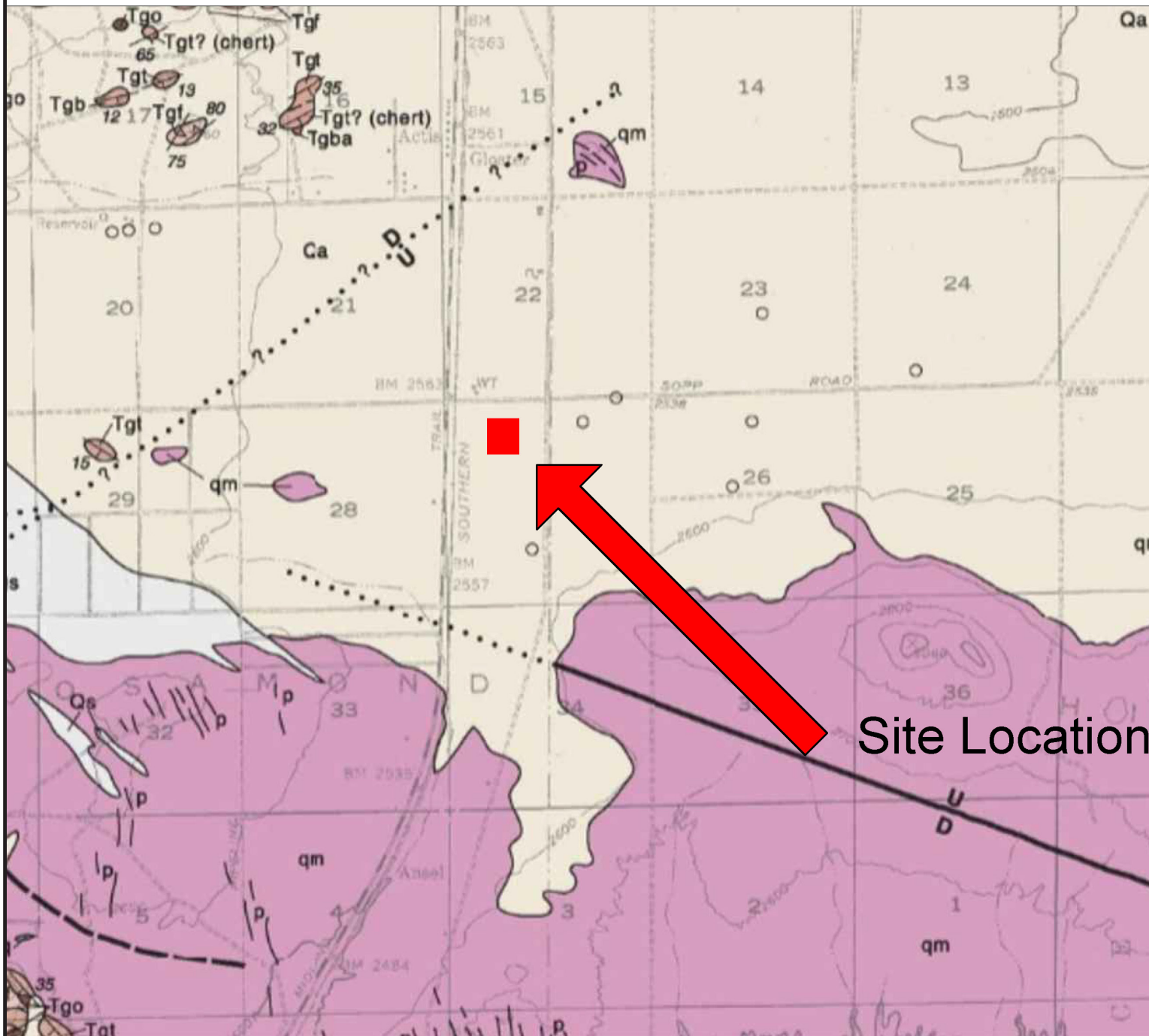
Figure 4.7-1: Regional Geologic Map

PSGM3 Holdings Corp (Pacific Steel Group)

Site Location

Rosamond and Rogers Lake Map (DF-384)

- Qa:** Alluvial silt, sand and gravel of valley areas and flood plains
- Qs:** Loose, windblown sand, buff, fine-grained, well sorted, deposited as dunes or thin veneers on alluvium and clay
- qm:** Granite, cream-white to pinkish-white, massive, fine- to medium-grained
- Tgt:** Lithic tuff
- Tgba/tgi:** Basalt flows, black, fine-grained
- Tgf:** Felsite and porphyritic felsite facies of Bobtail quartz latite member
- Tgb:** Felsite breccia facies of Bobtail member
- Tgo:** Perlite obsidian facies of Bobtail member
- Tgp:** Porphyry facies of bobtail member
- p:** pegmatite and aplite dikes swarms



Site Location

APN: 431-010-02 & 431-030-02
 Sec. 27 - T10N/R12W



**Kern County
 Planning & Natural
 Resources Department**



Garlock Fault

The Garlock Fault extends eastward from its point of intersection with the San Andreas Fault, near Lebec, for a distance of nearly 150 miles. The fault is located nearly 15 miles northwest of the project site. The Garlock Fault Zone is one of the most obvious geologic features in Southern California, clearly marking the northern boundary of the area known as the Mojave Block, as well as the southern ends of the Sierra Nevada Mountain Range and the valleys of the westernmost Basin and Range Province. While no earthquake has produced surface rupture on the Garlock Fault in historic times, there have been a few sizable quakes recorded along the Garlock Fault Zone. The most recent was a magnitude 5.7 event near the town of Mojave on July 11, 1992. It was believed to have been triggered by the Landers earthquake just two weeks earlier. The biggest known earthquake occurred on November 27, 1852, was a magnitude 7.0, and was approximately 35 miles from the project site. At least one section of the fault has shown movement in recent years. This is an active fault capable of damaging the area.

Local Geologic Setting

The project site is generally underlain by Holocene- and Pleistocene-age alluvial deposits derived from regional erosion of the surrounding highlands. Extensive alluvial fan complexes originating from the mouths of numerous deeply incised canyons on the southeastern flanks of the Tehachapi Mountains and northeastern flanks of the San Gabriel Mountains extend out into Antelope Valley. These alluvial fan complexes have been depositing sediment since at least the early Pleistocene, with younger, Holocene-age alluvial fan complexes building on top of older, Pleistocene-age complexes. Alluvial fan complexes generally consist of coarser-grained fan deposits, originating as overland sheetwash flows from the flanks of the uplands, and finer-grained alluvial valley deposits originating in distributary alluvial channels on the distal fringes of the fans.

Within the project site, the soils are described as Holocene aged Alluvial Deposits consisting of silt, sand and gravel of valley areas and flood plains; in other words, a Qa designation. In addition to the Holocene aged Alluvial Deposits, the site also consists of Wind Blown Deposits (Qs). The alluvial deposits are generally derived from erosion of the surrounding highlands (e.g., Tehachapi Mountains, San Gabriel Mountains). Presumably, the Holocene-age deposits transition downsection (i.e., at depth) into older, Pleistocene age deposits.

Paleontological Resources

Paleontological resources (i.e., fossils) are the buried remains and/or traces of prehistoric organisms (i.e., animals, plants, and microbes). Resources can be persistent through many years if undisturbed or may be destroyed through natural or human disturbance such as construction. Body fossils such as bones, teeth, shells leaves, and wood, as well as trace fossils such as tracks, trails, burrows, and footprints, are found in the geologic units/formations within which they were originally buried. The primary factor determining whether an object is a fossil or not is the age of the organic remain or trace. Although it is typical that fossils must be older than approximately 11,700 years, materials as young as 5,000 years can also be considered. One other consideration is the geologic units in which a project occurs because some localities and the geologic units are considered to have a greater paleontological sensitivity, or potential to contain fossils. Accordingly, paleontological resources can also include these localities and the geologic units in which the resources may be

located. Ultimately, the paleontological potential is determined based on the existence of known fossil localities within a given geologic unit, and/or the potential for future fossil discoveries, given the age and depositional environment of a particular geologic unit, and are discussed in more detail below.

High Potential Areas

Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.).

Undetermined Potential

Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.

Low Potential

Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e. g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.

No Potential

Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

Existing Paleontological Resources

LACM Records Search

On March 22, 2021, ESA received a database search from the LACM for records of fossil localities in and around the Project area). The purpose of the museum records search was to: (1) determine

whether any previously recorded fossil localities occur in the Project area, (2) assess the potential for disturbance of these localities during construction, and (3) evaluate the paleontological sensitivity within the Project area and vicinity. Although no paleontological resources were identified within the Project area as a result of the search, four Pleistocene age fossils localities were identified in the Project's vicinity. The four localities were identified at depths as shallow as 3 feet below ground surface and up to 21 feet below ground surface (bgs). These localities are summarized in **Table 4-7.1: Summary of LACM Fossil Specimen Localities**.

Table 4.7-1: Summary of LACM Fossil Specimen Localities

Locality No.	Formation	Taxa	Depth	Distance from Project
LACM IP 455	Unknown Upper Pleistocene Formation	Invertebrates (unspecified)	Unknown	15 miles
LACM VP 7891	Unknown Pleistocene Formation	Lamine camelid (<i>Hemiauchenia</i>)	21 feet bgs	8.5 miles
LACM VP 7853	Unknown Pleistocene Formation	fish; amphibians; reptiles; small mammals, and camel (<i>Camelops</i>)	3 – 11 feet bgs	13 miles
LACM VP 7884	Unknown Pleistocene Formation	Camel (<i>Camelops hesternus</i>)	4 feet bgs	15.5

VP = Vertebrate Paleontology
IP = Invertebrate Paleontology

Locality LACM IP 455 is an invertebrate locality at Edwards Air Force Base, approximately 15 miles east of the Project. As this locality is in ancient lacustrine deposits, it is not directly relevant to the Project, which is not located in the vicinity of Pleistocene-age lake playas. Locality LACM VP 7891 yielded a Lamine camelid (*Hemiauchenia*) within Pleistocene-aged soils at 21 feet bgs. Locality LACM VP 7853 produced fossils of fish, amphibians, reptiles, small mammals, and camel (*Camelops*) at depths between 3 and 11 feet bgs in Pleistocene-aged soils (made up of light tan-gray loose loess like sand under a dune deposit). Locality LACM VP 7884 produced a fossil camel (*Camelops hesternus*) at 4 feet bgs in Pleistocene-aged soils (consisting of brown clayey silt from a fluvial environment) (Appendix I). These latter two deposits have relevance to the Project as the geological settings are similar. In summary, the LACM records search indicates the Project area has the potential to contain subsurface fossil localities.

Literature Review

A literature review was conducted to determine whether paleontological resources have been previously identified in the particular geologic units that are mapped within the Project area. The Mojave Desert has a rich Pleistocene fossil record, with fossils recovered from alluvium as well as lake margin deposits. The Late Pleistocene record is comprised of large herbivores (e.g., bison), suggesting a wetter and more diverse landscape during the last glacial period. However, the lack of detailed analysis of microvertebrate fossils precludes a full understanding of the ecosystem at that time. Based on the literature, the project area may contain significant subsurface fossils that may contribute to a better understanding of late Pleistocene ecosystem evolution in the western Mojave.

Local Geologic Setting

Soils and Topography

Soils within the project site are predominantly composed of Wind Blown Deposits (Qs) and Alluvium (Qal). The Wind Blown Deposits consists of fine to coarse silty sand when in a dry and loose condition. The Alluvium deposits consists of fine to coarse silty sand with gravel. The Wind Blown Deposits were found to be a few inches in thickness on up to four feet along to the fences located on-site with Caliche deposits found at or near the surface.

Groundwater

The proposed project site is located in the Gloster subbasin of the Antelope Valley Groundwater Basin, located north of the Rosamond Hills. Generally, the Antelope Valley Groundwater Basin's primary water-bearing materials are Pleistocene and Holocene age unconsolidated alluvial and lacustrine deposits that consist of compact gravels, sand, silt, and clay. These clays are interbedded with lenses of coarser water bearing material as thick as 20 feet; in contrast, the clay beds are as thick as 400 feet. Specifically, the Gloster subbasin has approximately 3,000 to 3,500 feet of alluvial sediments. Beneath the subject site approximately 130 feet of alluvial deposits have been identified (Appendix H).

The upper aquifer, which is the primary source of groundwater for the valley, is generally unconfined whereas the lower aquifer is generally confined and specific yield of these deposits' ranges from 1 to 30 percent and wells typically have a moderate to high ability for water well production. Average groundwater depths were recorded at approximately 118 feet below ground surface. Groundwater was not encountered during the groundwater field investigation at a maximum depth of 70 feet. In 1978, groundwater levels were recorded at approximately 50 feet while a 2018 Well Completion Report recorded a groundwater depth of 72 feet (Appendix, H).

Fault Rupture

Ground surface rupture can occur along an earthquake fault and may cause damage to aboveground infrastructure and other features. Fault rupture typically occurs when movement on a fault breaks through to the ground surface and almost always follow preexisting faults that are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. Accordingly, ground surface rupture along an earthquake fault may cause damage to aboveground infrastructure and other features and occurs when movement on a fault deep within the earth breaks through to the surface. Active faults are defined as faults with evidence of displacement in the last 11,000 years. As described above, there are no active faults that intersect the project sites nor are any located within the immediate vicinity of the project site (Appendix H). The nearest Earthquake Fault Zone as delineated by the Alquist-Priolo Earthquake Fault Zoning Act, is associated with the Garlock fault which is approximately 15 miles northwest of the project site.

Ground Shaking

Faults located within the project site vicinity have the potential to cause ground shaking to occur on the project site; the magnitude of ground shaking experienced onsite is dependent on the distance

to causative faults and the earthquake magnitude (or measure of the amount of energy released during an earthquake event). Strong ground shaking from an earthquake can result in damage associated with landslides, ground lurching, structural damage, and liquefaction. The Southern California region is characterized by, and has a history of, fault stress and associated seismic activity. Earthquakes are classified by their magnitude, a measure of the amount of energy released during an event. During a seismic event, the project site may be subjected to high levels of ground shaking due to proximity to active faults in the area. The largest fault in the area is the San Andreas Fault, which is considered active. Strong ground shaking can be expected at the site during moderate to severe earthquakes in the general region. However, this phenomenon is common to most areas in Southern California. The Garlock Fault is located approximately 15 miles northwest from the proposed project site and has the potential to cause moderate to intense ground shaking during the lifetime of the proposed project. The project site has experienced earthquake-induced ground shaking in the past and can be expected to experience further shaking in the future (Appendix H).

Landslides

Since the site is relatively flat and located in the floor of the subject site area with no adjacent hillsides, earthquake-induced land sliding does not appear to be a hazard to proposed development.

Liquefaction and Lateral Spreading

Liquefaction is a type of ground failure resulting from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose sandy soils exist below groundwater. Liquefaction of saturated sandy soils is generally caused by the sudden decrease in soil shear strength due to vibration. During seismic shaking, typically caused by an earthquake, the soil mass is distorted, and interparticle stresses are transferred from the soil particles to the pore water. As pore pressure increases the bearing capacity decreases and the soil may behave temporarily as a viscous fluid (liquefaction) and, consequently, loses its capacity to support the structures founded thereon.

Engineering research of soil liquefaction potential indicates that generally three basic factors must exist concurrently in order for liquefaction to occur, namely:

- A source of ground shaking, such as an earthquake, capable of generating soil mass distortions.
- A relatively loose sandy soil fabric exhibiting a potential for volume reduction.
- A relative shallow groundwater table (within approximately 50 feet bgs) or completely saturated soil conditions that will allow positive pore pressure generation.

The proposed project site is not located within a Zone of Required Investigation for Liquefaction. Additionally, based on the groundwater depth, the potential for liquefaction at the project site is remote (Appendix H).

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or “free” face such as an open body of water, channel, or excavation. This movement is generally due to failure along a weak plane and may often be

associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally toward the open face. The site is within an area as having a remote liquefaction potential (Appendix H).

Soil Erosion

Soil erosion is the wearing away of soil and rock by processes such as mechanical or chemical weathering, mass wasting, and the action of waves, wind and subsurface water flow. Excessive soil erosion can eventually lead to damage of building foundations and roadways. In general, areas that are most susceptible to erosion are those that would be exposed during the construction phase when earthwork activities disturb soils and require temporary stockpiling. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, asphalt, or slope protection, however changes in drainage patterns can also cause areas to be susceptible to the effects of erosion. There are many factors contributing to soil erosion. Soils containing high silt content have the highest soil erodibility since they are easily detached, tend to crust and produce high rates of runoff (MSU, 2021). Coarse textured soils, or sandy soils, are easily detached but typically do not produce a lot of runoff, so they have low soil erodibility.

As mentioned previously, soils within the project site are predominantly composed of Wind Blown Deposits (Qs) and Alluvium (Qal). The Wind Blown Deposits consists of fine to coarse silty sand when in a dry and loose condition. The Alluvium deposits consists of fine to coarse silty sand with gravel. The Wind Blown Deposits were found to be a few inches in thickness on up to four feet along to the fences located on-site with Caliche deposits found at or near the surface.

The onsite soils within the project site are generally well drained and largely consist of sands and gravel. The project site has little slope and vegetation is sparse consistent with the desert environment. Generally, long slope length and high slope steepness contribute to higher erosion rates. Thus, since the site is relatively flat, erosion potential related to slope length and slope steepness is low.

Subsidence

Subsidence is the sinking of the ground surface; there are four types of subsidence that are currently occurring within Kern County. Tectonic subsidence refers to the long-term slow sinking of the land surface. Subsidence can also occur naturally when moisture-deficient soils are exposed to water, which causes collapse. Subsidence has also been caused by human activities including the extraction of oil and gas and the withdrawal of groundwater. The proposed project sit is not located within a zone of land subsidence, according to the United States Geological Survey California Water Science Center. Additionally, the project site has the potential to be susceptible to subsidence because of the extraction of oil and gas and the withdrawal of groundwater. However, the potential for land subsidence is low (Appendix H).

Soil Collapse

Collapsible soils consist of loose, dry, low-density materials that collapse, compact and change in settlement under the addition of water or excessive loading, often resulting in severe damage to structures. These soils are distributed throughout the southwestern United States, specifically in areas of young alluvial fans, debris flow sediments, and loess (wind-blown sediment) deposits. A sudden reduction in subgrade support when water is introduced to soils can cause soil collapse.

There is a higher risk to structures supported on mat foundations. The likelihood of soil collapse within the project site is low to moderate (Appendix H).

Expansive Soils

Expansive soils contain clay types capable of absorbing water in a manner that results in volumetric changes. Over long-term periods of cyclical changes in water content, these volumetric changes can end up causing damage to foundations, retaining walls, sidewalks, and roadways. Expansive soils generally have a high shrink-swell potential. The proposed project site soils at shallow depths have a low to very low expansion potential (Appendix H).

4.7.3 Regulatory Setting

Geologic resources and geotechnical hazards are governed primarily by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards.

The California Environmental Quality Act (CEQA) establishes a specific process for environmental impact analysis and public review of certain projects on nonfederal lands in California. In addition, the project proponent must comply with other applicable federal, State, and local statutes, regulations, and policies. Relevant and potentially relevant statutes, regulations, and policies are discussed below.

Federal

Clean Water Act (Erosion Control)

The Federal Clean Water Act (CWA) (33 USC 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain nonpoint-source discharges to jurisdictional waters of the United States. Such discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). The project site is within the jurisdiction of the Lahontan Regional Water Quality Control Board. For purposes of regulating non-point source storm water discharges, projects that disturb one or more acres may be required to obtain NPDES coverage under the Construction General Permit if the project is deemed to discharge to a water of the United States. Because the project is in a terminal drainage area of Kern County (i.e., does not drain to a waters of the United States), NPDES coverage is not expected to be required as discussed further below.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) to regulate stormwater runoff, including measures to prevent soil erosion. Requirements of the CWA and associated SWPPP are described in further detail in Section 4.10, *Hydrology and Water Quality*.

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the project would be required to adhere.

Paleontological Resources

A variety of federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes federally owned or federally managed lands or involves a federal agency license, permit, approval, or funding. The first of these is the Antiquities Act of 1906 (54 U.S.C. 320301–320303 and 18 U.S.C. 1866(b)), which calls for protection of historic landmarks, historic and prehistoric structures, as well as other objects of historic or scientific interest on federally administered lands, the latter of which would include fossils. The Antiquities Act both establishes a permit system for the disturbance of any object of antiquity on federal land and also sets criminal sanctions for violation of these requirements. The Antiquities Act was extended to specifically apply to paleontological resources by the Federal-Aid Highways Act of 1958. More recent federal statutes that address the preservation of paleontological resources include the National Environmental Policy Act (NEPA), which requires the consideration of important natural aspects of national heritage when assessing the environmental impacts of a project (P.L. 91-190, 31 Stat. 852, 42 U.S.C. 4321–4327). The Federal Land Policy Management Act (FLPMA) of 1976 (P.L. 94-579; 90 Stat. 2743, U.S.C. 1701–1782) requires that public lands be managed in a manner that will protect the quality of their scientific values, while Title 40 Code of Federal Regulations Section 1508.2 identifies paleontological resources as a subset of scientific resources. The Paleontological Resources Preservation Act (Title VI, Subtitle D of the Omnibus Land Management Act of 2009) is the primary piece of federal legislation.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act offers provisions of paleontological resources identified on federal, Native American, or state lands and guidance for their management and protection, and promotes public awareness and scientific education regarding vertebrate fossils. The law also requires federal agencies to develop plans for inventory, collection, and monitoring of paleontological resources and establishes stronger criminal and civil penalties for the removal of scientifically significant fossils on federal lands

State

The Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act) regulates the development and construction of buildings intended for human occupancy to avoid hazards associated with surface fault rupture. In accordance with this law, the California Geological Survey maps active faults and designates Earthquake Fault Zones along mapped faults. This act groups faults into categories (i.e., active, potentially active, or inactive). Historic and Holocene faults are considered active, Late Quaternary and Quaternary faults are considered potentially active, and pre-Quaternary faults are considered inactive. These classifications are qualified by conditions. For example, a fault must be shown to be “sufficiently active” and “well defined” through detailed site-specific geologic explorations to determine whether building setbacks should be established. Any project that involves the construction of buildings or structures for human occupancy, such as an operations and maintenance building, is subject to review under the Alquist-Priolo Earthquake Fault Zoning Act, and any structures for human occupancy must be located at least 50 feet from any active fault.

The Seismic Hazards Mapping Act of 1990

In accordance with PRC Chapter 7.8, Division 2, the California Geologic Survey (CGS) is directed to delineate seismic hazard zones. The purpose of the act is to reduce the threat to public health and safety and minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by the California Geological Survey in their land use planning and permitting processes. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2022 edition of the CBC is based on the 2021 International Building Code (IBC) published by the International Code Council. The code is updated triennially, and the 2022 edition of the CBC was published by the California Building Standards Commission in 2022 and took effect starting January 1, 2023. The 2022 CBC contains California amendments based on the American Society

of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-22, *Minimum Design Loads for Buildings and Other Structures*, provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for inclusion into building codes. A load is the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with Chapter 16 of the California Building Code (CBC). Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. Expansive soils are defined in the CBC as follows:

1803.5.3 Expansive Soil. In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1,2 and 3 shall not be required if the test prescribed in Item 4 is conducted:

1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318.
2. More than 10 percent of the soil particles pass a No. 200 sieve (75 micrometers), determined in accordance with ASTM D 422.

3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422.
4. Expansion index greater than 20, determined in accordance with ASTM D 4829.

Public Resources Code Section 5097.5 and Section 30244

State requirements for paleontological resource management are included in Public Resources Code (PRC) Section 5097.5 and Section 30244; of these two PRC sections, only the latter (Section 30244) applies to the project as the former (Section 5097.5) is only applicable to projects on public land. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to archaeological or paleontological resources.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, in cooperation with the CWA, established the California State Water Resources Control Board (SWRCB). The SWRCB and the nine RWQCBs are responsible for protecting California's surface water and groundwater supplies. Section 13000 of the act directs each RWQCB to develop Water Quality Control Plans for all areas in its region, to designate the beneficial uses of California's rivers and groundwater basins; these plans are the basis for each board's regulatory program.

The Basin Plan gives direction on the beneficial uses of state waters in Region 6, describes the water quality that must be maintained to support such uses, and includes programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The Lahontan RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements to individuals, communities, or businesses whose waste discharges may affect water quality. These requirements are State Waste Discharge Requirements for discharge to land or federally delegated NPDES permits for discharges to surface water. Responsibility for implementing CWA Sections 401–402 and Section 303(d) is also outlined in the Porter-Cologne Water Quality Control Act.

State Regional Water Quality Control Board, Stormwater General Construction Permit

The five-member SWRCB allocates water rights, adjudicates water right disputes, develops Statewide water protection plans, establishes water quality standards, and guides the nine RWQCBs in the major watersheds of the State. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters.

In 1999, the State adopted the NPDES General Permit for Stormwater Discharges Associated with Construction Activities (Construction Activities General Permit) (SWRCB Order No. 2012-0006-DWQ, NPDES No. CAS000002). The General Construction Permit generally requires that construction sites with 1 acre or greater of soil disturbance, or less than 1 acre but part of a greater common plan of development, apply for coverage for discharges under the General Construction Permit by submitting a Notice of Intent for coverage, developing a stormwater pollution prevention plan (SWPPP), and implementing best management practices to address construction site pollutants if the project is deemed to discharge into a water of the United States. However, as the project site

is in a terminal drainage area of Kern County (e.g., does not drain to a waters of the United States), NPDES coverage is not expected to be required as described in further detail in Section 4.10, *Hydrology and Water Quality*.

The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list the best management practices (BMP) the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Enrollment under the General Construction Permit is through the Stormwater Multiple Application and Report Tracking System. Additionally, the SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through the individual regional boards.

California Environmental Quality Act

The State CEQA Guidelines (Title 14, Chapter 3 of the California Code of Regulations, Section 15000 et seq.), are prescribed by the Secretary of Resources to be followed by state and local agencies in California in their implementation of the CEQA. Appendix G of the State CEQA Guidelines includes an Environmental Checklist Form with questions that may be used by public agencies in their assessment of impacts on the environment. The question within Appendix G that relates to paleontological resources states: “Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” CEQA protects paleontological resources by requiring an assessment of a project’s potential paleontological impacts.

Local

Construction and operation of the solar facility would be subject to all applicable policies and regulations contained within the general and specific plans, including the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to geology, geologic hazards, and soils. The policies, goals, and implementation measures in the Kern County General Plan related to geology and soils that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in Chapter 2, Introduction, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Kern County General Plan

Chapter 1. Land Use, Conservation, and Open Space Element

1.3 Physical and Environmental Constraints

Goal

Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

Policy

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.

Implementation Measures

Measure D: Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.

Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

Policy 25: The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measure

Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with the California Environmental Quality Act (CEQA).

Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

Chapter 4. Safety Element

4.1 Introduction

Goal

Goal 1: Minimize injuries and loss of life and reduce property damage.

4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Policy

Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

Implementation Measures

Measure B: Require geological and soils engineering investigations in identifying significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.

Measure C: The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.

4.5 Landslides, Subsidence, Seiche, and Liquefaction

Policies

Policy 1: Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.

Policy 3: Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

Kern County Code of Building Regulations (Title 17 of the Ordinance code of Kern County)

Chapter 17.08, Kern County Building Code

All construction in Kern County is required to conform to the Kern County Building Code (Chapter 17.08, Building Code, of the Kern County Code of Regulations). Kern County has adopted the CBC, 2016 Edition, with some modifications and amendments. The entire County is in Seismic Zone 4, a designation previously used in the Uniform Building Code (UBC) to denote the areas of highest risk for earthquake ground motion. California has an unreinforced masonry program that details seismic safety requirements for Zone 4. Seismic provisions associated with Seismic Zone 4 have been adopted (Kern County, 2017).

Chapter 17.28. Kern County Grading Code

The Kern County Grading Code (Chapter 17.28, Building Code, of the Kern County Code of Regulations) sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading construction (Kern County, 2017). Sections of the Grading Code that are particularly relevant to geology and soils are provided below.

Section 17.28.140. Erosion Control

- A. Slopes. The faces of cut-and-fill slopes shall be prepared and maintained to control erosion. This control may consist of effective planting. Protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.
- B. Other Devices. Where necessary, check dams, cribbing, riprap, or other devices or methods shall be employed to control erosion and provide safety.
- C. Temporary Devices. Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

Section 17.28.170. Grading Inspection

- A. General. All grading operations for which a permit is required shall be subject to inspection by the building official. Professional inspection of grading operations and testing shall be provided by the civil engineer, soils engineer, and the engineering geologist retained to provide such services in accordance with Subsection 17.28.170(E) for engineered grading and as required by the building official for regular grading.
- B. Civil Engineer. The civil engineer shall provide professional inspection within such engineer's area of technical specialty, which shall consist of observation and review as to the establishment of line, grade, and surface drainage of the development area. If revised plans are required during the course of the work they shall be prepared by the civil engineer.
- C. Soils Engineer. The soils engineer shall provide professional inspection within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the building official and the civil engineer.
- D. Engineering Geologist. The engineering geologist shall provide professional inspection within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved engineering geology report shall be submitted to the soils engineer.
- E. Permittee. The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code, and the permittee shall engage consultants, if required, to provide professional

inspections on a timely basis. The permittee shall act as a coordinator between the consultants, the contractor and the building official. In the event of changed conditions, the permittee shall be responsible for informing the building official of such change and shall provide revised plans for approval.

- F. Building Official. The building official may inspect the project at the various stages of the work requiring approval to determine that adequate control is being exercised by the professional consultants.
- G. Notification of Noncompliance. If, in the course of fulfilling their responsibility under this chapter, the civil engineer, the soils engineer, or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the building official. Recommendations for corrective measures, if necessary, shall also be submitted.
- H. Transfer of Responsibility. If the civil engineer, the soils engineer, or the engineering geologist of record is changed during the course of the work, the work shall be stopped until:
 - 1. The civil engineer, soils engineer, or engineering geologist, has notified the building official in writing that they will no longer be responsible for the work and that a qualified replacement has been found who will assume responsibility.
 - 2. The replacement civil engineer, soils engineer, or engineering geologist notifies the building official in writing that they have agreed to accept responsibility for the work.

Kern County Water Quality Control Plan

The Kern County Public Works Department requires the completion of an NPDES applicability form for all construction projects disturbing one or more acre. This form requires the applicant to provide background information on construction activities. Applicants must apply for the permit under one of the following four conditions:

- 1. All storm water is retained onsite and no storm water runoff, sediment, or pollutants from onsite construction activity can discharge directly or indirectly offsite or to a river, lake, stream, municipal storm drain, or offsite drainage facilities.
- 2. All storm water runoff is not retained on site, but does not discharge to a Water of the United States (i.e., drains to a terminal drainage facility). Therefore, a SWPPP has been developed and BMPs must be implemented.
- 3. All storm water runoff is not retained on site, and the discharge is to a Water of the United States. Therefore, a Notice of Intent (NOI) must be filed with the State Regional Water Resources Control Board prior to issuance of the building permit. Also, a SWPPP has been developed and BMPs must be implemented.
- 4. Construction activity is between one to five acres and an Erosivity Waiver was granted by the SWRCB. BMPs must be implemented.

Kern County Public Health Services Onsite Wastewater Treatment System Permitting

The Kern County Public Health Services Department is responsible for permitting, inspecting, and approving onsite wastewater treatment systems, including septic tank wastewater disposal systems. The agency provides leach line requirements, seepage pit requirements, percolation testing standards, and other regulations for land development related to wastewater treatment systems.

4.7.4 Impacts and Mitigation Measures

Methodology

Potential significant impacts associated with the project site were identified based on a review of available online sources, the *Geotechnical Investigation* (Appendix H), and the *Paleontological Resources Assessment Report* (Appendix I).

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on geology and soils.

A project would have a significant adverse effect on geology and soils if it would:

- a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction;
 - Landslides.
- b. Result in substantial soil erosion or the loss of topsoil;
- c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;

- f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Project Impacts

Impact 4.7-1: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map issued by the state geologist for the area or based on other substantial evidence of a known fault.

Primary ground rupture is ground deformation that occurs along the surface trace of the causative fault during an earthquake. The proposed project would introduce structures and people to the project site (construction workers and full-time operational employees) and could thus expose people and structures to seismic risks.

The project site is located in the highly seismic southern California region that is influenced by multiple faults, but it is not located within or in proximity to a State of California Alquist-Priolo Earthquake Fault Zone. The two largest faults in the region are the San Andreas fault, which is located approximately 21 miles to the southwest, and the Garlock Fault, which is approximately 15 miles to the northwest. The nearest fault to the project site is the Willow Springs fault approximately 9 miles to the southwest. Due to the distance from the nearest active fault to the project site, the potential for surface fault rupture is considered low.

The proposed project would include a total of nine buildings (a total of approximately 550,921 square feet) and 63-acre solar array with a substation. During the operational phase, there will be approximately 440 employees in which 417 will be hourly and salaried employees while 23 will be third-party employees for on-site security and slag processing services. The primary reinforcing steel manufacturing operations would operate three eight-hour shifts per day with the potential to operate seven days per week. The fabrication operations would consist of two eight-hour shifts Monday through Friday. Thirty truck drivers, on day shift and afternoon shift, would transport fabricated rebar from the site to construction projects primarily in Southern California with a small percentage of fabricated rebar being transported to the Northern California and south across the border into Mexico. Anticipated administrative office hours would be from 7:00 a.m. to 5:00 p.m. There would be designated parking spots for visitors close to the entrance of the Administration Office.

Construction, operation, and continued maintenance of the project would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08). Kern County has adopted the CBC 2022 Edition (CCR Title 24), which imposes substantially the same requirements as the International Building Code (IBC), 2021 Edition, with some modifications and amendments. These requirements would ensure that project structures comply with minimum standards related to structural strength and general stability.

Thus, given the absence of any known active faults in the project area and required compliance with the Kern County Building Code, impacts related to fault rupture are anticipated to be less than significant. Based on the absence of any known active faults that cross or the project site, and project compliance with applicable ordinances of the Kern County Building Code, personnel

present during the construction and operation phases of the proposed project also would not be exposed to hazards from fault rupture. Therefore, impacts related to fault rupture would be less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include any occupied structures and all would be constructed in accordance with all applicable regulatory standards, including building codes and earthquake safe designs. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconducted route, these off-site facilities would be fully maintained by SCE. In addition, due to the distance from the nearest active fault to the reconducted transmission lines, the potential for surface fault rupture is considered negligible and use of these areas for these project elements would not directly or indirectly result in substantial adverse effects from ground shaking. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.7-2: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

As stated previously, the proposed project is in a highly seismic region that could experience one or more substantive seismic events in the future. The region is influenced by several fault systems, most notably the San Andreas and Garlock Fault systems, which are capable of generating strong ground motions that could affect the project site and surrounding areas. Depending on the magnitude, distance to the source, and duration of shaking, damage to the buildings, solar array, or additional site components and injury to workers or visitors could result. Although the project site is within a highly seismic region, it is unlikely the project would directly or indirectly cause substantial adverse effects involving strong seismic ground shaking.

As stated previously, the project is not located on nor near a State of California Alquist-Priolo Earthquake Fault Zone. In fact, the nearest active faults, the San Andreas and Garlock Faults, are 21 and 15 miles away, respectively. To mitigate any potential impacts, such as the risk of loss, injury, or death stemming from the project, Mitigation Measures MM 4.7-1 through MM 4.7-7 would be implemented along with the Kern County Building Code and the California Building Code (CBC).

Mitigation Measure MM 4.7-1 requires a phased grading plan to minimize the area that will be graded on the project site. Prior to the initiation of construction, the project proponent shall retain a California registered professional engineer to approve the final grading earthwork and foundation plans prior to construction. For MM 4.7-2, prior to the issuance of building or grading permits, the project proponent shall conduct a full geotechnical study and submit the study to the Kern County Public Works Department for review and approval. Additionally, MM 4.7-3, will require the project proponent to retain a California registered engineer to design the project facilities to withstand probable seismically induced ground shaking at the site; the final design will need to be approved by the Kern County Inspection Department.

For Mitigation Measure MM 4.7-4, the building location will need to be stabilized against liquefaction by dynamic compaction or another accepted soil stabilization method. MM 4.7-5 will require a geotechnical evaluation to be approved by the Kern County Public Works Department prior to grading permits being issued. MM 4.7-6 requires the project proponent to minimize erosion to the greatest extent possible by using existing roads. Lastly, MM 4.7-7 requires that the project proponent's final grading plans include best management practices to limit on-site and off-site erosion, a water plan to treat disturbed areas during construction and reduce dust, and a plan for the disposal of drainage waters originating on-site and from adjacent rights-of-way.

Further, the buildings, solar array, and additional site components would be constructed in accordance with all other applicable codes, such as those that require property line and public roadway setbacks to protect the public and onsite staff from potential hazards associated with the facilities that could result from an earthquake. Thus, adherence to the requirements of the Kern County Building Code, the CBC, and Mitigation Measures MM 4.7-1 through MM 4.7-7 would ensure that seismic hazards would be minimized; impacts related to ground shaking would be less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. The improvements within these areas do not include any occupied structures and would be constructed in accordance with all applicable regulations, including building codes and earthquake safe designs. Use of these areas for these project elements would not directly or indirectly result in substantial adverse effects from liquefaction. Impacts would be less than significant.

Mitigation Measures

- MM 4.7-1:** The project proponent shall limit grading to the minimum area necessary for construction. Prior to the initiation of a construction or grading project exceeding one (1)-acre in size, the project proponent shall retain a California registered and licensed professional engineer to submit final grading earthwork and foundation plans prior to construction to the Kern County Public Works Department for approval.
- MM 4.7-2:** Prior to the issuance of building or grading permits for the project, the project proponent shall conduct a final engineering design specific geotechnical study in accordance with all applicable ordinances of the Kern County Building Code (Chapter 17.08) and the CBC to evaluate soil conditions and geologic hazards on the project site and submit it to the Kern County Public Works Department for review and approval.
- MM 4.7-3:** Prior to the issuance of grading permits, the project proponent shall retain a California registered engineer to design the project facilities to withstand probable seismically induced ground shaking at the site. All grading and construction on-site shall adhere to the specifications, procedures, and site conditions contained in the final design plans, which shall be fully compliant with the seismic recommendations of the California-registered professional engineer. The procedures and site conditions shall encompass site preparation, foundation specifications, and protection measures for buried metal. The final structural design shall be subject to approval and follow-up inspection by the Kern County Building Inspection Department. Final design requirements shall be provided to the on-site construction supervisor and the Kern County Building Inspector to ensure compliance.
- MM 4.7-4:** Building locations shall be stabilized against the occurrence of liquefaction by dynamic compaction, or other accepted soil stabilization method approved by the County Building official.
- MM 4.7-5:** Prior to the issuance of grading permits, a geotechnical evaluation, consisting of field exploration (drilling and soil sampling), laboratory testing of soil samples, and engineering analysis, shall be prepared to determine soil properties related, but not limited, to ground-motion acceleration parameters, the amplification properties of the subsurface units at the specific site, the potential for hydrocompaction to affect the proposed facilities, and the potential for collapsible, subsiding, or expansive soils to affect the proposed facilities.
- These studies shall be used to determine the appropriate engineering for foundations and support structures as well as building requirements to minimize geotechnical hazard impacts. Copies of all analyses shall be submitted to the Kern County Public Works Department for review and approval. An approved copy of the evaluation shall be submitted to the Kern County Planning and Natural Resources Department.
- MM 4.7-6:** The project proponent shall continuously comply with the following:

The project proponent shall use existing roads to the greatest extent feasible to minimize erosion.

Prior to approval of the grading permit, final plans shall be reviewed and approved by the Kern County Public Works Department to confirm existing roads were used to the greatest extent feasible.

MM 4.7-7: The project proponent shall continuously comply with the following:

The project proponent shall limit grading to the minimum area necessary for construction and operation of the project. Final grading plans shall include best management practices (BMPs) to limit on-site and off-site erosion, a water plan to treat disturbed areas during construction and reduce dust, and a plan for the disposal of drainage waters originating on-site and from adjacent rights-of-way (if required).

The plans shall be submitted to the Kern County Public Works Department for review and approval.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.7-1 through 4.7-7, impacts would be less than significant with mitigation for the project.

Impact 4.7-3: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction.

Seismically induced ground failure and liquefaction occurs when loose, water-saturated sediments of relatively low density are subjected to cyclic shaking that causes soils to lose strength or stiffness because of increased pore water pressure. Liquefaction generally occurs when the depth to groundwater is less than 50 feet. Based on a review of the available groundwater level data and a field investigation, the groundwater level ranged from 50 feet below ground surface to 72 feet below ground surface. Furthermore, the project is not located within a current, mapped California Liquefaction Hazard Zone. Structures constructed as part of the project would be required by state law to be constructed in accordance with all applicable IBC and CBC earthquake construction standards, including those relating to soil characteristics.

Due to the existing geotechnical conditions and the historical depth to groundwater, the potential for liquefaction is considered unlikely according to the Geotechnical Investigation undertaken for the project, which also notes the project site was not located within a USGS & California Geological Survey “Zone of Required Investigation for Liquefaction”. Project conformance with building code requirements would serve to reduce the potential for liquefaction to affect the proposed project (Appendix H).

To mitigate potential impacts from liquefaction, including the risk of loss, injury, or death, Mitigation Measures MM 4.7-2, MM 4.7-4, and MM 4.7-5 would be implemented. As discussed earlier, MM 4.7-2 requires the project proponent, prior to the issuance of building or grading permits, to conduct a full geotechnical study and submit it to the Kern County Public Works Department for review and approval. MM 4.7-4 requires dynamic compaction, or another approved method, to be used to stabilize against liquefaction. Lastly, MM 4.7-5 requires a geotechnical

evaluation be conducted then submitted to the Kern County Public Works Department for review and approval prior to building and grading plans being approved. Adherence to all applicable regulations and implementation of Mitigation Measures MM 4.7-2, MM 4.7-4, and MM 4.7-5 would avoid any potential impacts to structures resulting from liquefaction at the project. Therefore, impacts would be less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. The improvements within these areas do not include any occupied structures and would be constructed in accordance with all applicable regulations, including building codes and earthquake safe designs. Use of these areas for these project elements would not directly or indirectly result in substantial adverse effects from liquefaction. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.7-2, MM 4.7-4, and MM 4.7-5.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.7-2, MM 4.7-4, and 4.7-5, impacts would be less than significant with mitigation incorporated for the project.

Impact 4.7-4: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving landslides.

The project site is situated within the central portion of the Antelope Valley, which sits at the western edge of the Mojave Desert. The project lies approximately five miles northeast of the unincorporated community of Rosamond. The topography of the proposed project site is relatively flat with some gentle sloping in the southeast portion of the site. The elevation of the project site is mostly consistent and ranges between 2,554 and 2,564 feet with a 10-foot elevation variance. Given the relatively flat terrain for off-site and on-site project components, the potential for landslides on the project site is considered low. Therefore, adverse effects related to landslides are not anticipated to occur or pose a hazard to the project or surrounding area and impacts would be less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Terrain along these existing transmission line routes and utility corridors are generally flat with minimal changes in elevation. The improvements within these areas do not include any occupied structures and would be constructed in accordance with all applicable regulations, including building codes and earthquake safe designs. Use of these areas for these project elements would not directly or indirectly cause potential substantial adverse

effects, including the risk of loss, injury, or death, involving landslides. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.7-5: The project would result in substantial soil erosion or the loss of topsoil.

As mentioned previously, soils within the project site are predominantly composed of Wind Blown Deposits (Qs) and Alluvium (Qal). The Wind Blown Deposits consists of fine to coarse silty sand when in a dry and loose condition. The Alluvium deposits consists of fine to coarse silty sand with gravel. The Wind Blown Deposits were found to be a few inches in thickness on up to four feet along to the fences located on-site with Caliche deposits found at or near the surface.

Site preparation activities for the proposed project would include grading activities that would disturb surface soils. Construction of the project sites would involve earth-disturbing activities that could expose soils to the effects of wind or water erosion. Although the project site consists of relatively flat topography and would not involve substantive cut and fill operations, earthmoving and construction activities could loosen soil, and the removal of existing minimal vegetation could contribute to soil loss and erosion.

Clearing of vegetation and grading activities could lead to exposed or stockpiled soils susceptible to peak stormwater runoff flows and wind forces. During rainfall events, particularly during construction activities when surface soils are exposed, there is the potential for increased surface erosion and sediment transport and subsequent deposition to off-site areas. Project grading would be minimized to the extent feasible to reduce unnecessary soil movement that may result in the increased loss of topsoil. Scrapers, excavators, dozers, water trucks, haul vehicles, and/or graders may be used in site preparation and some trenching would be required for installation of the underground cables and circuits on-site. These activities would increase the potential for erosion to occur.

Project operations regarding the micro mill processing facility are not expected to contribute to soil erosion because most of the operation will be done in one of the six buildings on-site. Project operations regarding the solar array would include the periodic cleaning of the panels with water; however, this is not expected to result in soil erosion because infrequency of these activities and the limited volumes of water involved; water is expected to infiltrate into the ground and not generate substantial erosion or soil loss. Project operations would not entail ground disturbance of area which has not previously been subjected to disturbance.

While construction and operation have the potential to increase erosion, as discussed in **Section 4.10 – Hydrology and Water Quality**, the project would implement Mitigation Measure MM 4.10-1 that requires preparation a hydrologic study and final drainage plan per Kern County Development Standards and the Kern County Code of Building Regulations, and MM 4.10-2, that requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) using best management practices (BMPs) to reduce the potential effects of erosion.

The development of required SWPPP and BMPs, would be informed by the final hydrologic study and drainage plan. The SWPPP would be prepared and implemented per the requirements of Kern County for projects that disturb more than one acre of soil. The SWPPP would detail that existing vegetation and topography are to be preserved to the maximum extent possible. These documents would include drainage and erosion controls designed to minimize potential increases in runoff from the project site following project implementation. This would include an evaluation and recommendation to minimize the potential for erosion and sedimentation to carry materials off-site. Engineering recommendations would include measures to offset increases in stormwater runoff, as well as identification of design measures to minimize or manage potential flow concentrations or changes in flow depths or velocity so as to minimize erosion, sedimentation, and flooding potential on-site or off-site.

The SWPPP would also specify various types of BMPs including erosion control BMPs to prevent soil from moving offsite; all temporary erosion control measures required by the Kern County Grading Code (Chapter 17.28.140) would be incorporated into the SWPPP. Preparation of the erosion control plans would be informed by the geotechnical report that would include evaluation of soils. This information would be used to prepare the grading plans and perform drainage calculations pursuant to the Kern County Grading Code (Section 17.28.070). All materials related to the SWPPP would be submitted to the Kern County Engineering and Survey Services Department prior to approval and obtaining required grading permits. As a result, project construction would have less-than-significant impacts related to erosion with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2.

In addition to Mitigation Measures MM 4.10-1 and MM 4.10-2, MM 4.7-8 would also be implemented. Mitigation Measure MM 4.7-8 consists of the project proponent preparing a Soil Erosion and Sedimentation Control Plan, prepared by a California registered civil engineer, then submitting it to the Kern County Public Works Department for review and approval. With the implementation of Mitigation Measures MM 4.10-1, MM 4.10-2, and MM 4.7-8, potential impacts regarding soil erosion or the loss of top soil would be less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Terrain along these existing transmission line routes and utility corridors are generally flat with minimal changes in elevation. The improvements within these areas do not include any occupied structures and would be constructed in accordance with all applicable regulations, including building codes and earthquake safe designs. Use of these areas for these project elements would not result in substantial soil erosion or the loss of topsoil. Impacts would be less than significant.

Mitigation Measures

Refer to **Section 4.10, *Hydrology and Water Quality***, regarding water quality mitigation measures MM 4.10-1 and MM 4.10-2.

MM 4.7-8: The project proponent shall prepare a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion. The plan shall be prepared by a California registered civil engineer or other professional approved to prepare said

Plan and submitted for review and approval by the Kern County Public Works Department. The Soil Erosion and Sedimentation Control Plan shall include, but is not limited to, the following:

- a. Best Management Practices to minimize soil erosion consistent with Kern County grading requirements and the California Regional Water Quality Control Board requirements pertaining to the preparation and approval of a Stormwater Pollution Prevention Plan (Best Management Practices recommended by the Kern County Public Works Department shall be reviewed for applicability);
- b. Provisions to maintain flow in washes, should it occur, throughout construction;
- c. Provisions for site revegetation using native seed mix;
- d. Sediment collection facilities as may be required by the Kern County Public Works Department;
- e. A timetable for full implementation, estimated costs, and a surety bond or other security as approved by the County;
- f. Other measures required by the County during permitting, including long-term monitoring (post-construction) of erosion control measures until site stabilization is achieved; and
- g. Provisions to comply with local and state codes relating to drainage and runoff, including use of pervious pavements, and/or other methods to the extent feasible, to increase stormwater infiltration and reduce runoff onto agricultural lands.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.10-1, MM 4.10-2 (see **Section 4.10, Hydrology and Water Quality**), and MM 4.7-8, impacts would be less than significant with mitigation incorporated for the project.

Impact 4.7-6: The project would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Landslides

As described above, the project is in a relatively flat-lying plain where landslides are not anticipated due to the absence of steep slopes. Therefore, adverse effects related to landslides would not pose a hazard to the project or surrounding area and impacts would be less than significant.

Lateral Spreading

Due to the low potential for liquefaction, the depth of groundwater, and the fact that the project site is not located near free faces or bodies of water, the potential for impacts due to lateral spreading

and is considered low but will be further evaluated pursuant to the requirements of Mitigation Measure MM 4.7-2.

This site-specific exploration would be included as part of the design level geotechnical investigation. The subsurface data would be used to complete the final design of the proposed project and associated structures in consultation with the County in a manner that meets applicable State and County building, grading and construction codes, ordinances and standards. Therefore, as required, the geologic hazards, including liquefaction, collapse and subsidence would be fully evaluated and based on the conclusions of the report, site specific design would be implemented that would minimize geologic hazard-related impacts. With implementation of Mitigation Measure MM 4.7-2, impacts would be less than significant.

Subsidence

As discussed previously, the proposed project site is not located within a zone of land subsidence, according to the United States Geological Survey California Water Science Center. Furthermore, based on the geotechnical investigation conducted by RMA GeoScience, the potential for land subsidence due to over pumping of groundwater or oil extraction is low. The full geotechnical study required by Mitigation Measure MM 4.7-2 would be prepared for the proposed project to identify and resolve any soil conditions including subsidence. Based on the conclusions of the report, recommended mitigation measures would be implemented to minimize this geologic hazard-related impact. With implementation of Mitigation Measure MM 4.7-2, impacts would be less than significant.

Liquefaction

As discussed in Impact 4.7-3, above, the potential for liquefaction is anticipated to be low, but this would be formally evaluated in the subsequent Geotechnical report as required by Mitigation Measures MM 4.7-2. Based on the conclusions of the report, recommended mitigation measures would be implemented to minimize this geologic hazard. Impacts would be less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. The improvements within these areas do not include any occupied structures and would be constructed in accordance with all applicable regulations, including building codes and earthquake safe designs. Use of these areas would not exacerbate the potential for on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.7-2, as described above.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.7-2 impacts would be less than significant with mitigation incorporated for the project.

Impact 4.7-7: The project would be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

Expansive soils are fine-grained soils (generally high plasticity clays) that can undergo a significant increase in volume with an increase in water content and a significant decrease in volume with a decrease in water content. Changes in the water content of a highly expansive soil can result in severe distress to structures constructed on or against the soil. The shrink swell behavior of expansive soils can lead to damage of project improvements over time if not addressed appropriately prior to construction.

To understand the soils type on the proposed project site, 32 test pits were dug to a maximum depth of 10 feet and 44 borings were drilled to a maximum depth of 70 feet. Holocene Aged Wind Blown Deposits were found in a range from a few inches to four feet. The material consists of fine to coarse silty sand to sand in a dry and loose condition. In addition, Quaternary aged alluvium was encountered in all 32 test pits and 44 borings. It consists of medium to light gray to dark brown, fine to coarse silty sand with gravel. Caliche deposits, principally as nodules at or near the surface, were observed along with iron oxide staining. The alluvium was dry to moist and medium dense to dense; Oxide staining was observed in some areas. Based on the preliminary observations and laboratory testing, the soils at shallow depths have a low to very low expansion potential. It is recommended that additional expansion index testing will be required at the completion of rough grading to verify the properties of the near surface soils.

Mitigation Measure MM 4.7-2 requires that a geotechnical study to evaluate soil conditions and geologic hazards including an evaluation for expansive soils and provide recommendations consistent with CBC requirements to reduce potential adverse effects from expansive soils and the shrink swell potential be performed by a qualified geotechnical engineer on the project site. All grading and construction onsite would adhere to the specifications, procedures, and site conditions contained in the final design plans, which would be fully compliant with the recommendations provided by the California-registered professional engineer in accordance with California and Kern County Building Code requirements. The required measures would encompass site preparation such as treatment of expansive soils or replacement with engineered fill. The final designs would be subject to approval and follow-up inspection by the Kern County Building Inspection Department. Final design requirements would be provided to the onsite construction supervisor and the Kern County Building Inspector to ensure compliance. Therefore, with implementation of Mitigation Measure MM 4.7-2, impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.7-2, as described above.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.7-2 impacts would be less than significant with mitigation incorporated for the project.

Impact 4.7-8: The project would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.

As part of the project, an on-site septic system would be installed which includes a septic tank, a leach field, and piping connecting to the septic tank to the various buildings. The wastewater disposal system would comply with applicable requirements of the Kern County Environmental Health Services Division (EHSD). The EHSD *Standards for Land Development* include the aspects of sewage and preservation of environmental health and include measures to demonstrate the adequate drainage of wastewater prior to project approval. If not designed correctly, septic systems could result in health impacts, adversely affect natural habitat, and pollute groundwater. Any septic system or alternative wastewater disposal system installed as part of the proposed project would be constructed in conformance with all standards intended to safeguard the public health and require all applicable permits. Proper siting and design of the leach field would minimize the potential for a health or environmental impact. This would include ensuring that on-site soils are suitable to support septic tanks and leach fields such as through an analysis of the on-site soil properties, permeability and percolation test results. Adherence to these County requirements would ensure that soils at the site are capable of adequately supporting the volume of wastewater that would be necessary for project operations.

To stem potential impacts from the use of a septic system, Mitigation Measures MM 4.7-9 and MM 4.7-10 would be implemented. Mitigation Measure MM 4.7-9 requires the project proponent to provide evidence to the Kern County Planning and Natural Resources Department that the siting, design and construction of proposed septic system(s) and leach field disposal system(s) comply with the 2016 Kern County Onsite Systems Manual. Mitigation Measure MM 4.7-10 requires that the final leach field disposal system shall be designed by a licensed engineer, taking into full consideration the requirements provided in the June 2016 Kern County Onsite Systems Manual. Therefore, the implementation of Mitigation Measures MM 4.7-9 and MM 4.7-10 would make the impacts be less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. The improvements within these areas would not affect use of any area for septic or alternative wastewater disposal system. No impacts would occur.

Mitigation Measures

MM 4.7-9: Prior to the issuance of permits, the project proponent shall provide evidence to the Kern County Planning and Natural Resources Department that the siting, design and construction of proposed septic system(s) and leach field disposal system(s) comply with the 2016 Kern County Onsite Systems Manual as authorized by the California Water Board Local Agency Management Program and administered locally by the Kern County Public Health Services Department – Environmental Health Division. Proving the proposed septic design plans

comply with these requirements will ensure that all standards for septic tanks, seepage pits, and soils are capable of adequately supporting the use of septic tanks.

MM 4.7-10: The final leach field disposal system shall be designed by a licensed engineer, taking into full consideration the requirements provided in the June 2016 Kern County Onsite Systems Manual.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.7-9 and MM 4.7-10, impacts would be less than significant for the project.

Impact 4.7-9: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, as defined in CEQA Guidelines Section 15064.

The geologic map and literature review indicates much of the project's surficial geology is comprised of late Pleistocene to early Holocene-age (14,000 to 4,000 years old) Quaternary alluvium. The Quaternary alluvium has low to high potential for the presence of paleontological resources, increasing with depth. As such, project-related ground disturbing activities have the potential to impact paleontological resources based on depth of ground disturbance. Surface scraping, stockpiling, and grading are considered surficial and would not impact fossil resources. However, deeper excavations, extending 5 feet below grade or more, have the potential to encounter and significantly impact paleontological resources in the Quaternary alluvium. Implementation of the following recommended mitigation measures would reduce potential significant impacts to paleontological resources to less than significant.

Based on the above, Mitigation Measures MM 4.5-1 through MM 4.5-4 (see Section 4.5, *Cultural Resources*) would be implemented and would reduce impacts to paleontological resources to less than significant. This would include development and implementation of a project-specific Paleontological Resources Mitigation and Monitoring Plan (PRMMP), paleontological resources sensitivity training for all construction personnel, and construction monitoring for inadvertent discovery of paleontological resources. Implementation of these measures would reduce impacts to less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. Due to the disturbed nature of these improvement areas, impacts are expected to be less than significant.

Mitigation Measures

Mitigation Measures MM 4.5-1 through MM 4.5-4 would need to be implemented; see Section 4.5, *Cultural Resources*, for a description.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-4, impacts would be less than significant with mitigation incorporated for the project; see Section 4.5, *Cultural Resources*, for a description.

Cumulative Setting, Impacts, and Mitigation Measures

Impacts of the project would be considered cumulatively considerable if they would have the potential to combine with other past, present, or reasonably foreseeable projects to become significant. Cumulative projects listed in **Table 3-3**, *Cumulative Projects List*, would be subject to relatively similar seismic hazards as that of the proposed project. However, the effects of these projects are not of a nature to cause cumulatively significant effects from geologic impacts or on soils because such impacts are site specific and would only have the potential to combine with impacts of the project if they occurred in the same location as the project.

Development of the proposed project, with implementation of the regulatory requirements discussed above, would result in less-than-significant impacts related to exposing persons or structures to geology, soils, or seismic hazards. Although the entire region is a seismically active area, geologic and soil conditions vary widely within a short distance, making the cumulative context for potential impacts resulting from exposing people and structures to related risks one that is more localized or even site-specific. Similar to the proposed project, other projects in the area would be required to adhere to the same California and Kern County Building Codes which would reduce the risk to people and property to less-than-significant levels. While future seismic events cannot be predicted, adherence to all federal, State, and local programs, requirements and policies pertaining to building safety and construction would limit the potential for injury or damage to a less-than-significant level. Therefore, the project, combined with past, present, and other foreseeable development in the area, would not result in a cumulatively significant impact by exposing people or structures to risk related to geologic hazards, soils, and/or seismic conditions. The project would result in less-than-significant cumulative impacts related to geology and soils.

Mitigation Measure MM 4.7-1 requires a geotechnical study to evaluate soil conditions and geologic hazards be performed by a qualified geotechnical engineer on the project site and to design the project facilities to withstand probable seismically induced ground shaking, liquefaction and subsidence. Surficial deposits, namely erosion and sediment deposition, can be cumulative in nature, depending on the type and amount of development proposed in a given geographical area. The cumulative setting for soil erosion consists of existing, planned, proposed, and reasonably foreseeable land use conditions in the region. However, construction constraints are primarily based on specific sites within a proposed development and on the soil characteristics and topography of each site. Erosion impacts of the proposed project during construction would be mitigated through the implementation of an SWPPP and appropriate BMPs. Other individual projects also would be required to comply with applicable codes, standards, and permitting requirements (e.g., preparation of a SWPPP) to mitigate erosion impacts. As discussed in Section 4.10 – *Hydrology and Water Quality*, Mitigation Measure MM 4.10-1 that requires preparation a hydrologic study and final drainage plan per Kern County Development Standards and the Kern County Code of Building Regulations, and Mitigation Measure MM 4.10-2, that requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) using best management practices (BMPs) to reduce the

potential effects of erosion. Other cumulative projects would be required to adhere to similar requirements, thereby minimizing cumulative erosion impacts. Specifically, all planned projects in the vicinity of the project are subject to environmental review and would be required to conform to the Kern County General Plan and Building Code, and would implement additional mitigation of seismic hazards to ensure soil stability, especially related to seismically induced erosion. With implementation of Mitigation Measures MM 4.7-1, MM 4.10-1 and MM 4.10-2 (see Section 4.10 – *Hydrology and Water Quality*, the project would not contribute to any cumulative impacts for geologic, seismic hazards or related events. Cumulative impacts related to geology and soils are less than significant.

The geographic scope for cumulative effects to paleontological resources includes the western portion of the Antelope Valley, which includes the Mojave Desert that surrounds the area of the proposed project. Given similarities in geologic formations, this area is expected to contain similar types of paleontological resources. There is no temporal scope because direct impacts to paleontological resources are permanent. Cumulative impacts to paleontological resources in the study area could occur if other related projects, in conjunction with the proposed project, had or would have impacts on paleontological resources that, when considered together, would be significant. Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, Mitigation Measures MM 4.5-1 through MM 4.5-4 are included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed project. Implementation of Mitigation Measure MM 4.7-2 requires a final engineering design specific geotechnical study to be prepared and MM 4.7-3 requires a California registered engineer to design the project facilities to withstand probable seismically induced ground shaking at the site. Additionally, Mitigation Measure MM 4.7-4 would require all building locations to be stabilized against the occurrence of liquefaction, MM 4.7-5 would require a geotechnical evaluation to determine appropriate engineering for foundations and support structures, MM 4.7-6 would require the use of existing road to the greatest extent possible, MM 4.7-7 would require the project to limit grading and incorporate BMPs to reduce erosion, MM 4.7-8 would require the preparation of a Soil Erosion and Sedimentation Control Plan, MM 4.7-9 would require the project proponent to submit evidence of the proposed septic system(s) and leach field disposal system(s) complying with the 2016 Kern County Onsite Systems Manual, and MM 4.7-10 would require the final leach field disposal system to be designed by a licensed engineer. Given the above mitigation measures and the requirement for similar mitigation for other projects in the Antelope Valley, cumulative impacts to Geology would be less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of

Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include any occupied structures and all would be constructed in accordance with all applicable regulatory standards, including building codes and earthquake safe designs. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. Construction of new transmission structure would involve temporary ground disturbance around the new structure locations, however use of these areas for these project elements would not exacerbate the potential result in a cumulative impact from geologic hazards or to paleontological impacts. As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts, and these necessary improvements are small parts of that overall project. Consequently, these impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.7-1 through MM 4.7-10, MM 4.5-1 through MM 4.5-4 (see Section 4.5, *Cultural Resources*), and MM 4.10-1 and MM 4.10-2 (see Section 4.10, *Hydrology and Water Quality*).

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.7-1 through MM 4.7-10, MM 4.5-1 through MM 4.5-4 (see Section 4.5, *Cultural Resources*), and MM 4.10-1 and MM 4.10-2 (see Section 4.10, *Hydrology and Water Quality*), cumulative impacts would be less than significant for the project.

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Section 4.8

Greenhouse Gas Emissions

4.8.1 Introduction

This section of the EIR describes the affected environment and regulatory setting relating to greenhouse gases (GHGs) for the project. It also describes the impacts associated with GHGs that would result from implementation of the project, and, as necessary, mitigation measures that would reduce these impacts.

Information in this section is based primarily on the project's greenhouse gas and energy technical report, *Greenhouse Gas and Energy Technical Report* for the Mojave Micro Mill Project located in Appendix G1 and *Greenhouse Gas and Energy Analysis of Off-Site Utilities Memorandum* located in Appendix G2 of this EIR. The impact assessment for the project is also based upon a review of relevant literature and technical reports that include, but are not limited to, information and guidelines by the California Air Resources Board (CARB), the United States Environmental Protection Agency (USEPA), and the applicable provisions of CEQA.

4.8.2 Environmental Setting

GHGs and climate change are a cumulative global issue. CARB and the USEPA regulate GHG emissions within the State of California and the United States, respectively. While CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emission reduction. CARB has divided California into regional air basins. The project is located within the central portion of the Antelope Valley, approximately 4 miles north of the unincorporated community of Rosamond, in the southeastern portion of unincorporated Kern County which is under the jurisdiction of the Eastern Kern Air Pollution Control District (EKAPCD), and is located in the Mojave Desert Air Basin (MDAB).

Greenhouse Gases

GHGs refer to gases that absorb and re-emit infrared radiation in the atmosphere. Many chemical compounds found in Earth's atmosphere act as GHGs, which allow sunlight to enter the atmosphere freely. When sunlight strikes Earth's surface, some of it is reflected back toward space as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to Earth's surface should be about the same as the amount of energy radiated back into space, leaving the temperature of Earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide, methane, and nitrous oxide), while others are exclusively human-made (e.g., gases used for aerosols). The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide

(N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs), are listed below (USEPA, 2020).

- **Carbon Dioxide (CO₂):** CO₂ is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO₂ is the reference gas (GWP of 1) for determining the GWPs of other GHGs (IPCC, 2007a).
- **Methane (CH₄):** CH₄ is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH₄ is 21 in the IPCC SAR and 25 in the IPCC AR4 (IPCC, 2007a).
- **Nitrous Oxide (N₂O):** N₂O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N₂O is 310 in the IPCC SAR and 298 in the IPCC AR4 (IPCC, 2007a).
- **Hydrofluorocarbons (HFCs):** HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWP of HFCs ranges from 140 for HFC-152a to 11,700 for HFC-23 in the IPCC SAR and 124 for HFC-152a to 14,800 for HFC-23 in the IPCC AR4 (IPCC, 2007a).
- **Perfluorocarbons (PFCs):** PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 6,500 to 9,200 in the IPCC SAR and 7,390 to 17,700 in the IPCC AR4 (IPCC, 2007a).
- **Sulfur Hexafluoride (SF₆):** SF₆ is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF₆ has a GWP of 23,900 in the IPCC SAR and 22,800 in the IPCC AR4 (IPCC, 2007a).
- **Nitrogen Trifluoride (NF₃):** NF₃ is a fluorinated compound consisting of nitrogen and fluoride. It is an inorganic, colorless, non-flammable, toxic gas with a slightly musty odor. NF₃ is used as a replacement for SF₆ in the electronics industry. It is typically used in plasma etching and chamber cleaning during the manufacturing of semi-conductors and liquid crystal display (LCD) panels (GGP, 2013). NF₃ has a GWP of 17,200 in the IPCC AR4, and 16,100 in the IPCC AR5.

Because different GHGs have different GWPs and CO₂ is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e) (IPCC, 1995 & 2007a). For example, SF₆ is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF₆, while comprising a small fraction of the total GHGs emitted annually worldwide, is a much more potent GHG with 22,800 times the GWP as CO₂. Therefore, an emission of 1 metric ton (MT) of SF₆ could be reported as an emission of 22,800 MT of CO₂e (IPCC, 2007a). Large emissions sources are reported in million MT of CO₂e (MMT CO₂e).

Greenhouse Gas Emissions Inventories

CARB compiles GHG inventories for the State of California. The most updated inventory reports the State's GHG emissions inventory from calendar year 2020. Based on the 2020 GHG inventory data

(i.e., the latest year for which data are available from CARB), California emitted 369.2 MMTCO₂e including emissions resulting from imported electrical power (CARB, 2022b). Between April 2010 and July 2020, the population of California grew by an annualized rate of 0.64 percent to a total of 39.78 million (CDOF, 2020). In addition, the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining. The California economy, measured as gross state product, grew from \$773 billion in 1990 to \$3.4 trillion in 2021 representing an increase of over three times the 1990 gross state product (CDOF, 2021).

California's economy, as with most of the county, experienced a decline in gross state product in 2020 (\$3.0 trillion) due to the Covid 19 pandemic. Despite the population and economic growth experienced in 2021, California's net GHG emissions were reduced to below 1990 levels in 2020 (CDOF, 2021). According to CARB, as of 2016, statewide GHG emissions dropped below the 2020 GHG Limit (431 MMTCO₂e) and have remained below the limit since that time, due in part to the state's GHG reduction programs (such as the Renewables Portfolio Standard, Low Carbon Fuel Standard (LCFS), vehicle efficiency standards, and declining caps under the Cap and Trade Program). **Table 4.8-1, State of California Greenhouse Gas Emissions**, identifies and quantifies Statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2020 (i.e., the most recent year in which data are available from CARB). As shown in **Table 4.8-1**, the transportation sector is the largest contributor to Statewide GHG emissions at approximately 37 percent in 2020.

Table 4.8-1: State of California Greenhouse Gas Emissions

Category	Total 1990 Emissions using IPCC SAR (MMTCO ₂ e)	Percent of Total 1990 Emissions	Total 2020 Emissions using IPCC AR4 (MMTCO ₂ e)	Percent of Total 2020 Emissions
Transportation	150.7	35%	135.8	36.8%
Electric Power	110.6	26%	59.5	16.1%
Commercial	14.4	3%	11.6	3.6%
Residential	29.7	7%	25.3	6.8%
Industrial	103.0	24%	73.3	19.9%
Recycling and Waste ^a	-	-	8.9	2.4%
High-GWP/Non- Specified ^b	1.3	<1%	21.3	5.8%
Agriculture/Forestry	23.6	6%	31.6	8.6%
Forestry Sinks ^c	-6.7		-	-
Net Total (IPCC AR4) ^d	431	100%	369.2	100%

^a Included in other categories for the 1990 emissions inventory.

^b High-GWP gases are not specifically called out in the 1990 emissions inventory.

^c Revised methodology under development (not reported for 2019)

^d CARB revised the State's 1990 GHG emissions using GWPs from the IPCC AR4.

SOURCES: California Air Resources Board, California Greenhouse Gas Emissions for 2000 to 2020. Trends of Emissions and Other Indicators. October 26, 2022. https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf. Accessed January 2023.

Climate Change

GHGs are gases in the atmosphere that trap heat. The major concern with GHGs is that increases in GHG concentrations in the atmosphere are causing global climate change, which is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to GHGs from human activities, most in the world-wide scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases (i.e., global warming).

According to CARB, the potential impacts in California due to global climate change may include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems. (CARB, 2018a). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas
- Reduced diurnal temperature range over most land areas
- Increase of heat index over land areas
- More-intense precipitation events

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, ocean acidification (including coral bleaching), impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, the potential for substantial environmental, social, and economic consequences over the long-term may be great.

4.8.3 Regulatory Setting

Federal

Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO₂ gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the Energy Star labeling system for energy-efficient products) encourage voluntary reductions from

large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

Federal Clean Air Act

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO₂ gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the Energy Star labeling system for energy-efficient products) encourage voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

Clean Air Act

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the United States Supreme Court held in April of 2007 that the USEPA has statutory authority under Clean Air Act (CAA) Section 202 to regulate GHGs. The Court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under CAA Section 202(a). The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under CAA Section 202(a)(1) consistently with the United States Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not, by themselves, impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards

On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. In August 2012, standards were adopted for model year 2017 through 2025 passenger cars and light-duty trucks. By 2020, new vehicles are projected to achieve 41.7 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 213 grams of CO₂ per mile (Phase II standards). By 2025, vehicles will achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile. According to the USEPA, under these standards a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle (USEPA, 2012). In 2017, the USEPA recommended no change to the GHG standards for light-duty vehicles for model years 2022–2025.

In August 2018, the USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule that would maintain the CAFE and CO₂ standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO₂ standards for model year 2020 are 43.7 mpg and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. The proposal, if adopted, would also exclude CO₂-equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020 (NHTSA & USEPA, 2018). The proposed SAFE Vehicles Rule's public comment period was extended to October 26, 2018 (NHTSA, 2020).

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the state's GHG and zero-emissions vehicle programs under CAA Section 209 (USEPA, 2019). The withdrawal of the waiver became effective November 26, 2019. The USEPA also published the final rule for the One National Program on Federal Preemption of State Fuel Economy Standards that finalizes critical parts of the SAFE Vehicles Rule and makes clear that federal law preempts state and local tailpipe GHG emissions standards as well as zero-emissions vehicle mandates. In November 2019, California and 23 other states, environmental groups, and the cities of Los Angeles and New York, filed a petition with the U.S. Court of Appeals for the District of Columbia Circuit, for the USEPA to reconsider the published rule (State of California v. Chao, 2019). In April 2020, the final USEPA and NHTSA SAFE Vehicles Rule was published in the Federal Register, setting fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026 (USEPA, 2019).

On January 20, 2021, President Biden issued Executive Order 13990 "Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis" directing the USEPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks," promulgated in April 2020. On February 8, 2021, the United States Court of Appeals for the District of Columbia Circuit issued an order granting the Biden Administration's motion to stay litigation over Part 1 of SAFE Rule. Consistent with President Biden's executive order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, USEPA and NHTSA are now evaluating whether and how to replace the SAFE Rule (Union of Concerned Scientists v. NHTSA, 2021). On April 28, 2021, the EPA reconsidered the withdrawal of the waiver of preemption for California's zero emission vehicle (ZEV) programs and GHG emission standards within California's Advanced Clean Car program for purposes of rescinding that action under the Clean Air Act. On March 14, 2022, EPA rescinded their 2019 waiver withdrawal, thus bringing back into force the 2013 Advanced Clean Car program waiver, including a waiver of preemption for California's ZEV sales mandate and GHG emissions standards (FR, 2022). EPA ruled to revise the greenhouse gas emissions standards under the Clean Air Act section 202(a) for light-duty vehicles for 2023 and later model years to make the standards more stringent (FR, 2021). Moreover, on August 5, 2021, the President signed an executive order that targets making half of all new vehicles sold in 2030 zero-emissions vehicles, including battery electric, plug-in hybrid electric, or fuel cell electric vehicles (White House, 2021).

On December 30, 2021, the USEPA finalized the federal greenhouse gas emissions standards for passenger and light trucks for model years 2023 through 2026 (USEPA, 2021). This rule prompts

auto makers to use clean technologies available today and incentivizes them to produce vehicles with zero and near-zero emissions technology. The final rule revises the current SAFE rules standards, beginning in model year 2023 and increases in stringency year over year through model year 2026. The standards finalized for model year 2026 establish the most stringent GHG standards ever set for the light-duty vehicle sector. The final rule sets a stringency increase in model year 2023 by almost 10% (compared to the SAFE rule standards of model year 2022), followed by stringency increases of 5% for model year 2024, 6.6% for model year 2025, and 10% for model year 2026. The USEPA projects that the final standards will result in a reduction of 3.1 billion tons of GHG emissions by 2050 and will also reduce emissions of some criteria pollutants and air toxics.

Heavy-Duty Engines and Vehicles Fuel Efficiency Standards

On October 25, 2010, the USEPA and the United States Department of Transportation (USDOT) proposed the first national standards to reduce GHG and improve fuel efficiency of heavy-duty trucks and buses (also known as “Phase 1”). For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and up to a 15 percent reduction for diesel vehicles by 2018 model year (12% and 17% respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles (includes other vehicles like buses, refuse trucks, concrete mixers; everything except for combination tractors and heavy-duty pickups and vans), the agencies are proposing engine and vehicle standards starting in the 2014 model year, which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by the 2018 model year. Building on the success of the standards, the USEPA and USDOT jointly finalized additional standards (called “Phase 2”) for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons.

Fuel Efficiency Standards for Construction Equipment

The federal government sets fuel efficiency standards for non-road diesel engines that are used in construction equipment. The regulations, contained in 40 CFR Parts 1039, 1065, and 1068, include multiple tiers of emission standards. Most recently, the USEPA adopted a comprehensive national program to reduce emissions from non-road diesel engines by integrating engine and fuel controls as a system to gain the greatest reductions. To meet these Tier 4 emission standards, engine manufacturers will produce new engines with advanced control technologies.

State

Assembly Bill 32 and Senate Bill 32

In 2006, the California Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. AB 32 defines

GHGs as CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under AB 32, CARB has the primary responsibility for reducing GHG emissions. AB 32 required CARB to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020.

In 2016, the California Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown to update AB 32 and include an emissions reduction's goal for the year 2030. SB 32 and AB 197 amend AB 32 and establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure the benefits of state climate policies reach into disadvantaged communities. SB 32 suggests approaches to achieving the new reduction target, which include increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The previous scoping plan, 2017 Climate Change Scoping Plan and the most recent scoping plan, the 2022 Scoping Plan for Achieving Carbon Neutrality are discussed below.

2017 Climate Change Scoping Plan

In response to the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan) in December 2017 (CARB, 2017a). The 2017 Scoping Plan outlines the strategies the State will implement to achieve the 2030 GHG reduction target, which build on the Cap-and-Trade Regulation, the LCFS, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet California's energy needs. CARB's projected statewide 2030 emissions take into account 2020 GHG reduction policies and programs. The 2017 Scoping Plan also comprehensively addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The adopted 2017 Scoping Plan includes ongoing and statutorily required programs and continuing the Cap-and-Trade Program. This "Scoping Plan Scenario" was modified from the January 2017 Proposed Scoping Plan to reflect AB 398, including removal of the 20 percent refinery measure.

CARB states that the Scoping Plan Scenario "is the best choice to achieve the state's climate and clean air goals" (CARB, 2017a). Under the Scoping Plan Scenario, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions are achieved from electricity sector standards (i.e., utility providers to supply at least 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. The alternatives were designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030.

The 2017 Scoping Plan discusses the role of local governments in meeting the state's GHG reductions goals because local governments have jurisdiction and land use authority related to: community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations (CARB, 2017a). Furthermore, local governments

may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures (CARB, 2017a).

Under the Scoping Plan Scenario, continuation of the Cap-and-Trade regulation is expected to cover approximately 34 to 79 MMTCO₂ of the 2030 reduction obligation (CARB, 2017a). The short-lived GHG strategy is expected to cover approximately 17 to 35 MMTCO₂e. The RPS with 50 percent renewable electricity by 2030 is expected to cover approximately 3 MMTCO₂. The mobile source strategy and sustainable freight action plan includes maintaining the existing vehicle GHG emissions standards, increasing the number of zero-emissions vehicles, and improving the freight system efficiency, and is expected to cover approximately 11 to 13 MMTCO₂. Under the Scoping Plan Scenario, CARB expects that the doubling of the energy efficiency savings by 2030 would cover approximately 7 to 9 MMTCO₂ of the 2030 reduction obligation. The other strategies would be expected to cover the remaining 2030 reduction obligations.

Assembly Bill 1279 (The California Climate Crisis Act)

The Legislature enacted AB 127977 (CLI, 2022a), The California Climate Crisis Act, on September 16, 2022. AB 1279 establishes the policy of the State to achieve net zero GHG emissions, carbon neutrality, as soon as possible, but no later than 2045 and achieve and maintain net negative GHG emissions thereafter. Additionally, AB 1279 ensures that by 2045 Statewide anthropogenic greenhouse gas emissions are reduced at least 85 percent below 1990 levels. SB 1279 also requires CARB to ensure that the Scoping Plan identifies and recommends measures to achieve carbon neutrality, and to identify and implement policies and strategies for carbon dioxide removal solutions and carbon capture, utilization, and storage technologies. It also requires CARB to submit an annual report on progress in achieving the Scoping Plan's goals.

2022 Scoping Plan for Achieving Carbon Neutrality

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), adopted by CARB in December 2022, expands on prior Scoping Plans and responds to more recent legislation by outlining a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target of reducing anthropogenic emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045 or earlier (CARB, 2022o). The 2022 Scoping Plan outlines the strategies the state will implement to achieve carbon neutrality by reducing GHGs to meet the anthropogenic target and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches. The major element of the 2022 Scoping Plan is the decarbonization of every sector of the economy. This requires rapidly moving to zero-emission transportation for cars, buses, trains, and trucks; phasing out the use of fossil gas for heating; clamping down on chemicals and refrigerants; providing communities with sustainable options such as walking, biking, and public transit to reduce reliance on cars; continuing to build out solar arrays, wind turbine capacity, and other resources to provide clean, renewable energy to displace fossil-fuel fired electrical generation; scaling up new options such as renewable hydrogen for hard-to-electrify end uses and biomethane where needed. "Successfully achieving the outcomes called for in the Scoping Plan would reduce demand for liquid petroleum by 94 percent and total fossil fuels by 86 percent by 2045 relative to 2022" (CARB, 2022o). Despite these efforts, some amount of residual emissions will remain from hard-to-abate industries such as cement, internal combustion vehicles still on the road, and other sources of GHGs, including high global warming

chemicals used as refrigerants. The 2022 Scoping Plan addresses the remaining emissions by re-envisioning natural and working lands (such as forests, shrublands/chaparral, croplands, wetlands, and other lands) to ensure they incorporate and store as much carbon as possible. Since working lands will not provide enough sequestration or carbon storage on their own to address the residual emissions, additional methods of capturing, removing, and storing carbon dioxide need to be explored, developed and deployed.

The 2022 Scoping Plan shows that the state must take unprecedented and substantial action to achieve its climate goals, far beyond anything CARB has considered in prior scoping plans. In CARB's own words, the 2022 Scoping Plan "is the most comprehensive and far-reaching Scoping Plan developed to date" and "[m]odeling for this Scoping Plan shows that this decade must be one of transformation on a scale never seen before to set us up for success in 2045" (CARB, 2022o). The 2022 Scoping Plan includes the Scoping Plan Scenario, which "builds on and integrates efforts already underway to reduce the state's GHG, criteria pollutant, and toxic air contaminant emissions by identifying the clean technologies and fuels that should be phased in as the state transitions away from combustion of fossil fuels" (CARB, 2022o). The 2022 Scoping Plan approaches decarbonization from two perspectives: (1) managing a phasedown of existing energy sources and technology and (2) ramping up, developing, and deploying alternative clean energy sources and technology over time (CARB, 2022o). Key actions to support success of the 2022 Scoping Plan include, but are not limited to:

- Transportation Sector
 - Decarbonizing the transportation sector, including transitioning to 100 percent sales of light-duty zero emission vehicles (ZEVs) by 2035 and medium- and heavy-duty vehicles by 2040; achieving a 20 percent zero emission target for the aviation sector, and developing a rapid and robust network of ZEV refueling infrastructure.
 - Ensuring that an adequate supply of zero-carbon alternative fuel which will require building the production and distribution network for zero-carbon fuels; strengthening the Cap-and-Trade Program; and increasing the stringency and scope of the Low Carbon Fuel Standard (LCFS).
 - Achieving a per capita vehicle miles traveled (VMT) reduction of at least 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045 by reimagining roadway projects to decrease VMT, investing in public transit, implementing equitable roadway pricing; expanding and completing planned networks of high-quality active transportation infrastructure; deploying autonomous vehicles, ride-hailing services, and other options which have higher occupancy and low VMT; streamlining access to public transportation; and ensuring alignment of land use, housing, transportation; conservation and planning in adopted regional plans and accelerating infill development and housing production in transportation efficient places.
- Clean Electricity Grid
 - Long-term planning to support grid reliability and expansion of renewable and zero-carbon resource and infrastructure deployment; completing systemwide and

local reliability assessments; facilitating resource development such as long-duration energy storage and hydrogen production; maximizing opportunities for demand response; enhancing decarbonization, reliability, and affordability in regional markets; addressing resource build-out challenges; and doubling statewide energy efficiency savings in electricity and fossil gas end uses by 2030; achieving 90 percent, 95 percent, and 100 percent renewable and zero-carbon retail sales by 2035, 2040, and 2045, respectively;

- Sustainable Manufacturing and Buildings
 - Using best available control technology (BACT) for stationary sources; prioritizing alternative fuel transitions and pilot projects to identify options to reduce materials and process emissions along with energy emissions in industrial manufacturing facilities; strengthening the Cap-and-Trade Program; developing infrastructure for Carbon Capture Sequestration (CCS) and hydrogen production; establishing markets for low-carbon products and recycled materials; developing a net-zero cement strategy; incentivizing the installation of energy efficiency and renewable energy technologies; evaluating the role of hydrogen in meeting GHG reduction goals; and addressing cost barriers to promote low-carbon fuels for hard-to-electrify industrial applications.
 - Achieving three million all-electric and electric-ready homes by 2030 and seven million by 2035 with six million heat pumps installed by 2030; strengthening building standards to support zero-emission new construction and developing building performance standards for existing buildings and by adopting a zero-emission standard for new space and water heaters beginning in 2030; expanding use of low-GWP refrigerants within buildings; increasing funding to decarbonize existing buildings and appliance replacements; and implementing biomethane procurement targets for investor-owned utilities.
- Carbon Dioxide Removal (CDR) and Capture
 - Incorporating CCS into other sectors, besides transportation, where cost-effective and technologically feasible options are not currently available and to achieve the 85 percent reduction in anthropogenic sources below 1990 levels; addressing market barriers for CCS and CDR; evaluating the role for CCS in cement decarbonization; supporting carbon management infrastructure projects; exploring carbon capture applications; consider carbon capture infrastructure when developing hydrogen roadmaps; and streamlining permitting barriers to project implementation.
- Short-Lived Climate Pollutants (Non-Combustion Gases)
 - Installing anaerobic digesters, maximizing biomethane capture, and directing biomethane to sectors that are hard to decarbonize or as a feedstock for energy; increasing alternative manure management projects; implementing enteric fermentation strategies; accelerating demand for dairy and livestock product substitutes such as plant-based or cell-cultured dairy and livestock products to

achieve reductions in animal populations; and deploying methane migration strategies and developing regulations to ensure that the 2030 target is achieved.

- Maximizing and expanding existing infrastructure to reduce landfill disposal; expanding markets for products made from organic waste; recovering edible food to combat food insecurity; infrastructure to support organic recycling; and directing biomethane captured from landfills and organic waste digesters to sectors that are hard to decarbonize.
 - Mitigating emissions from leaks; utilizing zero emission equipment alternatives wherever feasible; identifying and addressing methane leaks from oil infrastructure near communities; minimizing emission from equipment that must vent fossil gas by design; installing vapor collection systems on high emitting equipment; phasing out venting and routine flaring of associated gas; reducing pipeline and compressor blowdown emissions; utilizing remote sensing capability to mitigate leaks.
 - Expanding the use of very low- or no-GWP technologies in all hydrofluorocarbon (HFC) end-use sectors; converting large HFC emitters such as existing refrigeration systems to the lowest practical GWP technologies; and improving recovery, reclamation, and reuse of refrigerants by limiting sales of new or virgin high-GWP refrigerants and requiring the use of reclaimed refrigerants.
 - Reducing fuel combustion from reductions in transportation emissions and agricultural equipment emissions and investing in residential woodsmoke reduction.
- Natural and Working Lands (NWL)
 - Increasing climate smart forest, shrubland, and grassland management to at least 2.3 million acres a year—an approximately 10-fold increase from current levels; increasing climate smart agricultural practices by at least 78,000 acres adopted a year, annually conserving at least 8,000 acres a year of croplands, and increasing organic agriculture to comprise at least 20 percent of cultivated acres by 2045—an approximately 7.5-fold increase in healthy soils practices from previous levels and a 2-fold increase in total acres of organic agriculture; increasing annual investment in urban trees in developed lands by at least 200 percent above historic levels and establishing defensible space on all parcels by 2045; restoring at least 60,000 acres, or approximately 15 percent of all Sacramento-San Joaquin River Delta wetlands by 2045; and cutting land conversion of deserts and sparsely vegetated landscapes by at least 50 percent annually from current levels, starting in 2025.
 - Establishing and expanding mechanism that ensure NWL are protected from land conversion and parcelization and pairing land conservation projects with management plans that increase carbon sequestration.
 - Accelerating the pace and scale of climate smart forest management to at least 2.3 million acres annually by 2025; establishing and expanding mechanisms that ensure forests, shrublands, and grasslands are protected from land conversion; accelerating the deployment of long-term carbon storage from waste woody

biomass residues; expanding infrastructure to facilitate processing of biomass; and streamlining permitting to accelerate implementation of climate smart forest management.

- Establishing and expanding mechanisms that ensure grasslands are protected from conversion/parcelization and that support ongoing management actions that improve carbon sequestration and to deliver waste diversion goals through nature-based solutions.
- Accelerating healthy soils practices to 80,000 acres annually by 2025, conserving at least 8,000 acres of annual crops annually, and increasing organic agriculture to 20 percent of all cultivated acres by 2045; accelerating deployment of healthy soils practices, organic farming, and climate smart agriculture practices.
- Restoring 60,000 acres of Delta wetlands annually by 2045 to reduce methane emissions from wetlands and reverse the resulting subsidence.
- Increasing urban forestry investment annually by 200 percent relative to business as usual.
- Establishing and expanding mechanisms that ensure sparsely vegetated lands are protected from conversion.

Under the Scoping Plan Scenario, the demand for liquid petroleum would decrease by 94 percent and total fossil fuels by 86 percent in 2045 relative to 2022 (CARB, 2022e). Unfortunately, some residual emissions would remain from hard-to-abate industries such as cement, internal combustion vehicles still on the road, and other sources of GHGs, including high global warming chemicals used as refrigerants (CARB, 2022e). The 2022 Scoping Plan addresses these remaining emissions through increased sequestration rates in NWL. However, the 2022 Scoping Plan modeling indicates that NWL, on their own, will not provide enough sequestration and storage to address all the residual emissions so it will be necessary to research, develop, and deploy additional methods of capturing CO₂ that include pulling it from smokestacks of facilities, or drawing it out of the atmosphere itself and then safely and permanently utilizing and storing it (CARB, 2022e). Additionally, carbon removal will be necessary to achieve net negative emissions to address historical GHGs already in the atmosphere (CARB, 2022e). The 2022 Scoping Plan does not specify how the residual emissions will be removed, as this will require new CCS and Direct Air Capture (DAC) technologies to be developed which will need governmental or other incentive support to overcome technology and market barriers (CARB, 2022e).

The 2022 Scoping Plan also discusses the role of local governments in meeting the state's GHG reductions goals because local governments have jurisdiction and land use authority related to community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations. Local governments' efforts to reduce GHG emissions within their jurisdictions are critical to achieving the State's long-term climate goals. Furthermore, local governments make critical decisions on how and when to deploy transportation infrastructure and can choose to support transit, walking, bicycling, and neighborhoods that allow people to transition away from cars; they can adopt building ordinances that exceed statewide building code requirements; and they play a critical role in facilitating the rollout of ZEV infrastructure (CARB, 2022p). The 2022 Scoping Plan encourages local governments to take

ambitious, coordinated climate action at the community scale; action that is consistent with and supportive of the state's climate goals (CARB, 2022p). These could include:

- Developing local CAPS and strategies consistent with the State's GHG emission reduction goals.
- Incorporating State-level GHG priorities into their processes for approving land use and individual plans and individual projects.
- Implementing CEQA mitigation, as needed, to reduce GHG emissions associated with new land use development projects, and
- Leveraging opportunities for regional collaboration.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15, which involved the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

Executive Order B-55-18

Executive Order B-55-18 was signed by Governor Brown on September 10, 2018. The order establishes an additional statewide policy to achieve carbon neutrality, which CARB defines as meaning "... that all GHG emissions emitted into the atmosphere are balanced in equal measure by GHGs that are removed from the atmosphere, either through carbon sinks or carbon capture and storage," (E3, 2020) by 2045 and maintain net negative emissions thereafter. As per Executive Order B-55-18, CARB is directed to work with relevant State agencies to develop a framework for implementation and accounting that tracks progress toward this goal and to ensure that future climate change scoping plans identify and recommend measures to achieve the carbon neutrality goal. California is making progress towards the 2045 goal; however, the pathway to carbon neutrality is still under development. According to CARB, the framework will include a strong reliance on energy efficiency, electrification, low carbon fuels (including low-carbon electricity), and CO₂ removal in future policies and strategies for reaching the ambitious goal (E3, 2020). The path to carbon neutrality lies in striving for zero emissions from all new sources and maximum sequestration to offset existing sources.

Senate Bill 905

The Legislature enacted SB 905 (CLI, 2022e) on September 16, 2022. SB 905 requires CARB to establish the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon capture, utilization, and sequestration (CCUS) and carbon dioxide removal (CDR) project and technology. On or before January 1, 2025, CARB must adopt regulations creating a unified permitting application for approval of CCUS and CDR projects which would expedite the permitting process and other authorizations for the construction and operation of these projects. SB 906 also authorizes CARB to develop a centralized database to track the deployment of CCUS and CDR technologies and projects. Additionally, SB 905 requires the Secretary of the Natural Resources Agency to publish framework for governing agreements for two or more tracts of land overlying the same geologic storage reservoir for the purposes of a carbon sequestration project.

Senate Bill 1137

SB 1137 (CLI, 2022h) prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.

Assembly Bill 1757

AB 1757 (CLI, 2022b) requires the California Natural Resources Agency (CNRA), by January 1, 2024, in collaboration with CARB, the California Environmental Protection Agency (CalEPA), the California Department of Food and Agriculture (CDFA), and an expert advisory committee, to set targets for natural carbon sequestration and nature-based climate solutions for 2030, 2038, and 2045, which must be integrated into the Scoping Plan and other State policies. CARB must ensure that double counting of emissions reductions is avoided and emissions reduction projects and actions that receive State funding will not be eligible to generate credits under any market-based compliance mechanism. CARB, by January 1, 2025, must develop standard methods for State agencies to track GHG emissions and reductions, carbon sequestration, and, where feasible, additional benefits from natural and working lands over time. CNRA, by January 1, 2025, in collaboration with CARB, CalEPA, and CDFA, must review and update the Climate Smart Strategy to achieve the targets and post data on its website on progress made toward targets, including on State expenditures made to implement the targets.

Senate Bill 1206

SB 1206 (CLI, 2022i) prohibits the sale or distribution of bulk hydrofluorocarbon gases (HFCs) or bulk blends contain HFCs that exceed 2,200 GWP in 2025, 1,4000 GWP in 2030, and 750 GWP in 2033, unless the HFCs are reclaimed or for use in medical metered dose inhalers. SB 1206 also requires the state to use reclaimed refrigerant with a GWP greater than 750 to service existing

equipment owned/operated by the State starting in 2025. Additionally, SB 1206, requires CARB to initiate a rulemaking requiring low- and ultra-low GWP alternatives to HFCs in all sectors where it is practicable for entities in the sector to comply with the requirement.

Senate Bill 27

SB 27 (CLI, 2022c) requires CNRA, in coordination with other state agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. SB 27 also requires CARB to establish specified CO₂ removal targets for 2030 and beyond as part of its Scoping Plan. Under SB 27, CNRA is to establish and maintain a registry to identify projects in the state that drive climate action on natural and working lands and are seeking funding. CNRA also must track carbon removal and GHG emission reduction benefits derived from projects funded through the registry. This bill is reflected in the 2022 Scoping Plan as CO₂ removal and carbon capture targets of 20 MMTCO₂e by 2030 and 100 MMTCO₂e by 2045 in support of carbon neutrality.

Senate Bill 596

SB 596 (CLI, 2022d) requires CARB, by July 1, 2023, to develop a comprehensive strategy for the state's cement sector to achieve net-zero-emissions of GHGs associated with cement used within the state as soon as possible, but no later than December 31, 2045. The bill establishes an interim target of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035. Under SB 596, CARB must: (1) define a metric for GHG intensity and establish a baseline from which to measure GHG intensity reductions, (2) evaluate the feasibility of the 2035 interim target (40 percent reduction in GHG intensity) by July 1, 2028, (3) coordinate and consult with other state agencies, (4) prioritize actions that leverage state and federal incentives, and (5) evaluate measures to support market demand and financial incentives to encourage the production and use of cement with low GHG intensity.

Senate Bill 1383

This bill (Chapter 395, Statutes of 2016) creates goals for short-lived climate pollutant (SLCP) reductions in various industry sectors. The SLCPs included under this bill – including methane, fluorinated gases, and black carbon – are GHGs that are much more potent than carbon dioxide and can have detrimental effects on human health and climate change. SB 1383 requires the CARB to adopt a strategy to reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The methane emission reduction goals include a 75 percent reduction in the level of statewide disposal of organic waste from 2014 levels by 2025. In 2017, CARB adopted a SLCP Reduction Strategy to implement SB 1383 (CARB, 2017c).

Executive Order N-79-20

Executive Order N-79-20 was signed by Governor Newsom on September 23, 2020. The order directs CARB to develop and propose regulations that would require a ramp up to 100 percent in-state sales of new zero-emissions passenger vehicles (cars and trucks) and drayage trucks by 2035. The Executive Order further directs CARB to promulgate regulations that would require a ramp up to 100 percent in-state sales of medium- and heavy-duty trucks by 2045 “for all operations where

feasible.” The Executive Order also instructs CARB to develop and propose “strategies” (as opposed to regulations) to achieve zero emissions from off-road vehicles and equipment operations in the state by 2035. The order also directs State agencies to take a number of actions focused on the oil and gas industry, including, but not limited to, a direction to CARB to strengthen and extend the LCFS program beyond 2030.

Land Use and Transportation Planning

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that would prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for passenger car and light truck regional emissions for 2020 and 2035. Reduction targets are updated every eight years; but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO’s SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may be ineligible for funding programmed after January 1, 2012. Kern Council of Governments (KCOG) is the MPO for the region in which the project site is located. In addition, on September 23, 2010, CARB adopted the GHG emissions reduction targets of 5 percent per capita reduction by 2020 and 10 percent per capita reduction by 2035 relative to 2005 levels for KCOG (CARB, 2020). Under SB 375, the reduction target must be incorporated within that region’s Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

On August 16, 2018, KCOG adopted the 2018 Regional Transportation Plan and Sustainable Communities Strategy (2018 RTP/SCS) (KCOG, 2018), which is an update to the previous 2014 RTP/SCS. The RTP/SCS seeks to: improve economic vitality, improve air quality, improve the health of communities, improve transportation and public safety, promote the conservation of natural resources and undeveloped land, increase regional access to community services, increase regional and local energy independence and increase opportunities to help shape the communities’ future, while successfully achieving the GHG-emission-reduction targets set by CARB. CARB approved that the KCOG 2018 RTP/SCS would achieve the 2020 and 2035 GHG reduction targets (CARB, 2020).

KCOG adopted the 2022 RTP/SCS (KCOG, 2022a) on December 16, 2022. The 2022 RTP/SCS contains CARB’s GHG reduction targets of 9 percent per capita by 2020 and 15 percent per capita by 2035 as compared to 2005 level (changed from the previous reduction targets, discussed above, effective October 1, 2018 (CARB, 2022n)). The Kern region has outperformed the 2020 state GHG target and this plan shows that they are on target to achieve the 2035 target. The following strategy areas will be implemented to meet the 2035 target:

- A forecasted development pattern to accommodate the region's future transportation, employment, and housing needs, while promoting conservation of natural resources and open space areas.
- A transportation network comprising well-maintained public transit, local streets and roads, managed lanes and highways, and bikeways and walkways.
- Strategies to manage demands on the region's transportation roadway system (also known as transportation demand management, or TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand.
- Strategies to manage operations of the region's transportation system (also known as transportation system management, or TSM) to maximize the efficiency of the network and reduce congestion.

Implementation of the 2022 RTP/SCS is anticipated to achieve a 10.8 percent reduction in 2020, 15.1 percent in 2035 relative to 2005, which would exceed CARBs GHG reduction targets (KCOG, 2022a).

Transportation Sector

In response to the transportation sector accounting for a large percentage of California's CO₂ emissions, AB 1493 (HSC Sections 42823 and 43018.5) (also referred to as the Pavley standards) enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured during and after 2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers.

The federal Clean Air Act ordinarily preempts state regulation of motor vehicle emissions standards; however, California is allowed to set its own standards with a federal Clean Air Act waiver from USEPA. In August 2012, USEPA and the U.S. Department of Transportation adopted GHG emissions standards for model year 2017–2025 vehicles, which corresponds to the state's Pavley standards; however, these standards were rescinded and replaced under the federal SAFE Vehicles Rule. As mentioned above, California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020. Also, on January 20, 2021, President Biden signed EO 13990, directing the government to revise fuel economy standards with the goal of further reducing emissions. On April 22, 2021, NHTSA proposed to formally roll back portions of the SAFE Vehicles Rule, thereby restoring California's right to set more stringent fuel efficiency standards.

In January 2007, Governor Brown signed EO S-01-07, which mandates the following actions: (1) establish a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) adopt a Low Carbon Fuel Standard for transportation fuels in California. CARB identified the Low Carbon Fuel Standard as one of the nine discrete early actions in the Climate Change Scoping Plan. In 2018, CARB amended the Low Carbon Fuel Standard to strengthen and smooth the carbon intensity benchmarks through 2030 in line with California's 2030 GHG emissions reduction target enacted through SB 32.

California Air Resources Board

CARB is responsible for the coordination and administration of both federal and state air pollution control programs in California. Some of the regulations and measures that CARB has adopted to reduce particulate matter, nitrogen oxides, and other emissions have the co-benefits of reducing GHG emissions. Regulations and measures include:

- In 2012, CARB approved the Advanced Clean Cars Program, which includes low-emission-vehicle regulations that reduce criteria pollutant and GHG emissions from light- and medium-duty vehicles, and the zero-emissions vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018–2025 model years. The program aims to reduce smog-forming pollution from passenger vehicles by 75 percent by 2025, with the ultimate goal of total fleet electrification and elimination of tailpipe emissions. CARB is in the process of establishing the next set of low-emission-vehicle and ZEV requirements to contribute to meeting federal ambient air quality ozone standards and California’s carbon neutrality targets.
- In 2022, CARB approved the Advanced Clean Cars II Program (CARB 2022p), for model years 2026 through 2035, which requires that all new passenger cars, trucks and SUVs sold in California be zero emissions by 2035. The regulation amends the Zero-emission Vehicle (ZEV) Regulation to require an increasing number of ZEVs, and relies on advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrid electric-vehicles, to meet air quality and climate change emissions standards, in support of EO N-79-20. This Program also amended the Low-emission Vehicle Regulations to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions. By increasing the number of ZEVs on the road and continuing to clean up conventional internal combustion vehicles, the regulations will reduce exposure to vehicle pollution in communities throughout California, including in frontline communities that are disproportionately exposed to vehicular pollution.
- In 2004, CARB adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling, to reduce public exposure to diesel particulate matter and other toxic air contaminants (13 CCR Section 2485). This measure generally prohibits diesel-fueled commercial vehicle idling for more than five minutes at any given location, with certain exemptions for equipment in which idling is a necessary function, such as concrete trucks.
- In 2008, CARB approved the Truck and Bus regulation to reduce particulate matter and nitrogen oxide emissions from existing diesel vehicles operating in California (13 CCR Section 2025[h]).
- In 2007, CARB promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models.

While these regulations primarily target reductions in criteria air pollutant emission, they have the co-benefits of minimizing GHG emissions due to improved engine and fuel efficiencies and reduction of idling times.

Energy Sector

Title 24 of the California Code of Regulations is the California Building Code. It governs all aspects of building construction. Part 6 of the Building Code includes standards mandating energy efficiency measures in new construction. The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The 2022 update to the Title 24 standards became effective January 1, 2023.

The Energy Efficiency Standards for Residential and Nonresidential Buildings focuses on several key areas to improve the energy efficiency of renovations and addition to existing buildings as well as newly constructed buildings and renovations and additions to existing buildings. The most significant efficiency improvements to the residential Standards include the encouragement of electric heat pumps, expands solar photovoltaic (PV) and battery storage standards, establishes electric-ready requirements for new homes, and improvements for attics, walls, water heating, ventilation, and lighting (CEC, 2021a). The most significant efficiency improvements to the nonresidential Standards include alignment with the ASHRAE 90.1 2017 national standards, battery storage standards, and strengthens ventilation standards. The 2022 updates to the Title 24 standards also include changes made throughout all of its sections to improve the clarity, consistency, and readability of the regulatory language. Furthermore, the standards require that enforcement agencies determine compliance with state regulations (24 CCR Part 6) before issuing building permits for any construction (CEC, 2021a).

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality” (CBSC, 2022). The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the State and establishes mandatory measures for new residential and nonresidential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality (CBSC, 2022). The CALGreen Code was most recently updated in 2022 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2023.

The State has adopted regulations to increase the proportion of electricity from renewable sources. On September 10, 2018, Governor Brown signed SB 100, which increased California's RPS from 33 percent by 2020 renewable resources to 50 percent by December 31, 2026, and 60 percent by December 31, 2030, while requiring retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. In addition, SB 100 requires that CARB plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. Electricity providers, including the provider for the project site, SCE, is required to update future plans to meet applicable SB 100 requirements.

Senate Bill 1020, Clean Energy, Jobs, and Affordability Act of 2022, approved September 16, 2022, revises SB 100, to require that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to end use customers by December 31, 2035, 95 percent of all retail sales to end users by December 31, 2040, and 100 percent of all retail sales to end users by December 31, 2045, and 100 percent of electricity procured to serve all state agencies by December 31, 2035 (CLI, 2022f).

On September 16, 2022, Governor Gavin Newsom signed SB 1075, Hydrogen: green hydrogen: emissions of greenhouse gases, which requires CARB, CEC, California Public Utilities Commission (CPUC), and the California Workforce Development Board to conduct an evaluation on hydrogen by June 1, 2024, including policy recommendations to accelerate the production and use of hydrogen, and specifically green hydrogen, and its role in decarbonizing the electrical and transportation sectors (CLI, 2022g).

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code Section 25301[a]). The 2021 Integrated Energy Policy Report (CEC, 2022a), the latest published report from CEC, provides the results of the CEC's assessments related to energy sector trends, building decarbonization, energy reliability, decarbonizing California's gas system, the California energy demand forecast, and quantifying the benefits of the Clean Transportation Program.

Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase the procurement of electricity from renewable sources from 33 percent to 50 percent; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

Cap-and-Trade Program

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as a key strategy CARB employed to help California meet its GHG reduction targets for 2020 and will continue to assist in

the efforts to achieve the GHG reduction goals in 2030, and potentially beyond. Pursuant to its authority under AB 32, CARB has designed and adopted a California Cap-and-Trade Program to reduce GHG emissions from major sources (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32’s emission reduction mandate of returning to 1990 levels of emissions by 2020 (17 CCR Sections 95800 to 96023).

Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 metric tons CO₂e per year [MT CO₂e/year]) and declines over time, and facilities subject to the cap may trade permits to emit GHGs. The statewide cap for GHG emissions from the capped sectors commenced in 2013 and declines over time, achieving GHG emission reductions throughout the Program’s duration (17 CCR Sections 95811, 95812). On July 17, 2017 the California legislature passed Assembly Bill 398, extending the Cap-and-Trade Program through 2030.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 and 2030 statewide emission limits will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. In other words, as climate change is a global occurrence and the effects of GHG emissions are considered cumulative in nature, a focus on aggregate GHG emissions reductions, rather than source-specific reductions, is warranted.

If California’s direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California’s direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state’s emissions forecasts and the effectiveness of direct regulatory measures.

With the passage of AB 1279, the state has a statutory target to achieve carbon neutrality by 2045 and it is clear that additional GHG reductions will be required over this decade to achieve the accelerated 2030 target (CARB, 2022a). This will require changes to all major programs to increase their stringency between now and 2030 resulting in reductions in GHG emissions. As these GHG reductions increase, there will be less reliance on the Cap-and-Trade Program to “fill the gap” to meet the accelerated 2030 reduction target. Since the timing of major program changes is uncertain, the Cap-and-Trade Program must continue to be able to scale across a range of possibilities, including potential program design and annual cap changes (CARB, 2022a).

California Environmental Quality Act

In accordance with CEQA and Appendix F, Energy Conservation, of the State CEQA Guidelines, and to assure that energy implications are considered in project decisions, EIRs are required to include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

In addition, while not described or required as significance thresholds for determining the significance of impacts related to energy, Appendix F provides the following topics for consideration in the discussion of energy use in the CEQA Compliance Checklist as well as in the supporting documentation to the extent the topics are applicable or relevant to the proposed project:

The proposed project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;

- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Senate Bill 97

SB 97 (Chapter 185, Statutes of 2007), enacted in 2007, directed the California Office of Planning and Research (OPR) to develop CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions." In December 2009, OPR adopted amendments to the CEQA Guidelines (Guidelines Amendments), Appendix G, Environmental Checklist, which created a new resource section for GHG emissions and indicated criteria that may be used to establish significance of GHG emissions (California Code of Regulations [CCR] Title 14, Section 15064.4).

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments. The Guidelines Amendments require a lead agency to make a good-faith effort, based on scientific and factual data to the extent possible, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency and allow the lead agency to choose whether to: (1) quantify GHG emissions resulting from a project; and/or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The administrative record for the Guidelines Amendments also clarifies “that the effects of GHG emissions are cumulative and should be analyzed in the context of California Environmental Quality Act’s requirements for cumulative impact analysis” (Bryant, 2009).

Senate Bill 375

SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. CARB adopted the vehicular GHG emissions reduction targets, in consultation with the metropolitan planning organizations (MPOs), which require a 7 to 8 percent reduction by 2020 and a 13 to 16 percent reduction by 2035, for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs, such as the Kern Council of Governments (KCOG), will work with local jurisdictions in the development of sustainable community strategies (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. KCOG’s reduction target for per capita vehicular emissions is 5 percent by 2020 and 10 percent by 2035 (CARB, 2018a).

In 2018, CARB published the Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets. At that time, Metropolitan Planning Organizations (MPO) had completed the Sustainable Community Strategies (SCS). CARB reviewed and determined, if implemented, all SCSs but one would achieve the SB 375 targets. CARB’s 2018 plan updated targets for reductions and the technical and policy rationale supporting the recommendation, with the goal to ensure that the MPOs continue to innovate, while emphasizing implementation and accountability. In addition to increasing the GHG emissions reduction targets themselves (CARB, 2018a).

KCOG adopted the 2018 Regional Transportation Plan (RTP), which includes a Sustainable Community Strategies (SCS) component in accordance with SB 375. The 2018 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County.

California Green Building Standard Code

The State of California adopted the 2010 CALGreen Code, which became effective in January 2011. Building off of the initial 2008 California Green Building Code, the 2010 CALGreen Code represents a more stringent building code that requires, at a minimum, that new buildings and renovations in California meet certain sustainability and ecological standards. The 2010 CALGreen Code has mandatory Green Building provisions for all new residential buildings that are three stories or fewer (including hotels and motels) and all new non-residential buildings of any size that are not additions to existing buildings.

The California Building Standards Commission adopted the 2013 California Building Standards Code that also included the 2013 CALGreen Code, which became effective on January 1, 2014. The mandatory provisions of the code are anticipated to reduce GHG emissions by 3 MMTCO₂e by 2020, reduce water use by 20 percent or more, and divert 50 percent of construction waste from landfills. Additionally, the California Building Code includes a requirement for a 20 percent reduction in indoor potable water usage. The 2013 California Energy Code (Title 24, Part 6), which is also part of the CALGreen Code (Title 24, Part 11, Chapter 5.2), became effective on July 1,

2014. The 2016 CALGreen Code became effective on January 1, 2017. The updated code addresses clean air vehicles and requirements for electric vehicle charging infrastructure. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2020.

Regional

Eastern Kern Air Pollution Control District

The project site is located within the Mojave Desert Air Basin (Basin), which encompasses the desert portions of Kern, Los Angeles, Riverside, and San Bernardino Counties. The Basin has four air districts which regulate air quality. The project site lies within the Eastern Kern Air Pollution Control District (EKAPCD). EKAPCD is responsible for air quality planning in its portion of the Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished through air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles.

The EKAPCD has adopted guidance for assessing GHG emissions under CEQA, titled *Addendum to CEQA Guidelines Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* (EKAPCD, 2012). EKAPCD also has general CEQA guidelines, but they were last updated in 1999 and do not provide guidance for GHG emissions. The GHG guidelines are for stationary projects and require that project specific GHG emissions be quantified if the proposed project is not exempt from CEQA. The guidelines provide a significance threshold of 25,000 MTCO₂e/year and provides for less than significant impacts if projects meet one of three conditions (discussed below in Section 3.1). The guidance and policy rely on the use of performance-based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure.

Kern Council of Governments

As discussed above, in 2018 KCOG adopted the 2018 RTP/SCS (KCOG, 2018), which is an update to the previous 2014 RTP/SCS on December 16, 2022 (KCOG, 2022a). The 2022 RTP serves as a blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. The 2022 SCS includes land use planning strategies and policies to reduce air emissions from passenger and light duty truck travel by better coordinating transportation expenditures with forecasted development patterns in order to meet the GHG emissions reduction target for the region by achieving a 9 percent reduction in per capita transportation GHG emissions by 2020 and a 15 percent reduction in per capita transportation emissions by 2035 compared to the 2005 level (KCOG, 2022a). Compliance with and implementation of the 2022 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions (e.g., nitrogen dioxide, carbon monoxide, etc.) associated with reduced per capita vehicle miles traveled (VMT).

The 2022 RTP/SCS states that Kern County region was home to approximately 927,500 people in 2020 and included approximately 272,900 homes and 341,000 jobs (KCOG, 2022a). By 2050, the integrated growth forecast projects that these figures will increase by 299,700 people, with approximately 89,200 more homes and 61,200 more jobs (KCOG, 2022a). KCOG's 2022 RTP/SCS provides specific strategies for implementation. These strategies include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation and cultures and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles (KCOG, 2022a).

In addition, the 2022 RTP/SCS includes strategies to promote active transportation; support local planning and projects that serve short trips; promote transportation investments, investments in active transportation, more walkable and bikeable communities that will result in improved air quality and public health and reduced GHG emissions; and support building physical infrastructure such as local and regional bikeways, sidewalk and safe routes to schools pedestrian improvements, regional greenways and first-last mile connections to transit, including to light rail and bus stations. The 2022 RTP/SCS aligns active transportation investments with land use and transportation strategies, increases competitiveness of local agencies for federal and state funding, and expands the potential for all people to use active transportation. CARB is in the process of reviewing the KCOG GHG quantification determination in the 2022 RTP/SCS for future GHG emission reduction targets.

Although there are GHG emission reduction targets for passenger vehicles set by CARB for 2045, the 2022 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are needed for 2045. By meeting and exceeding the SB 375 targets for 2035, as well as achieving an additional 0.4 percent reduction in GHG from transportation-related sources in the ten years between 2035 and 2045, the 2022 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the state's future GHG emission reduction goals (KCOG, 2022a).

Local

Kern County General Plan

The Land Use, Open Space, and Conservation Element of the Kern County General Plan provides goals, policies, and implementation measures applicable to air quality, and as related to the project, would also reduce project GHG emissions. These goals, policies, and implementation measures are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the project. Therefore, they are not listed below.

Chapter 1: Land Use, Open Space, and Conservation Element

Air Quality

Policy

- Policy 18: The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.
- Policy 19: In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision making body, as part of its deliberations, will ensure that:
1. All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
 2. The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.
- Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the Kern County Air Pollution Control District on ministerial permits.

Implementation Measures

- Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.
- Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:
1. Minimizing idling time.
 2. Electrical overnight plug-ins.
- Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:
1. Pave dirt roads within the development.
 2. Pave outside storage areas.
 3. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
 4. Use of alternative fuel fleet vehicles or hybrid vehicles.
 5. Use of emission control devices on diesel equipment.

6. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
7. Provide bicycle lockers and shower facilities on site
8. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
9. The use and development of park and ride facilities in outlying areas.
10. Other strategies that may be recommended by the local Air Pollution Control Districts.

Measure J: The County should include PM10 control measures as conditions of approval for subdivision maps, site plans, and grading permits.

Chapter 5: Energy Element

Solar Energy Development

Policies

- Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.
- Policy 2: The County should attempt to identify and remove disincentives to domestic and commercial solar energy development.
- Policy 3: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.
- Policy 4: The County should encourage solar development in the desert and valley regions previously disturbed, and discourage development of energy projects on undisturbed land supporting State or federally protected plant and wildlife species.

Implementation Measures

- Measure A: The County shall continue to maintain, and update as necessary, provisions in the Kern County Zoning Ordinance to provide adequate development standards for commercial solar energy development.
- Measure B: The County should work with affected State and federal agencies and interest groups to establish consistent policies for solar energy development.

4.8.4 Impacts and Mitigation Measures

Methodology

GHG Emissions Estimates

This GHG Technical Report provides an estimate of the GHG emissions from project construction and operation. The following project-related emission sources have been evaluated:

- Scope 1: Direct, on-site and off-site combustion of fossil fuels (e.g., natural gas, propane, gasoline, diesel, and transportation fuels).
- Scope 2: Indirect, off-site emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy.

For purposes of this analysis, it was considered reasonable, and consistent with criteria pollutant calculations, to consider GHG emissions resulting from direct project-related activities, including, e.g., use of vehicles, electricity, and natural gas, to be new emissions. These emissions include project construction activities such as grading, hauling, and construction worker trips, as well as operational emissions. This analysis also considers indirect GHG emissions from water conveyance, wastewater generation, and solid waste handling. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions were calculated on an annual basis. As previously discussed, all emission will be considered net new.

GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) (Version 2020.4.0), which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.

As discussed previously, the County has adopted and implemented a range of GHG reduction activities and strategies that would reduce GHG emissions. In addition, KCOG is in the process of adopting the 2022 RTP/SCS applicable to the region, which outlines KCOG's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The SCS focuses on: a forecasted development pattern to accommodate the regions' future transportation, employment, and housing needs, while promoting conservation of natural resources and open space areas; a transportation network comprising well-maintained public transit, local streets and roads, managed lanes and highways, and bikeways and walkways; strategies to manage demands on the region's transportation roadway system (transportation demand management [TDM]) in ways to reduce or eliminate traffic congestion during peak demand periods; and strategies to manage operations of the region's transportation system (transportation system management [TSM]) to

maximize the efficiency of the network and reduce congestion. The SCS demonstrates that it will meet or exceed the reduction in per capita GHG emissions relative to 2005 of at least 9 percent by 2020 and 15 percent by 2035 as set by CARB. The project-level analysis describes the consistency of the proposed project's GHG emission sources with local and regional GHG emissions reduction strategies.

Construction

On-Site

Micro Mill

Construction emissions are forecasted by assuming a conservative estimate of construction activities from each phase of the proposed project. Construction emissions are estimated using the CalEEMod (Version 2020.4.0) software, an emissions inventory software program recommended by the EKAPCD. CalEEMod is based on outputs from OFFROAD (OFFROAD2021) and EMFAC (EMFAC2021), which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including off- and on-road vehicles. CalEEMod outputs construction-related GHG emissions of CO₂, CH₄, N₂O, and CO₂e. It has been assumed that construction equipment would meet USEPA Tier 4 Final and that the proposed project would implement dust control measures pursuant to EKAPCD Rule 402.

The output values used in this analysis were adjusted to be project-specific based on equipment types and the resource loaded construction schedule provided by the Applicant. Construction phasing would include site preparation, grading/excavation, drainage/utilities/trenching, electrical installation, foundations/concrete pour, building erection, mechanical equipment installation, process piping installation, paving, and landscaping. The schedule provided the construction phases with the number of equipment pieces allocated in various subphases. Therefore, not all equipment would be operated during the entire phase but only during the specified subphase. The resource loaded schedule is provided in Appendix G1.

Incidental Solar Array

Construction emissions for the solar array were estimated from a similar solar array in the same air district. The emissions from the Aratina Solar project, which is larger in acres than that for the proposed project, were scaled based on its size and the size of the proposed solar array of 63 acres.

The input values used in this analysis were adjusted to be project-specific based on equipment types and the construction schedule. Haul truck trips, worker trips, and vendor truck trip estimates were based on information obtained from the Applicant and the corresponding on road emissions were calculated using the EMFAC model and Excel spreadsheets. The CalEEMod model was used with project-specific inputs to determine offroad emissions occurring from construction related activities. CalEEMod relies on emission factors from CARB's OFFROAD2011 model. The Association of Environmental Professionals (AEP) recommends that total construction GHG emissions resulting from a project be amortized over the project's estimated lifetime and added to GHG emissions (AEP, 2016). In accordance with the AEP guidance, GHG emissions from project construction have been amortized over the 30-year lifetime of the proposed project.

Water Line

The construction emissions for the water line connection to the proposed site will be analyzed. The location of the water line connection within the project site will be between the employee and visitor car parking area and the solar fields on the western side of the property, continuing linearly due west under the railroad easement and to the edge of the Sierra Highway right-of-way, connecting at approximately 34°56'09.7"N, 118°08'58.0"W, approximately 1,500 ft in length.

Traffic Improvements

The Traffic Impact Study completed for the Project included traffic improvements. Emissions from the construction activities associated with these traffic improvements will be analyzed.

Power and Telecommunication

Construction emissions for the power and telecommunication lines were estimated using the Circle City Substation and Mira Loma-Jefferson 66 KV Line Project (Circle City Project) (CPUC, 2016). The Circle City Project was used as a project reference since the type of construction activities would be similar to those for the power and telecommunication connection lines for the proposed project. The known information provided by Southern California Edison (SCE), the electricity provider, was the number of poles to be constructed (300) and the rate of pole construction (one pole per day), which was used to develop a construction schedule of approximately 300 days. The Circle City Project is larger in linear feet, ground disturbance and overall construction activities than the power and telecommunication line for the proposed project. Detailed information provided in the technical appendices for the Circle City Project are publicly available and were analyzed to develop reasonably conservative and representative assumptions for this technical analysis. Additional details on the power and telecommunication lines can be found in Appendix G1.

Project construction is assumed to start as early as second quarter of 2024 and require up to 24 months with full build-out occurring in the second quarter of 2026. The construction and activation of the solar array may occur after full buildout of the micro mill. The solar array was conservatively assumed to occur over approximately 3 months at the conclusion of the micro mill construction schedule. Construction of the off-site improvements are assumed to occur sequentially with the on-site

Operations

Operational impacts were assessed for the proposed project buildout year (i.e., as early as 2025 assuming construction begins at the earliest possible time of 2023).

Micro Mill Facility

The exact equipment for the proposed project is not yet determined. Therefore, operational impacts from the micro mill portion of the proposed project, including raw (scrap) material handling, the electric arc furnace (EAF), the ladle metallurgy station (LMS), furnace, casting, rolling, slag, cooling towers, emergency engines, and fuel tanks were calculated using the CO₂e intensity factor for typical steel mills (USEPA, 2020). The intensity factory is based on a typical steel mill that uses natural gas. As previously stated, the proposed project would be an all-electric micro mill and would not utilize natural gas. Additionally, the emissions presented do not account for the reduction of CO₂ that would be captured in the EAF from the carbon capture system (CCS) or the reduction

of NO_x from the selective catalytic reduction (SCR) unit. The CCS is estimated to reduce CO₂ by approximately up to 78 percent (Sgro, 2023) and the SCR is estimated to reduce NO_x emissions by approximately up to 90 percent (RF MacDonald Co., 2023). The emissions presented herein are considered conservative in nature as the all-electric micro mill would result in lower GHG emissions. The intensity factor was based on the anticipated production rate of 456,000 tons of steel produced per year for the proposed project. Details of the processes and equipment associated with the proposed project are described below.

Raw Material Handling

Recycled scrap metal for the proposed project would be purchased from outside suppliers and transported into the facility by truck. Scrap metal to be received would include un-shredded and shredded scrap largely from crushed automobiles but also may include old appliances, machinery, sheet metal, rectangular bundles, and miscellaneous scrap metal. Un-shredded scrap metal would be processed by suppliers off-site to meet industry-standard size and cleanliness, arriving in a form either suitable for direct use in the steelmaking process or in larger sizes that would require cutting by a torch cutter, located in the scrap storage area, prior to its use in the process. The scrap metal would be stored in the 24,300-square-foot scrap bay or at the overflow scrap storage piles. Scrap would be moved using a front-end loader and loaded into a conveyor system using magnet cranes to the proposed Electric Arc Furnace (EAF).

Alloy aggregates would be used in the EAF and LMS for refining steel metallurgy. Alloys would be transported by truck, unloaded into storage bins and eventually transferred by front-end loaders or forklift to the EAF/LMS bay for use in the EAF or LMS as needed. Ferro Silicon 75 ((FeSi75), an alloy produced by combining 75 percent silicon and 25 percent iron), Ferro Silicon Manganese (FeC₅H₅MnSi), Silicon Carbide (SiC), Calcium Carbide (CaC₂), Fluorspar (CaF₂), Metallurgical carbon alloys, Ferro Vanadium (FeV), Ferro Chrome (FeCR), and Calcium Silicon (CaSi) alloys may be used as part of the steel making process.

Melt Shop

The melt shop (MS) process includes use of the EAF, LMS, casting operations, ladle and tundish preheaters, and refractory repair. Scrap metal is preheated by the EAF exhaust heat and then fed into the EAF. Chemical and electrical energy would be used to melt the entire batch of scrap metal. The melted steel is then transferred to the LMS via a ladle. The main emission control device for these proposed operations is the fume treatment plant which captures emissions from the EAF and LMS. The following subsections describe each process that occurs during the melt shop process:

- **EAF:** During the first use of the EAF after downtime, loading of scrap metal would be accomplished using charge buckets, which are transported into position over the EAF using overhead electric cranes. Once in position, the charge bucket would open, allowing scrap to fill the EAF. After the first batch of steel is made, scrap for subsequent batches would be fed to the EAF using a continuous conveyor (i.e., the endless charging system (ECS)).

During the melting, raw materials such as fluxing agents, metallurgic coal or coke, and oxygen would be added to the molten steel in order to achieve the desired product chemistry. Once the desired steel properties are reached in the EAF, the molten steel is poured (i.e., “tapped”) into the ladle. The molten steel is then transferred to the LMS via a ladle car.

The slag formed in the EAF would be emptied by tipping the EAF to the side and stored in a stockpile within the EAF/LMS bay. The slag would be subsequently removed from the pit using a front-end loader, quenched using process water, and transported to an outdoor storage pile before being processed on-site.

Electric Arc Furnace (EAF) dust will be collected in a bag filter, transported in an enclosed conveyor to a silo and, in a completely enclosed process and with a dustless spout, the trucks will be loaded from the silo to be trucked out of the plant. The EAF dust will be sold to zinc recycling plants to recover the zinc.

- **LMS:** The ladles filled with molten steel would be transferred from the EAF to the LMS via the ladle car. The molten steel would be further refined with the injection and mixing of raw materials such as fluxing agents, carbon, and alloys into the molten steel. Once the molten steel reaches the desired temperature and composition, the ladle would transport the molten steel to the continuous casting machine.
- **Casting Operations:** The ladle is transported to a continuous casting machine within the caster bay. During casting, steel flows out of the bottom of the ladle via a slide gate into a tundish. From the tundish, the steel flows into a single mold. In the mold, the steel is water-cooled and formed into bars (billets).
- **Ladle and Tundish Preheat Burners:** Refractory materials would line the ladles and tundishes which must be dried completely prior to steel production. Additionally, the ladles and tundishes must be preheated prior to the transfer of molten steel in order to prevent heat losses. Electrical ladle and tundish preheaters and dryers would be installed. The tundish would also use a refractory material that does not require curing.

Rolling Mill Process

The rolling mill process is a metal forming process in which metal stock is passed through one or more pairs of rolls to reduce the thickness and to make the thickness of the metal uniform. The rolling mill process includes an induction furnace located between the caster and the rolling mill for temperature elevation and stabilization, then a series of rolling mill stands that reduce the cross-sectional area and hot-form final rolled steel reinforcing bar. The products are water quenched for tempering and directed to the cooling beds to cool in the ambient air. The rolled steel is then sheared to length, cooled on a natural convection cooling bed, bundled and stored or fed directly into spooler machines which roll the reinforcing bar into a spool. Automated tying systems would then prepare products for movement by an overhead crane to storage areas, directly to trucks or transferred to the fabrication shop.

Cooling Towers

Two non-contact cooling towers and one contact cooling tower would be used to remove heat from the cooling water used in the proposed project. Cooling towers reduce the temperature of the system by relying on the latent heat of water evaporation to exchange heat between the cooling water and the air passing through the cooling tower. Because cooling towers provide direct contact between the cooling water and the air passing through the tower, some of the liquid water may be entrained in the air stream and be carried out of the tower into the atmosphere as “drift” droplets.

Ancillary Buildings

Operational impacts associated with the ancillary buildings part of the project were also calculated. The proposed project includes ancillary structures for storeroom and vehicle maintenance, office building, locker room, slag processing office building, containerized power control room, guard shack/scale house, a trucker restroom facility, and a water pre-treatment building.

Offsite Improvements

Water Line

Although the new water line would transport water to the proposed site there would not be any operational emissions associated with the pipeline itself. Therefore, no operational emissions are anticipated from the water line.

Traffic Improvements

Once completed, the traffic improvements would not generate emissions except for minimal amounts of energy consumed from the addition of traffic signals and from periodic inspections and maintenance. However, operational inspection and maintenance activities for the traffic improvements would be conducted as part of the overall inspection and maintenance activities of the existing roads. Thus, the net change in operational energy consumption and inspection and maintenance emissions from the traffic improvements would be minimal and are addressed qualitatively.

Power and Telecommunication

The power and telecommunication lines would convey electricity and data, they would not generate GHG emissions directly. During operation of the power and telecommunication lines, minimal amounts of energy could be consumed from indirect activities including periodic inspections and maintenance. However, operational inspection and maintenance activities for the new power and telecommunication lines would be conducted as part of the overall inspection and maintenance activities of the existing lines. Thus, the net change in operational inspection and maintenance emissions from the project's new power and telecommunication lines would be minimal and are addressed qualitatively.

CalEEMod was used to estimate operational GHG emissions from electricity, fossil fuels, solid waste, water and wastewater for the ancillary buildings, and landscaping equipment for the entire project site. CalEEMod was used to estimate mobile source emissions where emissions factors from CARB's updated version of the on-road vehicle emissions factor (EMFAC) model were input into CalEEMod to calculate mobile GHG emissions. The most recent version is EMFAC2021, which "represents CARB's current understanding of motor vehicle travel activities and their associated emission levels" (CARB, 2022j). CalEEMod generated the vehicle miles traveled (VMT) from project uses based on the trip rates in the Transportation Impact Study (LAV, 2023). In addition, the U.S. Environmental Protection Agency's AP-42 Compilation of Air Pollutant Emission Factors to evaluate operational GHG emissions from a number of emission sources including the electric furnace, ladle and furnace preheater, roll mill, cooling towers, fire pumps, emergency generators, fuel tanks, casting operations, and slag material.

With regard to energy demand, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Energy demand rates were estimated based on specific square footage of the new industrial uses, as well as predicted water supply needs for these uses. The proposed project electricity demands are supplied by SCE and onsite solar provided as part of the proposed project. CalEEMod provides default intensity factors for CO₂, CH₄, and N₂O for SCE and calculates an overall CO_{2e} intensity factor. The default CO₂ intensity factor is based on year 2012 and was adjusted to reflect an intensity factor that represents a 2022 scenario. By 2020, CPUC estimates that 41.4 percent of the energy SCE provide its customers is contracted to be generated by sources of renewable energy (CPUC, 2023). Also, as described above, SB 100 requires local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024. Therefore, since the proposed project's first operational year is anticipated to be 2025, the default CO₂ intensity factor in CalEEMod for SCE was linearly adjusted from 2020 to account for 42.4 percent renewable energy for 2022 based on the required renewables from year 2024 under SB 100. For 2012, SCE had 20.6 percent renewables and this was used to back calculate a CO₂ intensity factor where SCE had zero percent renewable. This value was then adjusted to reflect a CO₂ intensity factor with 42.4 percent renewables.

Emissions of GHGs from solid waste disposal were also calculated using CalEEMod software. The emissions are based on the waste disposal rate for the land uses, the waste diversion rate, and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for CH₄, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. In addition, it was assumed 75 percent of solid waste will be diverted from landfills as AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a Statewide goal for 75 percent disposal reduction by the year 2020 (CLI, 2011).

Emissions of GHGs from water and wastewater result from the required energy to supply and distribute the water and treat the wastewater. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions were calculated using CalEEMod and were based on the water usage rate for the land uses, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the emission factors for the wastewater treatment process.

Other sources of GHG emissions from operation of the proposed project include equipment used to maintain landscaping, such as lawnmowers and trimmers. The CalEEMod software uses landscaping equipment GHG emission factors from the CARB OFFROAD model and the CARB Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment.

Emissions calculations for the proposed project include credits or reductions for GHG reducing measures that are required by regulation, such as reductions in energy and water demand from the current Title 24 standards and the California Green Building Standards (CALGreen) Code. Physical and operational project characteristics for which sufficient data is available to quantify the reductions from building energy and resource consumption have been included in the quantitative analysis and include but are not limited to the following features.

As previously stated operational GHG impacts are assessed based on the project-related incremental increase in GHG emissions compared to baseline conditions and incorporation of emissions reduction strategies.

Conflicts with Greenhouse Gas Reduction Plan, Policies, and Actions

The proposed project's GHG emissions are also evaluated by assessing the proposed project's potential to conflict with applicable GHG reduction strategies and actions adopted by the State and County. As discussed previously, the County has adopted strategies and policies to reduce GHG emissions through its General Plan.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on GHGs.

A project would have a significant impact on GHGs if it would:

- a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The adopted *CEQA Guidelines* provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and global climate change impacts. Quantitative significance thresholds for this impact area have not been adopted by the State of California.

Kern County has not developed a quantified threshold of significance for GHG emissions, but a project found to contribute to a net decrease in GHG emissions and found to be consistent with the adopted implementation of the CARB Climate Change Scoping Plan is presumed to have less-than-significant GHG impacts.

In March 2012, EKAPCD adopted an addendum to their *CEQA Guidelines* to address GHG impacts, including quantitative thresholds for determining significance of GHG emissions when EKAPCD is the CEQA lead agency. In these circumstances, a project is considered to have a significant impact or cumulatively considerable impact if it exceeds the following criteria:

- Generate 25,000 MTs or more of CO₂e per year

The above impact would be considered to be fully reduced to below the significance level if it meets one of the following conditions:

- The project demonstrates to EKAPCD that it is in compliance with a State GHG reduction plan such as AB 32 or future federal GHG reduction plan if it is more stringent than the State plan; or
- Project GHG emissions can be reduced by at least 20 percent below BAU through implementation of one or more of the following strategies:
 - a. Compliance with a Best Performance Standard (BPS);
 - b. Compliance with GHG Offset; and/or
 - c. Compliance with an Alternative GHG Reduction Strategy.

Pursuant to the CEQA thresholds, impacts were evaluated based on whether the project would be consistent with the State's applicable GHG reduction goals, plans, policies, and regulatory requirements. Specifically, those plans and policies established in accordance with AB 32 and the State's RPS program as well as other federal, state, and local policies.

Project Impacts

Impact 4.8-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Construction Emissions

As explained above, the emissions of GHGs associated with construction of the proposed project were calculated for each year of construction activity assuming use of USEPA Tier 4 final equipment and implementation of EKAPCD Rule 402 dust control requirements. Results of the project's construction phase GHG emissions calculations are presented in **Table 4.8-2, Proposed Project Construction Greenhouse Gas Emissions**. Although construction-related GHGs are onetime emissions, any assessment of project emissions should include construction emissions. As discussed above, AEP recommends that a project's construction-related GHG emissions be amortized over the project's 30-year lifetime in order to include these emissions as part of the project's annualized lifetime total emissions, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. As indicated in **Table 4.8-2**, proposed project construction emissions during the approximate 24-month construction period would generate an estimated 37,265MTCO_{2e}, or 1,242 MTCO_{2e} amortized over a 30-year period. A complete listing of the equipment by phase, emission factors, and calculation parameters used in this analysis is included within the emissions calculation worksheets that are provided in Appendix G1 of this report.

Table 4.8-2: Proposed Project Construction Greenhouse Gas Emissions

Emissions Source	CO_{2e} (Metric Tons)^{a,b}
On-Site	
Construction Year 2024	10,104
Construction Year 2025	22,871
Construction Year 2026	2,297
Off-Site Improvements	
Traffic Improvement Project 1 – 2025	34
Traffic Improvement Project 2 – 2041	37
Traffic Improvement Project 3 – 2025	33
Traffic Improvement Project 4 – 2041	66
Water Line Project – 2025	57
Power and Telecommunication Lines	1,766
Total Construction Emissions	37,265
Amortized Construction Emissions (30-years)	1,242

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix G1.

^b CO_{2e} emissions are calculated using the GWP values from the IPCC Fourth Assessment Report.

SOURCE: ESA, 2023e and IPCC, 2007b

Operational Emissions

Operation and maintenance of the proposed project would generate GHG emissions largely through the manufacturing process (i.e., electric furnace, ladle and furnace preheater, roll mill, cooling towers, fire pumps, emergency generators, fuel tanks, casting operations, and slag material), motor vehicle trips to and from the project site; on-site maintenance activities involving portable equipment and maintenance vehicles; and energy use (i.e., electricity and natural gas), water conveyance and treatment, and waste sources were calculated for the expected first operating year, 2025. **Table 4.8-3, Estimated Annual Operational Greenhouse Gas Emissions**, summarizes operational emissions associated with the proposed project. With implementation of the proposed project's green building measures, the proposed project would achieve GHG reductions for electricity as shown by the negative GHG emissions associated with the solar array. As shown in Table 6, the proposed project is estimated to emit 172,063MTCO_{2e} per year during operation. The total construction GHG emissions, amortized over 30 years, was added to the annual estimated operational emissions to estimate annual GHG emissions generated by the proposed project. As shown in **Table 4.8-3**, the proposed project would emit 173,305MTCO_{2e} per year, throughout the operational life of the proposed project (assumed 30 years).

Additionally, the proposed on-site substations may feature circuit breakers that contain SF₆ gas, used as an insulator and an arc suppressor in the breakers. SF₆ is inert, non-toxic, and is encapsulated in the breaker assembly. SF₆ is a GHG with substantial global warming potential (GWP) because of its chemical nature and long residency time within the atmosphere. However, under normal conditions, it would be completely contained in the equipment and SF₆ would be released only in the unlikely event of a failure, leak, or crack in the circuit breaker housing. New circuit breaker designs have been developed to minimize the potential for leakage, compared to that of past designs, and the amount of SF₆ that could be released by the solar facility equipment would be minimal.

Table 4.8-3: Estimated Annualized Proposed Project Greenhouse Gas Emissions

Opening Operational Year (2025)	Operational Emissions CO _{2e} (Metric Tons per Year) ^a
Micro Mill Energy ^b	44,200
Ancillary Buildings	242
Mobile	18,630
Manufacturing	109,440
Water Treatment	376
Emergency Generators	72
Offroad Mobile Equipment	3,122
Fuel Tanks	533
Solar Array	(4,552)
Operational Subtotal	172,063
Amortized Construction	1,242
Total	173,305
EKAPCD Significance Threshold	25,000
Exceed Threshold	Yes
^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions are provided in Appendix G1.	

b Emissions for the proposed project were scaled from the Nucor facility which has a similar rebar production rate of 450,000 tons of steel produced per year. The proposed project has an anticipated production rate of 456,000 tons of steel produced per year. It should be noted, the Nucor facility is not an all-electric micro mill but rather utilizes natural gas. The emissions presented are considered a conservative estimate (i.e., overestimated) as the all-electric micro mill would result in lower criteria air pollutant emissions, specifically NO_x, VOCs, and SO₂ as well as a small reduction in toxic air containment emissions associated with the project's elimination of natural gas combustion. Additionally, the emissions presented do not account for the reduction of CO₂ that would be captured in the EAF from the CCS or the reduction of NO_x from the selective catalytic reduction unit.

SOURCE: ESA, 2023e. Sgro, 2023.

As shown in **Table 4.8-3**, the proposed project is considered to have a significant project and cumulatively considerable impact because its GHG emissions would exceed the EKAPCD significance threshold. This significant impact can be reduced to a less than significant impact and less than cumulatively considerable impact if the proposed project demonstrates that it is (1) in compliance with a state GHG reduction plan such as AB32 or Cap-and-Trade Program or (2) the proposed project's GHG emissions can be reduced by at least 20 percent below Business-As- Usual (BAU) through implementation of one or more of the following strategies: (a) compliance with a BPS, (b) compliance with GHG Offsets, or (c) compliance with an alternative GHG reduction strategy. The discussion in Section 5.1.3, below, demonstrates the proposed project's compliance with option (1), compliance with a state GHG reduction plan.

Project operational-related GHG emissions would decline in future years as emissions reductions from the State's Cap-and-Trade program are fully realized. Reductions from the proposed project's second and third highest GHG-emitting sources, mobile and electricity emissions, would occur over the next decade, and beyond, as regulations require cleaner and more efficient sources, ensuring that the proposed project's total GHG emissions would be further reduced. Emissions from electricity would decline as utility providers, including SCE, meet their RPS obligations to provide 60 percent of their electricity from renewable electricity sources by 2030 consistent with SB 100, which would achieve additional reductions in emissions from electricity demand although the actual reduction will depend on the mix of fossil fuels that SCE will replace with renewables and the relative CO₂ intensities of those fossil fuels. Project emissions from mobile sources would also decline in future years as older vehicles are replaced with newer vehicles resulting in a greater percentage of the vehicle fleet meeting more stringent combustion emissions standards, such as the model year 2017-2025 Pavley Phase II standards, federal GHG emissions standards for model years 2023 -2026, passenger cars and light trucks, the CAFE standards for model year 2024-2026 for passenger cars and light trucks, and Advanced Clean Cars II program.

Off-site Improvements

Long-term operation of the off-site improvements would not result in direct emissions of GHGs. Rather, during operation of the power and telecommunication lines minimal amounts of emissions could be generated from periodic inspections and maintenance operations. Typical operational maintenance activities of both the power and telecommunication lines would include the use of service vehicles traveling on existing access roads. The project would result in limited lengths of new power and telecommunications lines. The proposed new 66 kV power line would be approximately 0.95 miles in length and the proposed new telecommunication line would be approximately 1 mile in length. The reconductoring of the existing 66 kV line would be approximately 13 miles in length, however, as an existing line, this segment is already part of an existing inspection and maintenance schedule. Operational inspection and maintenance activities

for the new power and telecommunication lines would be conducted as part of the overall inspection and maintenance activities of the existing lines. Thus, the net change in operational inspection and maintenance emissions from the project's new power and telecommunication lines would be minimal.

As previously stated, once completed, the traffic improvements would not generate emissions except for minimal amounts of energy consumed from the addition of traffic signals and from periodic inspections and maintenance. Minimal indirect emissions would be generated from the operation of the signal lights. Operational inspection and maintenance activities for the new signal lights would be conducted as part of the overall inspection and maintenance activities of the existing signal lights in the area. Thus, the net change in operational inspection and maintenance emissions from the project's new signal lights would be minimal.

Although the new water line would transport water to the proposed site there would not be any operational emissions associated with the pipeline itself. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.8-2: The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas.

As discussed above, impacts were evaluated based on whether the project would be consistent with the State's applicable GHG reduction goals, plans, policies, and regulatory requirements as well as other federal, State, and local policies, as provided in the following analyses.

Conflict with State Plans, Policies, or Regulations

Manufacturing-related GHG emissions would be the largest source of emissions from the proposed project, as expected from a micro-mill plant which produces rebar. The proposed project is subject to a Prevention of Significant Deterioration (PSD) permit, due to the emissions of a regulated New Source Review (NSR) pollutant, and thus is subject to Tailoring Rule Step 1 which states that GHGs that are emitted in at least specified threshold amounts from a new source that is subject to PSD anyway, due to emissions of another regulated NSR pollutant, are subject to regulation and therefore a regulated NSR pollutant from that source (USEPA, 2011b). Since GHGs are considered a regulated NSR pollutant for the PSD permit, they are subject to a 75,000 CO_{2e} tons per year (tpy) thresholds (USEPA, 2011b). As the proposed project is subject to Tailoring Rule Step 1 and its CO_{2e} emissions are greater than 75,000 tpy, it is subject to a determination of BACT for GHGs. The US EPA recommends five-step "top-down" BACT process: (1) identify all available control technologies; (2) eliminate technically infeasible options; (3) rank remaining control technologies; (4) evaluate most effective control technologies; and (5) select the BACT (USEPA, 2011b). BACT requires emissions limitation based on the maximum degree of emissions reduction (considering energy, environmental, and economic impacts) achievable through application of production processes and available methods, systems, and techniques. Since the proposed project has not been

completely designed, we do not know the specific BACT that will be implemented. However, BACT must be applied for the proposed project to be granted the PSD permit. The US EPA states that BACT should consider energy efficiency, which includes clean fuels, and carbon capture and storage. As part of the proposed project, a solar array is proposed to provide part of the micro-mill's energy requirement.

Energy is the proposed project's second largest GHG emissions source. The California Energy Commission adopted CALGreen (Part 11 of Title 24, Building Energy Efficiency Standards) to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality" (CBSC, 2010). CALGreen was most recently updated in 2022, which took effect on January 1, 2023 (CBSC, 2022). The proposed project would comply with CALGreen requirements, which could include but are not limited to installation of ENERGY STAR® compliant appliances to the greatest extent feasible, installation of solar, electric or lower-nitrogen oxides gas-fired water heaters, and installation of water-efficient irrigation systems. Additionally, CALGreen requires designated parking spaces for carpool or alternative fueled vehicles, long- and short-term bike parking, and installation of electrical conduit for electric vehicle charging parking spaces. The 2022 CALGreen Code also focuses on battery storage system controls, demand management, heat pump space and water heating, and building electrification. Compliance with the 2022 CALGreen Code is mandatory. As such, implementation of the proposed project would not conflict with this code. The proposed project would be consistent with the County's goals to reduce emissions through reduced energy consumption by meeting or exceeding Title 24 standards, Energy Star appliances, and LED lighting.

Transportation-related GHG emissions are the third largest source of emissions from the proposed project. SB 375 requires KCOG to direct the development of the RTP/SCS for the region. At the regional level, the 2022 RTP/SCS is an applicable plan adopted for the purpose of reducing GHGs. The purpose of the 2022 RTP/SCS is to achieve the regional per capita GHG reduction targets for the passenger vehicle and light-duty truck sector established by CARB pursuant to SB 375. KCOG's Program EIR for the 2022 RTP/SCS states that "[p]ursuant to SB 375, KCOG must prepare an SCS to meet GHG reduction targets identified by CARB." The 2022 RTP/SCS is a comprehensive area-wide transportation program to address the mobility challenges created by the region's growth (KCOG, 2022a). The 2022 RTP has seven core goals:

- **Mobility** – Improve the mobility of people and freight.
- **Accessibility** – Improve accessibility to, and the economic wellbeing of, major employment and other regional activity centers.
- **Reliability/Safety** – Improve the reliability and safety of the transportation system.
- **Efficiency** – Maximize the efficiency and cost effectiveness of the existing and future transportation system.
- **Livability/Quality of Life** – Promote livable communities and satisfaction of consumers with the transportation system.
- **Sustainability** – Provide for the enhancement and expansion of the system while minimizing effects on the environment.

- **Equity** – Ensure an equitable distribution of the benefits among various demographic and user groups.

The 2022 SCS strives to reduce polluting tailpipe emissions from passenger vehicle and light duty truck travel by better coordinating transportation expenditures with forecasted development patterns to help meet CARB greenhouse gas targets for the region. The intent of the SCS is to achieve the state's GHG emission reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment, and improved quality of life for community members in Kern County. The SCS plans to achieve these through:

- A forecasted development pattern to accommodate the region's future transportation, employment, and housing needs, while promoting conservation of natural resources and open space areas.
- A transportation network comprising well-maintained public transit, local streets and roads, managed lanes and highways, and bikeways and walkways.
- Strategies to manage demands on the region's transportation roadway system (also known as transportation demand management, or TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand.
- Strategies to manage operations of the region's transportation system (also known as transportation system management, or TSM) to maximize the efficiency of the network and reduce congestion.

In order to assess the proposed project's potential to conflict with the 2022 RTP/SCS, the proposed project's land use characteristics were analyzed for potential conflicts with the strategies and policies set forth in the 2022 RTP/SCS to meet GHG emission-reduction targets set by CARB. Generally, projects are considered to not conflict with applicable County and regional land use plans and regulations, such as KCOG's 2022 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. As discussed above, the proposed project is an industrial project that would incorporate solar to meet some of its electrical needs.

The 2022 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The 2022 RTP/SCS is not directly applicable to the proposed project because the underlying purpose of the 2022 RTP/SCS is to provide direction and guidance by making the best transportation and land use choices for future development. However, the proposed project would support the 2022 RTP/SCS by offering employment opportunities in the community. The Project traffic impact study report calculated VMTs from the proposed project in accordance with SB 743, which states that VMT associated with the movement of goods does not need to be analyzed or mitigated in the determination of transportation impacts. Therefore, project VMT will only apply to "automobiles", which refers to on-road passenger vehicles, specifically cars and light-trucks (LAV, 2023). Additionally, the proposed project-generated trips have not been reduced by adjustments for capture trips, pass-by trips, or for carpooling (LAV, 2023). Thus, GHG emissions from mobile sources are conservative, since no reductions are being taken from any VMT reduction measures. Although almost any project will increase VMT, the intent of SB 32, SB 743, AB 1279 is the reduction of GHG emissions. As discussed in the traffic impact study report (LAV, 2023), without this project bulk steel materials need to be imported from out of state (Washington, Utah, Oregon, and Arizona) into California. In 2025, without the proposed project, the VMT would be 17,028,846. With the project, VMT would be reduced to 10,013,775, a reduction of 7,015,071

VMT, resulting in a 41 percent reduction in average VMT by the Pacific Steel Group fleet, thus reducing GHG emissions (LAV, 2023). Thus, without the proposed project additional GHG emissions would occur due to the additional travel distance to transport scrap metal out of the State for milling and manufacturing, and transport of reinforcing bars back into California markets. Therefore, the proposed project would reduce trucking distances by more than 7 million miles. Given that trucks can emit as much as eight times the GHGs per mile of automobiles, the proposed project would significantly reduce GHG emissions, meeting the intent of SB 32, SB 743, and AB 1279 (LAV, 2023).

Thus, the proposed project would support a reduction in VMT over the state, in accordance with the goals of the 2022 RTP/SCS. Furthermore, the proposed project does not conflict with the areas of anticipated GHG reductions to meet CARBs goals set forth in the 2022 RTP/SCS, AB 32, SB 743, and AB 1279. Therefore, the proposed project would not conflict with the goals and policies of the 2022 RTP/SCS, AB 32, SB 743, and AB 1279 which are designed to reduce GHG emissions. In addition, the proposed project would not impact local transportation or land use during operation. The proposed project would not conflict with the 2022 RTP/SCS goal to adapt to a changing climate and to support an integrated regional development pattern as discussed above.

The CARB 2022 Scoping Plan For Achieving Carbon Neutrality, was approved in December 2022, and expands on prior Scoping Plans and recent legislations, such as AB 1279, by outlining a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target of reducing anthropogenic GHG emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045 or earlier (LAV, 2023). To achieve carbon neutrality by 2045, the 2022 Scoping Plan contains GHG reductions, technology, and clean energy mandated by statutes, reduction of short-lived climate pollutants, and mechanical carbon dioxide capture and sequestration actions. **Table 4.8-4, Consistency Analysis with Applicable 2022 Scoping Plan Actions and Strategies**, contains a list of GHG emission reduction actions and strategies from the 2022 Scoping Plan and describes the proposed project's consistency with them.

Table 4.8-4: Consistency Analysis with Applicable 2022 Scoping Plan Actions and Strategies

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
Transportation Technology Sector <ul style="list-style-type: none"> Achieve 100 percent ZEV sales of light duty vehicles by 2035 and medium heavy-duty vehicles by 2040. Achieve 20 percent zero-emission target for the aviation sector. Develop a rapid and robust network of ZEV refueling infrastructure to support needed transition to ZEVs. Ensure that the transition of ZEV technology is affordable for low income households and communities 	State agencies and local agencies	No Conflict. Vehicles must transition to zero emission technology to decarbonize the transportation sector. Executive Order N-79-20296 reflects the urgency of transitioning to zero emission vehicles (ZEVs) by establishing target dates for reaching 100 percent ZEV sales or fleet transitions to ZEV technology. EO N-79-20 calls for 100 percent ZEV sales of new light-duty vehicles by 2035. The Advanced Clean Cars II regulation fulfills this goal and serves as the primary mechanism to help deploy ZEVs. A number of existing incentive programs also support this transition, including the Clean Cars 4 All Program. EO N-79-20

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
<p>of color, and meets the needs of communities and small business.</p> <ul style="list-style-type: none"> • Prioritize incentive funding for heavy-duty ZEV technology deployment in regions of the state with the highest concentrations of harmful criteria and toxic air contaminant emissions. • Promote private investment in the transition to ZEV technology, undergirded by regulatory certainty such as infrastructure credits in the Low Carbon Fuel Standard for hydrogen and electricity and hydrogen station grants from the CEC's Clean Transportation Program pursuant to Executive Order B-48-18. • Evaluate and continue to offer incentives similar to those through FARMER, Carl Moyer, the Clean Fuel Reward Program, the Community Air Protection Program, the Low Carbon Transportation, including CORE. Where feasible, prioritize and increase funding for clean transportation equity programs. • Continue and accelerate funding support for zero emission vehicles and refueling infrastructure through 2030 to ensure the rapid transformation of the transportation sector. 		<p>also sets targets for transitioning the medium- and heavy-duty fleet to zero emissions: by 2035 for drayage trucks and by 2045 for buses and heavy-duty long-haul trucks where feasible. Replacing heavy-duty vehicles with ZEV technology will significantly reduce GHG emissions and diesel PM emissions in low-income communities and communities of color adjacent to ports, distribution centers, and highways. The existing Advanced Clean Trucks regulation, paired with the proposed Advanced Clean Fleets regulation, are designed to transition a significant amount of the Off-road vehicles rely heavily on ICE technology and EO N-79-20 sets an off-road equipment target of transitioning the entire fleet to ZEV technology by 2035, where feasible. There are a number of funding sources available to support this transition, including FARMER, Carl Moyer, and Community Air Protection Incentives; as well as Low Carbon Transportation Incentives, including the Clean Off-Road Equipment (CORE) program.</p> <p>Refueling infrastructure is a crucial component of transforming transportation technology. Electric vehicle chargers and hydrogen refueling stations must become easily accessible for all drivers to support a wholesale transition to ZEV technology.</p> <p>Deployment of ZEV refueling infrastructure is currently supported by a number of existing local and state public funding mechanisms. Intrastate aviation relies on ICE technology today, but battery-electric and hydrogen fuel cell aviation applications are in development, along with sustainable aviation fuel.</p> <p>GHG emissions generated by project-related passenger and truck vehicular travel would benefit from the above regulations and programs, and mobile source emissions generated by the</p>

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
		<p>proposed project would be reduced California truck fleet to ZEV technology. As with the LDV sector, a number of incentive programs support this transition, such as the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP).with implementation of standards under the Advanced Clean Cars II Program, Advanced Clean Fleet Regulation, and HVIP consistent with reduction of GHG emissions under AB 1279. Thus, the proposed project would not conflict with actions under the transportation technology sector.</p>
<p>Transportation Fuels Sector</p> <ul style="list-style-type: none"> Accelerate the reduction and replacement of fossil fuel production and consumption in California. Incentivize private investment in new zero-carbon fuel production in California. Incentivize the transition of existing fuel production and distribution assets to support deployment of low- and zero-carbon fuels while protecting public health and the environment. Invest in the infrastructure to support reliable refueling for transportation such as electricity and hydrogen refueling. Evaluate and propose, as needed, changes to strengthen the Cap-and-Trade Program. Initiate a public process focused on options to increase the stringency and scope of the LCFS: <ul style="list-style-type: none"> Evaluate and propose accelerated carbon intensity targets pre-2030 for LCFS. Evaluate and propose further declines in LCFS post-2030 carbon 	<p>State agencies and local agencies</p>	<p>No Conflict. The state must continue to support low-carbon liquid fuels during this period of transition and for much harder sectors for ZEV technology such as aviation, locomotives, and marine applications. Biomethane currently displaces fossil fuels in transportation and will largely be needed for hard-to-decarbonize sectors but will likely continue to play a targeted role in some fleets while the transportation sector transitions to ZEVs.</p> <p>Private investment in alternative fuels will play a key role in diversifying the transportation fuel supply away from fossil fuels. EO N-79-20 calls on state agencies to support the transition of existing fuel production facilities away from fossil fuels and directs that this transition also protect and support workers, public health, safety, and the environment. In line with this direction, existing refineries could be repurposed to produce sustainable aviation fuel, renewable diesel, and hydrogen.</p> <p>GHG emissions generated by project-related passenger and truck vehicular travel would benefit from the above regulations and programs, and mobile source emissions generated by the proposed project would be reduced with implementation of the wider use of zero-carbon fuels consistent with reduction of</p>

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
<p>intensity targets to align with this 2022 Scoping Plan.</p> <ul style="list-style-type: none"> o Consider integrating opt-in sectors into the program. o Provide capacity credits for hydrogen and electricity for heavy-duty fueling. • Monitor for and ensure that raw materials used to produce low-carbon fuels or technologies do not result in unintended consequences. 		<p>GHG emissions under AB 1279. Thus, the proposed project would not conflict with actions in the transportation fuels sector.</p>
<p>Vehicles Miles Traveled Sector</p> <ul style="list-style-type: none"> • Achieve a per capita VMT reduction of at least 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045. • Reimagine new roadway projects that decrease VMT in a way that meets community needs and reduces the need to drive. • Invest in making public transit a viable alternative to driving by increasing affordability, reliability, coverage, service frequency, and consumer experience. • Implement equitable roadway pricing strategies based on local context and need, reallocating revenues to improve transit, bicycling, and other sustainable transportation choices. • Expand and complete planned networks of high-quality active transportation infrastructure. • Channel the deployment of autonomous vehicles, ride-hailing services, and other new mobility options toward high passenger-occupancy and low VMT-impact service models that complement transit and ensure equitable access for priority populations. 	<p>State agencies and local agencies</p>	<p>No Conflict. Managing total demand for transportation energy by reducing the miles people need to drive on a daily basis is also critical as the state aims for a sustainable transportation sector in a carbon neutral economy. VMT reductions will play an indispensable role in reducing overall transportation energy demand and achieving the state’s climate, air quality, and equity goals. CARB did not set regulatory limits on VMT in the 2022 Scoping Plan because the authority to reduce VMT largely lies with state, regional, and local transportation, land use, and housing agencies, along with the Legislature and its budgeting choices.</p> <p>Although the proposed project would introduce GHGs into the environment, it would locate a rebar plant in California which would deliver product to California and Mexico. As discussed in the traffic impact study report (LAV, 2023), without the proposed project bulk steel materials would be imported from out of state (Washington, Utah, Oregon, and Arizona) into California. The proposed project’s location would generate a 41 percent reduction in average VMTs by the Pacific Steel Group fleet and will reduce annual VMT by approximately 7,015,071 miles, thus reducing GHG emissions (LAV, 2023). Thus, the proposed project supports a reduction in VMT over the state, in accordance with the goals of the 2022</p>

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<ul style="list-style-type: none"> Streamline access to public transportation through programs such as the California Integrated Travel Project. Ensure alignment of land use, housing, transportation, and conservation planning in adopted regional plans, such as regional transportation plans (RTP)/sustainable communities strategies (SCS), regional housing needs assessments (RHNA), and local plans (e.g., general plans, zoning, and local transportation plans), and develop tools to support implementation of these plans. Accelerate infill development and housing production at all affordability levels in transportation-efficient places, with a focus on housing for lower income residents. 		<p>Scoping Plan. As such, the proposed project would not conflict with actions under the vehicle miles traveled sector.</p>
<p>Clean Electricity Grid Sector</p> <ul style="list-style-type: none"> Use long-term planning processes (Integrated Energy Policy Report, IRP, CAISO Transmission Planning Process, AB 32 Climate Change Scoping Plan) to support grid reliability and expansion of renewable and zero-carbon resource and infrastructure deployment. Complete systemwide and local reliability assessments across CAISO and other balancing authority areas, using realistic assumptions for land use, build rates, statewide and distribution system level constraints, and energy needs. Such assessments should be completed before state agencies update their electricity sector GHG targets. Prioritize actions to mitigate impacts to electricity reliability and affordability and provide sufficient flexibility in the state's 	<p>State agencies and local agencies</p>	<p>No Conflict. Decarbonizing the electricity sector depends on both using energy more efficiently and replacing fossil-fueled generation with renewable and zero-carbon resources, including solar, wind, energy storage, geothermal, biomass, and hydroelectric power. The RPS Program and the Cap-and-Trade Program continue to incentivize dispatch of renewables over fossil generation to serve state demand.</p> <p>SB 100 increased RPS stringency to require 60 percent renewables by 2030 and for California to provide 100 percent of its retail sales of electricity from renewable and zero-carbon resources by 2045. Furthermore, SB 1020 has added interim targets to SB 100's policy framework to require renewable and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent of all electricity retail sales by 2040; establish a planning goal of at least 20 GW of offshore wind by 2045; and that state agencies plan for an energy transition that</p>

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<p>decarbonization roadmap for adjustments as may be needed.</p> <ul style="list-style-type: none"> Facilitate long lead-time resource development through the IRP and the SB 100 interagency process and through technology development and demonstration funding that includes resources such as long-duration energy storage and hydrogen production. Continue coordination between energy agencies and energy proceedings to maximize opportunities for demand response. Continue to explore the benefits of regional markets to enhance decarbonization, reliability, and affordability. Address resource build-out challenges, including permitting, interconnection, and transmission network upgrades. Explore new financing mechanisms and rate designs to address affordability. Per SB 350, double statewide energy efficiency savings in electricity and fossil gas end uses by 2030, through a combination of energy efficiency and fuel substitution actions. Per SB 100 and SB 1020, achieve 90 percent, 95 percent, and 100 percent renewable and zero-carbon retail sales by 2035, 2040, and 2045, respectively. Evaluate and propose, as needed, changes to strengthen the Cap-and-Trade Program. Target programs and incentives to support and improve access to renewable and zero-carbon energy projects (e.g., rooftop solar, 		<p>avoids the need for new fossil gas capacity to meet California's long-term energy goals.</p> <p>California also continues to advance its appliance and building energy efficiency standards to reduce growth in electricity consumption and meet the SB 350 goal to double statewide energy efficiency savings in electricity and fossil gas end uses by 2030. Increased transportation and building electrification and continued policy commitment to behind-the-meter solar and storage will continue to drive growth of microgrids and other distributed energy resources (DER).</p> <p>Continued transition to renewable and zero-carbon electricity resources will enable electricity to become a zero-carbon substitute for fossil fuels. To reach the 2045 target, the state will need to quadruple its current level of wind and solar capacity. This transformation will drive investments in a large fleet of generation and storage resources but will also require significant transmission to accommodate these new capacity additions. Resources such as storage and demand-side management are essential to maintain reliability with high concentrations of renewables. Hydrogen produced from renewable resources and renewable feedstocks can serve a dual role as a low carbon fuel for existing combustion turbines or fuel cells, and as energy storage for later use.</p> <p>Although the proposed project would introduce GHGs into the environment, it would implement a solar array and would not utilize any natural gas, as part of the proposed project, to power some of the micro mill's operations, thus decreasing its reliance on fossil-fuel in support of these actions. As such, the proposed project would not conflict with actions in the clean electricity grid sector.</p>

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<p>community owned or controlled solar or wind, battery storage, and microgrids) for communities most in need, including frontline, low-income, rural, and indigenous communities.</p> <ul style="list-style-type: none"> • Prioritize public investments in zero-carbon energy projects to first benefit the most overly burdened communities affected by pollution, climate impacts, and poverty. 		
<p>Sustainable Manufacturing and Buildings Industry Sector</p> <ul style="list-style-type: none"> • Maximize air quality benefits using the best available control technologies for stationary sources in communities most in need, including frontline, low-income, disadvantaged, rural, and tribal communities. • Prioritize alternative fuel transitions first in communities most in need, including frontline, low-income, disadvantaged, rural, and tribal communities. • Invest in research and development and pilot projects to identify options to reduce materials and process emissions along with energy emissions in California's industrial manufacturing facilities, leveraging programs like the CEC's Electric Program Investment Charge (EPIC). • Evaluate and propose, as needed, changes to strengthen the Cap-and-Trade Program. • Support electrification with changes to industrial rate structures. • Develop infrastructure for CCS and hydrogen production to reduce GHG emissions where cost-effective and technologically feasible non-combustion alternatives are not available. 	<p>State agencies and local agencies</p>	<p>Consistent. Fossil gas is the primary gaseous fossil fuel used to produce heat at industrial facilities, as well as in residential and commercial buildings. Gaseous fossil fuel use can be displaced by four primary alternatives: zero-carbon electricity, solar thermal heat, hydrogen, and biogas/biomethane. The 2022 Scoping Plan reduces dependence on fossil gas in the industrial and building sectors by transitioning substantial energy demand to alternative fuels. Combustion of fossil gas, other gaseous fossil fuels, and solid fossil fuels provide energy to meet three broad industry needs: electricity, steam, and process heat. Non-combustion emissions result from fugitive emissions and from the chemical transformations inherent to some manufacturing processes. About 20 percent of the GHG emissions from the industrial sector are non-combustion emissions. Decarbonizing industrial facilities depends upon displacing fossil fuel use with a mix of electrification, solar thermal heat, biomethane, low- or zero-carbon hydrogen, and other low-carbon fuels to provide energy for heat and reduce combustion emissions. Emissions also can be reduced by implementing energy efficiency measures and using substitute raw materials that can reduce energy demand and some process emissions. Some remaining combustion emissions and some non-combustion CO₂ emissions can be captured and sequestered. This sector has a continuing demand for fossil</p>

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<ul style="list-style-type: none"> • Implement SB 905. • Establish markets for low-carbon products and recycled materials using Buy Clean California Act and other mechanisms relying on robust data. • Develop a net-zero cement strategy to meet SB 596 targets for the GHG intensity of cement use in California. • Continue to leverage energy-efficiency programs, including the U.S. DOE's ENERGY STAR program, U.S. DOE's Superior Energy Performance program, and ISO 50001. • Evaluate and continue to offer incentives to install energy efficiency and renewable energy technologies through programs such as CPUC decisions as part of rulemaking R.19-09-009393 and the CEC's Food Production Investment Program (FPIP) and EPIC programs. • Leverage low-carbon hydrogen programs, including the Bipartisan Infrastructure Law, for regional hydrogen hubs, hydrogen electrolysis, and hydrogen manufacturing and recycling. • Evaluate the role of hydrogen in meeting GHG emission reductions, including policy recommendations regarding the use of hydrogen in California as required by SB 1075. • Address cost barriers to promote low carbon fuels for hard-to-electrify industrial applications. 		<p>gas due to lack of non-combustion technologically feasible or cost-effective alternatives for certain industrial sectors. Microgrids powered by renewable resources and with battery storage are emerging as a key enabler of electrification and decarbonization at industrial facilities.</p> <p>The proposed project is an industrial stationary source project that is subject to a PSD permit and as such will utilize BACT to reduce air quality and GHG emissions. In addition, the electric arc furnace (EAF) would include a CCS to help reduce CO₂. Although it requires fossil-fuels to run its processes, the proposed project includes a solar array to power some of its buildings and would not utilize natural gas. The proposed project will also take part in the Cap-and Trade Program to reduce its GHG emissions. As such, the proposed project is consistent with measures in the 2022 Scoping Plan.</p>
<p>Sustainable Manufacturing and Buildings Sector</p> <ul style="list-style-type: none"> • Prioritize California's most vulnerable residents with the majority of funds in the new \$922 	<p>State agencies and local agencies</p>	<p>No Conflict. Achieving carbon neutrality must include transitioning away from fossil gas in residential and commercial buildings and will rely primarily on advancing energy efficiency while</p>

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<p>million Equitable Building Decarbonization program, created through the 2022–2023 state budget. This would include residents in frontline, low-income, disadvantaged, rural, and tribal communities. This program is dedicated to a statewide direct-install building retrofit program for low-income households to replace fossil fuel appliances with electric appliances, energy-efficient lighting, and building insulation and sealing while also coordinating reductions in gas infrastructure in specific geographic areas.</p> <ul style="list-style-type: none"> • Achieve three million all-electric and electric-ready homes by 2030 and seven million by 2035 with six million heat pumps installed statewide by 2030. • Expand incentive programs to support the holistic retrofit of existing buildings, especially for vulnerable communities. • Ensure that incentive programs prioritize energy affordability and tenant protections, promote affordable and low-income household retrofits that improve habitability and reduce expenses, protect and empower small landlords and homeowners, address overlooked consumer groups, and pair decarbonization with other critically needed renovation efforts to ensure that buildings support human health and are climate- and weather-resistant. • End fossil gas infrastructure expansion for newly constructed buildings. • Evaluate and propose, as needed, changes to strengthen the Cap-and-Trade Program. 		<p>replacing gas appliances with non-combustion alternatives. This transition must include the goal of trimming back the existing gas infrastructure, so pockets of gas-fueled residential and commercial buildings do not require ongoing maintenance of the entire limb for gas delivery. Blending low-carbon fuels such as hydrogen and biomethane into the pipeline further displaces fossil gas. Pipeline safety and reliability must be evaluated to accommodate low-carbon fuels. This transition is achieved when all new buildings constructed include non-combustion appliances, and appliances in existing buildings are replaced at the end of their useful life with non-combustion alternatives.</p> <p>The proposed project would not conflict with policies or actions to decarbonize the building sector and would comply with the 2022 CALGreen Code for energy efficiency.</p>

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<ul style="list-style-type: none"> • Strengthen California’s building standards to support zero-emission new construction. • Develop building performance standards for existing buildings. • Adopt a zero-emission standard for new space and water heaters sold in California beginning in 2030, as specified in the 2022 State Strategy for the State Implementation Plan. • Expand use of low-GWP refrigerants within buildings. • Support electrification with changes to utility rate structures and by promoting load management programs. • Increase funding for incentive programs and expand financing assistance programs focused on existing buildings and appliance replacements. • Expand consumer education efforts to raise awareness and stimulate the adoption of decarbonized buildings and appliances, especially in vulnerable communities. • Implement biomethane procurement targets for investor-owned utilities as specified in SB 1440 (Hueso, Chapter 739, Statutes of 2018) to reduce GHG emissions in remaining pipeline gas and reduce methane emissions from organic waste. 		
Carbon Dioxide Removal and Capture Sector <ul style="list-style-type: none"> • Implement SB 905 • Convene a multi-agency Carbon Capture and Sequestration Group comprised of federal, state, and local agencies to engage with environmental justice advocates, 	State agencies and local agencies	No Conflict. The deployment of CDR to counterbalance hard-to-abate residual emissions is unavoidable if net zero CO ₂ or GHG emissions are to be achieved. Modeling shows that emissions from the AB 32 GHG Inventory sources will continue to persist even if all fossil related combustion emissions are phased out.

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<p>tribes, academics, researchers, and community representatives to identify the current status, concerns, and outstanding questions concerning CCS, and develop a process to engage with communities to understand specific concerns and consider guardrails to ensure safe and effective deployment of CCS.</p> <ul style="list-style-type: none"> • Iteratively update the CARB CCS Protocol with the best available science and implementation experience. • Incorporate CCS into other sectors and programs beyond transportation where cost-effective and technologically feasible options are not currently available and to achieve the 85 percent reduction in anthropogenic sources below 1990 levels as called for in AB 1279. • Evaluate and propose, as appropriate, financing mechanisms and incentives to address market barriers for CCS and CDR. • Evaluate and propose, as appropriate, the role for CCS in cement decarbonization (SB 596) and as part of hydrogen production pathways (SB 1075). • Support carbon management infrastructure projects through core CEC research, development, and demonstration (RD&D) programs. • Continue to explore carbon capture applications for producing or leveraging zero-carbon power for reliability needs as part of SB 100. • Consider carbon capture infrastructure when developing hydrogen roadmaps and strategy, especially for non-electrolysis hydrogen production. 		<p>These residual emissions must be compensated for to achieve carbon neutrality with CDR, which includes both sequestration in natural and working lands and mechanical approaches like direct air capture, CCS, which is carbon capture from anthropogenic point sources involves capturing carbon from a smokestack of an emitting facility, or direct air capture, which captures carbon directly from the atmosphere.</p> <p>The proposed project is an industrial stationary source project that is subject to a PSD permit and as such will utilize BACT to reduce air quality and GHG emissions. In addition, the EAF would include a CCS to help reduce CO₂. Although it requires fossil-fuels to run its processes, the proposed project includes a solar array to power some of its buildings and would not include the use of natural gas. The proposed project will also take part in the Cap-and Trade Program to reduce its GHG emissions. As such, the proposed project is consistent with measures in the 2022 Scoping Plan.</p>

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<ul style="list-style-type: none"> Evaluate and streamline permitting barriers to project implementation while protecting public health and the environment. Explore options for how local air quality benefits can be achieved when CCS is deployed. Explore opportunities for CCS and CDR developers to leverage existing infrastructure, including subsurface infrastructure. Explore permitting options to allow for scaling the number of sources at carbon sequestration hubs. 		
<p>Short-Lived Climate Pollutants (Non-Combustion Gases) Dairy and Livestock Methane Sector</p> <ul style="list-style-type: none"> Install state of the art anaerobic digesters that maximize air and water quality protection, maximize biomethane capture, and direct biomethane to sectors that are hard to decarbonize or as a feedstock for energy. Increase alternative manure management projects, including but not limited to conversion to “solid,” “dry,” or “scrape” manure management; installation of a compost-bedded pack barn; an increase in the time animals spend on pasture; and implementation of solid-liquid separation technology into flush manure management systems. Implement enteric fermentation strategies that are cost-effective, scientifically proven, safe for animal and human health, and acceptable to consumers, and that do not impact animal productivity. Provide financial incentives for these strategies as needed. 	<p>State agencies and local agencies</p>	<p>No Conflict. SLCPs include black carbon, methane, and fluorinated gases. HFCs are the fastest growing source of GHG emissions, primarily driven by their use to replace ozone-depleting substances and an increased demand for cooling and refrigeration. Dairy and livestock are the largest source of methane emissions followed by landfills. Black Carbon, soot, comes primarily from transportation, specifically heavy-duty vehicles followed by fuel combustion for residential, commercial, and industrial applications.</p> <p>The proposed project would not conflict with SLCP dairy and livestock methane sector actions in the 2022 Scoping Plan. The proposed project is an industrial stationary source project that does not include dairy or livestock.</p>

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<ul style="list-style-type: none"> Accelerate demand for dairy and livestock product substitutes such as plant-based or cell-cultured dairy and livestock products to achieve reductions in animal populations. In consideration of pace of deployment of methane mitigation strategies and the scale of complimentary incentives, consider regulation development to ensure that the 2030 target is achieved, assuming the conditions outlined in SB 1383 are met. 		
<p>Short-Lived Climate Pollutants (Non-Combustion Gases) Landfill Methane Sector</p> <ul style="list-style-type: none"> Maximize existing infrastructure and expand it to reduce landfill disposal, with strategies including composting, anaerobic digestion, co-digestion at wastewater treatment plants, and other non-combustion conversion technologies. Expand markets for products made from organic waste, including through recognition of the co-benefits of compost, biochar, and other products. Recover edible food to combat food insecurity. Invest in the infrastructure needed to support growth in organic recycling capacity. Utilize existing digesters at wastewater treatment facilities to rapidly expand food waste digestion capacity. Direct biomethane captured from landfills and organic waste digesters to sectors that are hard to decarbonize. 	<p>State agencies and local agencies</p>	<p>No Conflict. SB 1383 has a 75 percent organic waste disposal reduction target below the 2013 baseline by 2030. The state did not achieve the 50 percent reduction in organic waste disposal below 2014 levels by 2020. The CPUC approved a decision in February 2022 implementing the biomethane procurement program, which will require investor-owned utilities by 2025 to procure 17.6 billion cubic feet (BCF) of biomethane produced from organic wastes to support the landfill disposal reduction and SLCP target and reduce fossil gas reliance for residential and commercial customers. Organic waste will also be reduced by measure to remove edible food from the stream. Emissions can also be reduced by improvements in operational practices at landfills including lower permeability covers, advanced landfill gas collection systems, and increased monitoring to detect and repair leaks.</p> <p>The proposed project would not conflict with SLCP landfill methane sector actions in the 2022 Scoping Plan. The proposed project is an industrial stationary source project that does not include a landfill.</p>

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<ul style="list-style-type: none"> • Implement improved technologies and best management practices at composting and digestion operations. • Reduce emissions from landfills through improvements in operational practices, lower permeability covers, advanced collection systems, and technologies to utilize landfill gas. • Leverage advances in remote sensing capabilities to quickly pinpoint large methane sources and mitigate leaks, improve understanding of the factors that lead to better capture efficiency, and explore new technologies and practices that can reliably improve methane control at landfills. 		
<p>Short-Lived Climate Pollutants (Non-Combustion Gases) Upstream Oil and Gas Methane Sector</p> <ul style="list-style-type: none"> • Mitigate emissions from leaks by regular leak detection and repair (LDAR) surveys at all facilities. • Replace high emitting equipment with zero emission alternatives wherever feasible. • Have CARB and CalGEM lead a Task Force to identify and address methane leaks from oil infrastructure near communities. • Pursuant to SB 1137, develop leak detection and repair plans for facilities in health protection zones, implement emission detection system standards, and provide public access to emissions data. • Minimize emissions from equipment that must vent fossil gas by design (e.g., fossil gas powered compressors). • Install vapor collection systems on high emitting equipment. 	<p>State agencies and local agencies</p>	<p>No Conflict. California is currently on track to achieve a 41 percent reduction in methane emission from oil and gas production by 2025 relative to 2013. To meet the 2030 target, regulatory requirements to further reduce intentional venting of fossil gas from equipment are needed.</p> <p>The proposed project would not conflict with SLCP upstream oil and gas methane sector actions in the 2022 Scoping Plan. The proposed project is an industrial stationary source project that does not include any oil or gas production, processing, or storage facilities.</p>

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<ul style="list-style-type: none"> • Phase out venting and routine flaring of associated gas (gas produced as a byproduct during oil production). • Continuous ambient monitoring at fossil gas underground storage facilities to quickly detect large methane sources. • Reduce pipeline and compressor blowdown emissions. • Leverage advances in remote sensing capabilities to quickly pinpoint large methane sources and mitigate leaks. 		
<p>Short-Lived Climate Pollutants (Non-Combustion Gases) Hydrofluorocarbons Sector</p> <ul style="list-style-type: none"> • Expand the use of very low- or no-GWP technologies in all HFC end-use sectors, including emerging sectors, like heat pumps for applications other than space conditioning, to maximize the benefits of building decarbonization. • Convert large HFC emitters such as existing refrigeration systems to the lowest practical GWP technologies. • Prioritize small-scale and independent grocers serving priority populations in addressing existing “banks” of high-GWP refrigerants. • Improve recovery, reclamation, and reuse of refrigerants by limiting sales of new or virgin high-GWP refrigerants and requiring the use of reclaimed refrigerants where appropriate. • Assist low-income and disadvantaged communities in obtaining low-GWP space conditioning units to protect vulnerable communities from heat stress and wildfire smoke. 	<p>State agencies and local agencies</p>	<p>No Conflict. New targeted measures are needed to reduce HFCs, primarily from high- GWP refrigerants, to meet 2045 requirements. HFC emissions from new and existing sources need to be addressed in tandem with building decarbonization efforts to maximize reductions. The adoption of low-GWP refrigerants must occur in parallel with building decarbonization efforts. The sales prohibitions on newly produced refrigerants set forth in SB 1206 and the national/international HFC phasedown will help in reducing HFC emissions from existing equipment by restricting the supply of and increasing the value of existing high-GWP HFCs.</p> <p>The proposed project would not conflict with SLCP hydrofluorocarbons sector actions in the 2022 Scoping Plan. The project is an industrial stationary source project that would comply with the 2022 CALGreen Code for energy efficiency and use of high-GWP refrigerants and would not conflict with these policies or actions.</p>

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<ul style="list-style-type: none"> Accelerate technology transitions in California and the U.S. overall by collaborating with international partners committed to taking action on HFCs under the Kigali Amendment to the Montreal Protocol; this includes addressing barriers to adoption of very low- or no-GWP refrigerant technologies such as high upfront costs, shortage of trained technicians, and lag in updating safety standards and building codes. 		
<p>Short-Lived Climate Pollutants (Non-Combustion Gases) Anthropogenic Black Carbon Sector</p> <ul style="list-style-type: none"> Reduce fuel combustion commensurate with state's climate and air quality programs, particularly from reductions in transportation emissions and agricultural equipment emissions. Invest in residential woodsmoke reduction. 	State agencies and local agencies	<p>No Conflict. Under current strategies, anthropogenic black carbon from transportation is expected to be reduced by over 60 percent in 2030. Continued reductions in combustion emissions across all sectors from both the state's climate and air quality programs will also reduce anthropogenic black carbon emissions.</p> <p>The proposed project would not conflict with SLCP anthropogenic black carbon sector actions in the 2022 Scoping Plan. The proposed project is an industrial stationary source project that would reduce VMTs which also results in a reduction of fuel combustion.</p>
<p>Natural and Working Lands: Strategies for all NWL</p> <ul style="list-style-type: none"> Implement AB 1757 and SB 27. Implement the Climate Smart Strategy. Accelerate the pace and scale of climate smart action, consistent with the management levels identified above, as part of a collective effort between federal, state, private, nonprofit, and individual land managers. Prioritize and practice equity, including through meaningful community engagement and prioritizing implementation of nature-based solutions that benefit 	State agencies and local agencies	<p>No Conflict. AB 1757 calls for the development of an ambitious range of targets for the NWL sector to be integrated into the Scoping Plan and other state policies. SB 27 directed CARB to establish CO2 removal targets for 2030 and beyond. In response to EO N-82-20 and AB 1757, the proposed target for NWL for 2045 is a -4 percent change in total carbon stock from 2014.</p> <p>The proposed project would not conflict with NWL strategies for all NWL actions under the 2022 Scoping Plan. The proposed project is an industrial project which would not be constructed on any NWL.</p>

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<p>the communities most vulnerable to climate change.</p> <ul style="list-style-type: none"> • Advance multi-benefit, collaborative, landscape-level approaches that engage communities and landowners, and incorporate adaptive managements. • Consult and partner with California Native American tribes to increase co-management and tribal management authority; restore, protect, and enhance natural cultural resources, traditional foods, and cultural landscapes; respect tribal sovereignty; and support tribes' implementation of tribal expertise and Traditional Ecological Knowledge and cultural easements. • Leverage existing innovative financial and market mechanisms, and explore new ones, between the public, private, and philanthropic sectors to secure funding of climate smart land management. • In partnership with communities, tribes, and the private sector, expand and develop new infrastructure for manufacturing and processing of climate smart agricultural and biomass products. • Leverage and support technical assistance providers: such as the UC Cooperative Extension and California's 98 Resource Conservation Districts, that have track records of providing technical assistance to local landowners and implementing agriculture, forestry, natural resource management, and restoration projects across the state. • Establish and expand mechanisms that ensure NWL are protected from land conversion and parcelization (e.g., conservation easements or 		

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<p>Williamson Act), in line with the strategies outlined in CNRA's Pathways to 30x30 California. Pair land conservation projects with management plans that increase carbon sequestration, where feasible.</p> <ul style="list-style-type: none"> • Increase opportunities for private and philanthropic investments in nature-based climate solutions, utilizing existing voluntary and compliance carbon markets, existing state and local programs, and the California Carbon Sequestration and Climate Resiliency Project Registry established pursuant to SB 27. • Expand monitoring and tracking of management actions and outcomes consistent with the tracking and monitoring recommendations of the Climate Smart Strategy. 		
<p>Natural and Working Lands: Forest Shrublands and Chaparral</p> <ul style="list-style-type: none"> • Accelerate the pace and scale of climate smart forest management to at least 2.3 million acres annually by 2025, in line with the climate smart management strategies identified in this Scoping Plan, the NWL Climate Smart Strategy, and the Wildfire and Forest Resilience Action Plan. • Establish and expand mechanisms that ensure forests, shrublands, and grasslands are protected from land conversion and that support ongoing, rather than one-time, management actions. • In collaboration with state and local agencies, accelerate the deployment of long-term carbon storage from waste woody biomass residues resulting from climate smart management, including storage in durable wood products, underground reservoirs, soil amendments, and other mediums. 	<p>State agencies and local agencies</p>	<p>No Conflict. California is covered by 27 percent forests and 31 percent shrublands and chaparral. Climate smart management can help make forests more resilient to climate change and less prone to catastrophic wildfire. Climate-smart management in shrublands and chaparral face can provide protection for threatened communities and natural resources.</p> <p>The proposed project would not conflict with NWL strategies for forest, shrublands, and chaparral actions under the 2022 Scoping Plan. The proposed project is an industrial project which would not be constructed on any NWL where forests, shrublands, and chaparral occur.</p>

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
<ul style="list-style-type: none"> Expand infrastructure to facilitate processing of biomass resulting from climate smart management. Expand permit streamlining in collaboration with state and local agencies to accelerate implementation of climate smart forest management while protecting natural resources. 		
Natural and Working Lands: Grasslands <ul style="list-style-type: none"> Establish and expand mechanisms that ensure grasslands are protected from land conversion/parcelization and that support ongoing, rather than one-time, management actions that improve carbon sequestration. Deploy grassland management strategies, like prescribed grazing, compost application, and other regenerative practices, to support soil carbon sequestration, biodiversity, and other ecological improvements. Increase adoption of compost production on farms and application of compost in appropriate grassland settings for improved vegetation and carbon storage, and to deliver waste diversion goals through nature-based solutions. 	State agencies and local agencies	<p>No Conflict. California is covered by 9 percent grasslands. The protection of grasslands provides an opportunity to reduce sprawl and complement VMT reduction strategies. Climate smart strategies can increase grassland resilience to climate change by improving species diversity and maintaining or increasing soil carbon stocks.</p> <p>The proposed project would not conflict with NWL strategies for grasslands actions under the 2022 Scoping Plan. The proposed project is an industrial project which would not be constructed on any NWL where grasslands occur.</p>
Natural and Working Lands: Croplands <ul style="list-style-type: none"> Accelerate the pace and scale of healthy soils practices to 80,000 acres annually by 2025, conserve at least 8,000 acres of annual crops annually, and increase organic agriculture to 20 percent of all cultivated acres by 2045. Utilize the recommendations included in CDFA's Farmer and Rancher-Led Climate Change Solutions report to accelerate deployment of healthy soils practices, organic farming, and climate smart agriculture practices. 	State agencies and local agencies	<p>No Conflict. California is covered by 9 percent croplands. In addition to food, croplands provide considerable carbon storage in the soil and, in perennial croplands, in aboveground biomass. Climate smart practices can maintain or increase the climate resilience of cropland productivity through improved soil conditions and increased pollinator habitat.</p> <p>The proposed project would not conflict with NWL strategies for croplands actions under the 2022 Scoping Plan. The proposed project is an industrial project</p>

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
<ul style="list-style-type: none"> Establish or expand financial mechanisms that support ongoing deployment of healthy soils practices and organic agriculture. Support strategies that achieve co-benefits of safer, more sustainable pest management practices and the health and preservation of ecosystems, such as implementing the California Department of Pesticide Regulation's (DPR's) Sustainable Pest Management Work Group recommendations. Conduct research on the intersection of pesticides, soil health, GHGs, and pest resiliency via a multi-agency effort with DPR, CDFA, and CARB. Conduct outreach and education to develop and facilitate the increased adoption of safer, more sustainable pest management practices and tools; reduce the use of harmful pesticides; promote healthy soils; improve water and air quality; and reduce public health impacts. In collaboration with state and local agencies, accelerate the deployment of alternatives to agricultural burning that increase long-term carbon storage from waste agricultural biomass, including storage in durable wood products, underground reservoirs, soil amendments, and other mediums. Work across state agencies to reduce regulatory and permitting barriers around some healthy soils practices (e.g., composting), where appropriate. Utilize innovative agriculture energy use and carbon monitoring and planning tools to reduce on-farm GHG emissions from energy and fertilizer application or to increase 		<p>which would not be constructed on any NWL where croplands currently occur.</p>

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
carbon storage, as well as to promote on-farm energy production opportunities.		
Natural and Working Lands: Wetlands <ul style="list-style-type: none"> • Restore 60,000 acres of Delta wetlands annually by 2045 to reduce methane emissions from wetlands and reverse the resulting subsidence. • Identify and prioritize wetland restoration efforts around climate vulnerable communities. • Leverage other funding and institutions to support wetland restoration projects, including land trusts, local funding, federal funding, and private and philanthropic funding to support wetlands restoration projects. • Work across state agencies to reduce regulatory and permitting barriers around wetland restoration projects, where appropriate. 	State agencies and local agencies	<p>No Conflict. California is covered by 2 percent wetlands. Wetlands are hotspots for diversity, contain considerable carbon in the soil, are critical to the states' water supply, and protect upland areas from flooding due to sea level rise and storms. Climate smart strategies to restore and protect wetlands can reduce emissions while simultaneously improving the climate resilience of surrounding areas and improving the water quality and yield for the state.</p> <p>The proposed project would not conflict with NWL strategies for wetlands actions under the 2022 Scoping Plan. The proposed project is an industrial project which would not be constructed on any NWL where wetlands occur.</p>
Natural and Working Lands: Developed Lands <ul style="list-style-type: none"> • Increase urban forestry investment annually by 200 percent, relative to business as usual. • Increase public awareness of urban forest benefits and, where appropriate, prioritizing irrigation of trees over lawns. • Provide technical assistance and resources to disadvantaged communities to implement community urban greening projects to provide equitable access to the benefits of urban greening projects. • Work with state and local agencies to expand technical assistance for and enforcement of the defensible space requirements of PRC 4291 to reduce wildfire risk to homes and structures. 	State agencies and local agencies	<p>No Conflict. California is covered by 6 percent developed lands. Developed lands include urban, suburban, and rural areas, as well as transportation and supporting infrastructure. The vegetation within cities and communities are all part of developed lands. This vegetation provides numerous benefits to surrounding areas, including carbon storage, air and water filtration, reduced urban heat island effect, and access to nature. Climate smart strategies to protect and expand the urban forests, landscaping, green spaces, parks, and associated vegetation can increase their climate resilience and the benefits Californians derive from them. Urban forests have a significant potential to sequester carbon.</p> <p>The proposed project would not conflict with NWL strategies for developed lands actions under the 2022 Scoping Plan. The proposed project is an industrial project which would be constructed on developed</p>

2022 Scoping Plan Action	Responsible Party(ies)	Consistency Analysis
		lands. Additionally, the proposed project proposes landscaping would be provided in three distinct areas of the project site.
Natural and Working Lands: Vegetated Lands <ul style="list-style-type: none"> Establish and expand mechanisms that ensure sparsely vegetated lands are protected from land conversion, prioritizing those areas most vulnerable to climate change and loss. 	State agencies and local agencies	<p>No Conflict. California is covered by 10 percent sparsely vegetated lands. Vegetated lands include deserts, beaches, dunes, bare rock, and areas covered in ice and snow. Vegetated lands provide limited carbon storage, but nonetheless, are important for open space, unique habitats, and recreational opportunities.</p> <p>The proposed project would not conflict with NWL strategies for vegetated lands actions under the 2022 Scoping Plan. The proposed project is an industrial project which would not be constructed on vegetated lands.</p>
SOURCE: ESA, 2023e.		

The proposed project would generate an incremental contribution to and a cumulative increase in GHG emissions. A specific discussion regarding potential GHG emissions associated with the construction and operational phases of the proposed project is provided below. As shown in **Table 4.8-3**, the proposed project's GHG emissions exceed the significance threshold. However, in compliance with the EKAPCD CEQA GHG Policy, if the proposed project is subject to a state or federal GHG emission reduction plan or program and demonstrate that it will be in compliance with the plan or program, impacts would be less than significant. As discussed above, the proposed project is in compliance or would not conflict with KCOG's 2022 RTP/SCS, CARB's 2022 Scoping Plan, SB 32, and AB 1279. Furthermore, the proposed project would take part in the Cap-and-Trade Program, which would help reduce GHG emissions through buying or trading credits and/or additional GHG offsets. Since the proposed project has demonstrated compliance with SB 32, AB 1279, and the Cap-and-Trade Program, demonstrating the proposed project's compliance with option (1), compliance with a state GHG reduction plan reducing projects impacts to less than significant.

Additionally, the proposed project will be subject to permitting requirements through the EKAPCD; Rule 201.1 Permit to Operate for Sources Subject to Title V of the Federal Clean Air Act Amendments of 1990, Rule 210.1 New and Modified Stationary Source Review (NSR), Rule 210.1A Major New and Modified Source Review (MNSR), and Rule 210.4 Prevention of Significant Deterioration (PSD). These rules require that the emissions of the new stationary source do not interfere with attainment of ambient air quality standards, ensure construction utilizing BACT, ensure no significant net increase for all non-attainment pollutants and their precursors or provide offsets for any significant net emissions increase of a nonattainment pollutant. Eastern Kern County is in nonattainment for the 8-hour ozone standard. Some of the ozone precursors are carbon monoxide, methane, and nitrogen oxide some of which happen to be greenhouse gases or help form GHGs. Thus, by adhering to the permit requirements, GHG emissions will be controlled to ensure that ambient air quality standards can be attained.

SCE is subject to compliance with the RPS, which requires utilities to source 60 percent renewable energy by December 31, 2030 and to plan for 100 percent renewable energy by December 31, 2045. The proposed project would benefit from SCE's compliance with RPS and GHG emissions would decrease as grid-generated electricity reaches a higher percentage of renewable energy. Additionally, the proposed project includes solar panels to run the energy needs of the EAF and LMS.

CARB approved the Advanced Clean Cars Program, which includes low-emission vehicle regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the zero-emissions vehicle regulation, which requires manufacturers to produce an increasing number of pure zero-emissions vehicles (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. CARB also approved the Advanced Clean Cars II Program, for model years 2026 through 2035, which requires that all new passenger cars, trucks and SUVs sold in California be zero emissions by 2035. The regulation amends the Zero-emission Vehicle Regulation to require an increasing number of zero-emission vehicles, and relies on advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrid electric-vehicles, to meet air quality and climate change emissions standards, in support of EO N-79-20. The proposed project would comply with CALGreen requirements meeting the number of electric-vehicle-ready and electric-vehicle-capable parking spaces to support zero-emissions vehicles and plug-in hybrid electric vehicles. As such, the proposed project would support compliance with these regulations. Further, the proposed project would benefit from implementation of the Advanced Clean Truck Regulation which aims to increase zero-emissions truck sales annually. By 2035, zero-emissions truck/chassis sales would need to be 55 percent of Classes 2b–3 truck sales, 75 percent. Because deliveries to the proposed project and product deliveries would be made by trucks subject to this regulation, the proposed project would benefit from these measures.

Although the proposed project would result in emissions exceeding 25,000 MTCO_{2e}/year, the impacts are determined to be less than significant because the proposed project demonstrates compliance with option (1) compliance with applicable state GHG reduction plan. For the reasons described above, the proposed project's emissions trajectory is expected to follow a declining trend, consistent with the establishment of the 2030 and 2045 targets established by SB 32, AB 1279, and the 2022 Scoping Plan. Therefore, given the proposed project's GHG emissions efficiency and the proposed project's consistency analysis with applicable GHG plans, policies and regulations adopted for the purpose of reducing GHG emissions, impacts regarding GHG emissions and reduction plans would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Cumulative Setting, Impacts, and Mitigation Measures

CEQA requires that lead agencies consider the cumulative impacts of GHG emissions from even relatively small (on a global basis) increases in GHG emissions. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant. In the case of global climate change, the proximity of the proposed project to other GHG emissions generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global condition. GHG emission impacts are, by their very nature cumulative, as both the California Natural Resources Agency and CAPCOA have recognized (CAPCOA, 2008). Therefore, an analysis of a proposed project's GHG emission impacts also serves as a cumulative impact assessment.

Although HSC Division 25.5 sets a statewide target for statewide 2020 and 2030 GHG emission levels, its implementing tools (e.g., CARB's Climate Change Scoping Plan) make clear that the reductions are not expected to occur uniformly from all sources or sectors. CARB has set targets specific to the transportation sector (land use-related transportation emissions), for example, and under SB 375, KCOG must incorporate these GHG-reduction goals into its Regional Transportation Plan and demonstrate that its Sustainable Communities Strategy is consistent with the Regional Housing Needs Assessment. One of the goals of this process is to ensure that the efforts of State, regional and local planning agencies accommodate the contemporaneous increase in population and employment with a decrease in overall GHG emissions. Although this proposed project would introduce GHGs into the environment, it would locate a rebar plant in California which would deliver product to California and Mexico. As discussed in the traffic impact study report (LAV, 2023) (Appendix O), without the proposed project, bulk steel materials need to be imported from out of state (Washington, Utah, Oregon, and Arizona) into California. The proposed project location will generate a 41 percent reduction in average miles traveled by the Pacific Steel Group fleet and would reduce annual VMT by approximately 7,015,071 miles, thus reducing GHG emissions (LAV, 2023). Thus, this proposed project supports a reduction in VMT over the state, in accordance with the goals of the 2022 RTP/SCS.

With implementation of good planning policies, the land use sector can accommodate growth and not conflict with statewide plans to reduce GHG emissions. To that end, various agencies are required to develop programs to guide future building and transportation development toward minimizing resource consumption and reducing resultant pollution. As discussed above, the County has adopted a Green Building Code that includes mandatory measures to minimize and reduce GHG emissions from energy consumption.

As discussed in the tables above, the proposed project's design and location would not conflict with applicable GHG reduction strategies recommended by the State and region. In addition, the proposed project would support and not conflict with relevant and applicable GHG emission reduction strategies in KCOG's 2022 RTP/SCS. Furthermore, the overwhelming majority of the proposed project related GHG emissions are from highly regulated source sectors, manufacturing, electricity generation, and transportation fuels. These sectors are already covered entities under the Renewables Portfolio Standard and the Cap-and-Trade Program and as such would be reduced sector-wide in accordance with the GHG reduction targets of HSC Division 25.5, in addition to the

previously discussed GHG emissions reductions from the project-specific energy efficiency design features, and substantial VMT-reducing characteristics of the proposed project.

As indicated above, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction program renders a cumulative impact insignificant. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the proposed project would comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the proposed project (14 CCR § 15064(h)(3)). To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency (14 CCR § 15064(h)(3)). Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions" (emphasis added) (14 CCR § 15064(h)(3)). Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with the California Cap-and-Trade Program or other regulatory schemes to reduce GHG emissions.

Given that the proposed project would generate GHG emissions that would not conflict with applicable GHG reduction plans and policies, as discussed in Section 5.1.3, above, and given that GHG emission impacts are cumulative in nature, the proposed project's incremental contribution to cumulatively significant GHG emissions would be less than cumulatively considerable, and impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Cumulative impacts would be less than cumulatively considerable for the project.

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Section 4.9

Hazards and Hazardous Materials

4.9.1 Introduction

This section of EIR describes the affected environment and regulatory setting for hazards and hazardous materials in the study area and project site. It also describes the project's potential impacts on residences and other sensitive receptors that could be exposed to these hazards (other than geologic hazards; see Section 4.7, *Geology and Soils*, of this EIR for discussion on geologic hazards) and presents mitigation measures where applicable. Information in this section is based primarily on the *Phase 1 Environmental Site Assessment Report* (Partner Engineering and Science, Inc., 2020), completed for the proposed project. The Phase 1 ESA is in Appendix J1 of this EIR.

4.9.2 Environmental Setting

This section discusses the existing conditions related to hazards and hazardous materials in the project area and describes the environmental setting for hazardous materials and waste, airports, electromagnetic fields (EMFs), and wildfire hazards. Residences and other sensitive receptors such as schools are also described as their proximate location to the project site affects their exposure to the potential hazards described below. A description of the project site relative to hazards and hazardous materials can also be found below.

Existing Setting

The proposed project site is approximately 174 acres of predominantly vacant land across two adjacent parcels, located at the southeast corner of Sopp Road and Sierra Highway. Regionally, the site is approximately 57 miles southeast of Bakersfield in the desert region near the unincorporated communities of Rosamond and Mojave, and is about 1.25 miles southeast of the State Route 14 and Backus Road exit. Regional access to the project site is provided by State Route 14 by way of Backus Road one mile north of the project site, from Sierra Highway to the east off of State Route 14.

The land uses immediately surrounding the project site include a variety of land uses but the surrounding areas are sparsely developed with the vast majority of land being vacant while zoned for agricultural production. To the west, land uses include the Ancient Valley/Pontious Airport and small number of residential uses. To the east, the fully operational Edwards Sanborn Solar Project sits just within the boundaries of Edwards Airforce Base adjacent to the site, whereas the Base itself located approximately 14 miles from the proposed project site. To the south, there are no discernable land uses, however, the unincorporated community of Rosamond is about five miles southwest. To the north, the land uses are a mix of light industrial and residential uses.

The nearest residence to the project site is approximately 0.36 miles to the northwest. Further to the northwest are more residences with a bigger cluster of residences located in the unincorporated community of Actis, which is approximately one mile to the north. Additionally, to the north, two

light industrial uses exist: the Shemshad Food Products, Inc. production facility and the Desert Block Company manufacturing and distribution facility.

The project site is located in a local responsibility area (LRA) for which the County of Kern is responsible for providing fire protection.

Historical Property Use

The subject property is generally vacant and undeveloped; no permanent structures are on the property. A small section on the northern portion of the subject property was previously utilized for agricultural industry storage. Onsite operations were limited to seasonal agricultural use. An irrigation well is present on the northern portion of the property.

According to available historical sources, the subject property was occupied by a small, unidentified structure in the northern portion along Sopp Road from circa 1915 to 1917 and was undeveloped from at least 1943 to 2016.

The immediately surrounding properties consist of Shemshad Food Products, Inc to the north across Sopp Road; undeveloped land to the south; Edward's Air Force Base immediately east; and undeveloped land to the west across a railroad easement and Sierra Highway.

Proposed Onsite Development

Development of the proposed project would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. Additionally, the project would include an approximate 63-acre accessory solar array. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 connected and standalone buildings and 8 ancillary structures. Project improvements would occur on 174 total acres of privately owned land.

Photovoltaic Solar Module Technologies

The proposed 63-acre, accessory solar array will utilize industry standard “modules,” also known as photovoltaic (PV) solar panels, that would be installed on the project site. These panels would consist of either crystalline silicon or cadmium telluride (CdTe) thin film technology. Crystalline silicon and thin film CdTe solar modules that would be installed on the project site may include small amounts of semiconductor or electrically conducting materials encapsulated within the modules that are considered to be hazardous such as lead or cadmium compounds. Because such materials are in a solid and non-leachable state, broken crystalline silicon and thin film CdTe solar modules would not be a source of pollution to surface water, stormwater, or groundwater. Crystalline silicon and thin film CdTe modules removed from the site (i.e., during project decommissioning) would be recycled or otherwise disposed at an appropriate waste disposal facility. In addition, the energy storage systems would include industry-standard battery systems which contain chemical contents that are considered hazardous, such as lithium-ion batteries as well as lead acid, sodium sulfur, and sodium or nickel hydride batteries.

Should thin film CdTe solar modules (CdTe PV) be installed on the project site, they would consist of a thin semiconductor layer that is in the environmentally stable form of a compound rather than

the leachable form of a metal. The CdTe compound is encapsulated in the PV module with the PV module containing less than 0.1 percent Cd content by weight. Due to optimal optical properties, only a three-micron thin layer of CdTe is used to absorb incident sunlight, with Cd content per 8 square feet of PV module less than that of one C-size flashlight nickel-cadmium (NiCd) battery.

CdTe PV is a mature technology with two decades of field deployment. It has been demonstrated that standard operation of CdTe PV systems does not result in cadmium emissions to air, water, or soil. During the PV module manufacturing process, CdTe is bound under high temperature to a sheet of glass by vapor transport deposition, coated with an industrial laminate material, insulated with solar edge tape, and covered with a second sheet of glass. The module design results in the encapsulation of the semiconductor material between two sheets of glass thereby preventing the exposure of CdTe to the environment. Experimental leaching studies, theoretical worst-case modeling and field examinations concluded that CdTe PV modules pose little to no risk under foreseeable accidents such as fire, breakage, and extreme weather events like tornadoes and hurricanes.¹

Several peer-reviewed studies have evaluated the environmental, health, and safety aspects of CdTe PV modules. These studies have consistently concluded that during normal operations, end-of-life disposal and in the event of exceptional accidents such as fire or breakage, CdTe PV modules do not present an environmental risk. CdTe releases are unlikely to occur during accidental breakage or fire due to the high chemical and thermal stability of CdTe. Disposal risks of end-of-life CdTe PV modules are minimized because of the low solubility of CdTe and because the modules can be effectively recycled at the end of their approximately 30-year life. The PV module manufacturer provides global CdTe module recycling services. End-of-life CdTe PV modules are currently characterized as federal non-hazardous waste, and as a California-only hazardous waste. Solar equipment and infrastructure would be recycled as practical or disposed of in compliance with applicable laws. CdTe PV modules are an article of commerce, and are not classified as a hazardous material for shipping purposes under either federal or State law.

Human health risk assessments looking at the environmental, health, and safety aspects of both crystalline silicon and thin film CdTe PV technologies have been evaluated by the International Energy Agency, concluding that CdTe PV modules do not present a health risk in the event of exceptional accidents such as fire or breakage, with regards to their use of lead and cadmium compounds, respectively.

Offsite Improvement Areas

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of

Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The Antelope Valley-East Kern Water Agency (AVEK) water main is located on the eastern side of Sierra Highway, approximately 200' feet from the boundary of the project site. For operations, a new water line would be installed from the project site, underneath the railroad, connecting to the 36" main AVEK line via an existing 10" turnout that is currently capped with a blind flange. For construction, water will be trucked to the project site and we will also use the existing water well at the plant. Two trucks per day were assumed during the construction phase.

Hazardous Materials and Waste

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under Title 22 of the California Code of Regulations (CCR), the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity; (2) ignitability; (3) corrosiveness; and (4) reactivity (22 CCR 11, Article 3).

A hazardous material is defined as a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either: (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (22 CCR 66260.10).

Various forms of hazardous materials can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials. Phase I Environmental Site Assessments conducted for the project site were used to determine potential risks of encountering legacy contaminants at the site.

Recognized Environmental Conditions

The Phase I ESA evaluated the site consistent with the procedures included in ASTM Practice E 1527-13 in Rosamond, Kern County, California. The Phase I ESA did not locate any Recognized Environmental Conditions (RECs) or Controlled RECs (CREC) in connection with the project site.

Electromagnetic Fields

Electromagnetic fields (EMFs) are associated with electromagnetic radiation, which is energy in the form of photons. Radiation energy spreads as it travels and has many natural and human-made sources. The electromagnetic spectrum, the scientific name given to radiation energy, includes light, radio waves, and x-rays, among other energy forms. Electric and magnetic fields are common throughout nature and are produced by all living organisms. Concern over EMF exposure, however, generally pertains to human-made sources of electromagnetism and the degree to which they may have adverse biological effects or interfere with other electromagnetic systems.

Commonly known human-made sources of EMF are electrical systems, such as electronics and telecommunications, as well as electric motors and other electrically powered devices. Radiation from these sources is invisible, non-ionizing, and of low frequency. According to a 2012 study conducted by the Massachusetts Clean Energy Center, the levels of such radiation from solar projects added to natural background sources are low (Massachusetts Clean Energy Center, 2012).

Electric voltage (electric field) and electric current (magnetic field) from transmission lines create EMFs. Power frequency EMF is a natural consequence of electrical circuits and can be either directly measured using the appropriate measuring instruments or calculated using appropriate information.

On January 15, 1991, the California Public Utilities Commission (CPUC) initiated an investigation to consider its role in mitigating the health effects, if any, of electric and magnetic fields from utility facilities and power lines. A working group of interested parties, the California EMF Consensus Group, was created by the CPUC to advise it on this issue. The California EMF Consensus Group's fact-finding process was open to the public, and its report incorporated public concerns. Its recommendations were filed with the CPUC in March 1992. Based on the work of the California EMF Consensus Group, written testimony, and evidentiary hearings, CPUC's decision (93-11-013) was issued on November 2, 1993, to address public concern about possible EMF health effects from electric utility facilities. The conclusions and findings included the following:

"We find that the body of scientific evidence continues to evolve. However, it is recognized that public concern and scientific uncertainty remain regarding the potential health effects of EMF exposure. We do not find it appropriate to adopt any specific numerical standard in association with EMF until we have a firm scientific basis for adopting any particular value."

This continues to be the stance of the CPUC regarding standards for EMF exposure. Currently, the state has not adopted any specific limits or regulations regarding EMF levels from electric power facilities. However, the CPUC did adopt a policy that requires electric utilities operating within California to agree to incorporate various measures into the construction of new or upgraded power lines and substations, and authorized each utility to develop and publish a set of "EMF Design Guidelines" implementing this policy. As a result, SCE published guidelines to reduce exposure of EMF from electrical utility transmission and distribution facilities. The proposed project is required to be designed to the published guidelines, including siting, construction, operation, and maintenance criteria.

Increase in Ambient Temperatures

All exposed surfaces (e.g., houses, cars, rocks) absorb heat produced by the sun. A "heat island" effect is generated when cities cover miles of land with structures (e.g., concrete buildings and asphalt roads), which absorb and store significantly more heat during the day than undeveloped earth. Additionally, these cities are filled with energy-consuming devices (e.g., engines, appliances, and heating, air-conditioning, and ventilation [HVAC] systems) that generate waste heat.

Solar arrays consist of solar panels mounted on aluminum and steel support structures. The support structures have little or no exposure to sunlight. The project site would not be covered entirely with solar panels. The amount of the sun's heat absorbed by a solar panel is similar to the amount of the sun's heat absorbed by open land. However, solar panels store less heat than the earth because they

consist of a thin, lightweight glass that is surrounded by airflow. Therefore, heat dissipates quickly from a solar panel compared with solid earth, which dissipates heat slowly. The project would have energy-consuming devices (e.g., inverters). There is nothing in the record to date that would indicate that the project would significantly increase ambient air temperatures outside the project site.

Fthenakis and Yu from Columbia University and Brookhaven National Laboratory combined models with field data to determine the extent to which PV facilities altered ambient air temperatures (Fthenakis and Yu, 2013). Temperatures surrounding the facility were found to cool completely at night and the researchers determined that the PV facility “did not induce a day-after-day increase in ambient temperatures, and therefore, adverse micro-climate changes from a potential PV plant are not a concern”. This study also concluded that increases in temperatures completely dissipated approximately 5-18 meters above the facility and that thermal energy “promptly dissipated” with distance from the facility. Remote sensing research produced by Edalat and Stephen from UNLV in 2017 supports the conclusions of Fthenakis and Yu (2013), demonstrating that land surface temperatures surrounding a solar facility were not significantly impacted by the solar facility (Edalat and Stephen, 2017).

Increased Noise

Noise from construction would be temporary and intermittent over a period of up to 24 months for the project, but the operational phase will feature long-term noise characteristics. The ambient noise in the project vicinity consists of traffic from the adjacent Sierra Highway and local streets, light industrial development, and rural residential uses and is a relatively quiet noise environment. The nearest sensitive noise receptors to the project are isolated rural residential land uses. As discussed in detail in Section 4.13, *Noise*, of this EIR, during the construction phase of the proposed project, construction noise will come from a variety of equipment and will exceed the ambient-based threshold; mitigation will be required. Additionally, off-site construction traffic will not exceed ambient noise levels while off-site improvements, such as road construction, will exceed ambient noise levels and require mitigation. The noise levels will be highest at the project site and will decrease as the distance from the site increases. The noise levels are expected to be below the ambient-based noise thresholds at the nearest residences.

As specified in Section 4.13, *Noise*, of this EIR, existing residential uses, R1 and R2, would experience noise levels that would be 26 dBA and 19 dBA, respectively, less than the combined noise level at 50 feet with the distance attenuation. Therefore, noise associated with on-site project operations would be attenuated to below 67.2 dBA L_{eq} . These estimated noise levels are lower than the ambient-based noise thresholds (73.9 dBA L_{eq} at R1 and 70.6 dBA L_{eq} at R2) at the nearest residences to the northwest of the project site.

Hazardous Materials Transportation

There is one major highway that is within proximity of the project site: State Route 14. State Route 14, a four-lane highway located approximately 0.77 miles west of the project site. Additionally, Sierra Highway, though not a major highway, is adjacent to the project site and borders the eastern boundary. The transportation of hazardous materials within the State of California is subject to various federal, State, and local regulations. It is illegal to transport explosives or inhalation hazards

on any public highway that is not designated for that purpose, unless the use of a highway is required to permit delivery or the loading of such materials (California Vehicle Code, Sections 31602 (b) and 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Information on CHP requirements and regulatory authority is provided in Section 4.9.3, *Regulatory Setting*, below. According to Section 2.5.4 of the Kern County General Plan Circulation Element, State Route 14 (approximately 0.77 miles west), State Route 58 (approximately 7 miles northeast) and US 395 (approximately 54 miles north) are designated as adopted commercial hazardous materials shipping routes.

Airports

The project site is not located within an area covered by the Kern County Airport Land Use Compatibility Plan (ALUCP). The nearest airports to the project site are the privately owned Ancient Valley/Pontious Airport located approximately 1.27 miles to the west, the privately owned Rosamond Skypark located approximately 5.5 miles southwest, the Mojave Air and Space Port located approximately 8 miles to the north, and Edwards Air Force Base located approximately 14 miles to the east. Safety hazards are not anticipated for people working in the project site with respect to the project's proximity to an airport.

Military Aviation

The Edwards Air Force Base R-2508 Complex includes all the airspace and associated land presently used and managed by the three principal military activities in the Upper Mojave Desert region: Naval Air Weapons Station (NAWS) China Lake; National Training Center, Fort Irwin; and Air Force Test Center, Edwards Air Force Base (Edwards AFB). The R-2508 Complex is composed of internal restricted areas, Military Operations Areas, Air Traffic Control Assigned Airspace areas, and other special use airspace. Use of these areas include bombing ranges, supersonic corridors, low altitude high speed maneuvers, radar intercept areas, and refueling areas. The R-2508 Complex is one of the largest military "special use" areas in the United States. Located around the Mojave Desert, it covers approximately 20,000 square miles.

Additionally, Restricted Area 2515 (R-2515) covers 1,812 square miles and lies within the R-2508 Complex. Internally, R-2515 has several unique work areas developed specifically for hazardous, special use and flight test activities. These areas include unmanned aircraft system operating areas, supersonic flight corridors, and the Precision Impact Range Area that supports air-ground payload deliveries and laser operations.

Fire Hazard Areas

The California Department of Forestry and Fire Prevention requires counties within the State to develop fire protection management plans that address potential threats of wildland fires. The Kern County Wildland Fire Management Plan identifies federal, State, and local responsibility areas for the entire County to facilitate coordination efforts for fire protection services. The California Department of Forestry and Fire Protection (CalFire) publishes Fire Hazards Severity Zone Maps for the State Responsibility Areas (SRA); however, the project site is not located within a State Responsibility Area. The project site is located in a local responsibility area (LRA) for which the County of Kern is responsible for providing fire protection.

4.9.3 Regulatory Setting

Federal

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The EPA's mission is to protect human health and to safeguard the natural environment – air, water, and land – upon which life depends. The EPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for using permits and for monitoring and enforcing compliance. Where national standards are not met, the EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the EPA to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” were enacted by Congress on December 11, 1980. This law (42 United States Code [USC] 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulations [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Clean Water Act/Spill Prevention, Control, and Countermeasure Rule

The Clean Water Act (CWA) (33 USC 1251 et seq., formerly known as the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the United States. As part of the CWA, the EPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 CFR 112, which is

often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement spill prevention, control, and countermeasure (SPCC) plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the United States.

Other Regulations

Other federal regulations overseen by the EPA relevant to hazardous materials and environmental contamination include 40 CFR Parts 100 to 149 -- Water Programs, 40 CFR Parts 239 to 259 -- Solid Wastes, and 40 CFR Parts 260 to 279 -- Hazardous Waste. These regulations designate hazardous substances under applicable federal statutes; determine the reportable quantity for each substance that is designated as hazardous; and establish quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration’s (OSHA’s) mission is to ensure the safety and health of U.S. workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910, which include preparation of Health and Safety Plans (HASPs). HASPs identify potential hazards associated with a proposed land use and may provide appropriate mitigation measures as required. 29 CFR Section 1910.120(e) requires all employees working on site exposed to hazardous substances, health hazards, or safety hazards and their supervisors and management responsible for the site to receive training meeting the requirements of this paragraph before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards. These employees shall receive any necessary review training.

State

California Building Code, Section 608

Section 608 of the California Building Code includes requirements for battery energy storage systems greater than 20 kWh, which includes the proposed energy storage facilities. Section 608 includes requirements for vehicle impact protection, location, spacing between batteries, egress, security, and fire suppression systems.

California Public Utilities Commission General Order 95: Rules for Overhead Electric Line Construction

General Order 95 (GO 95) is the key standard governing the design, construction, operation, and maintenance of overhead electric lines within the State of California. It was adopted in 1941 and updated most recently in 2012. GO 95 includes safety standards for overhead electric lines,

including minimum distances for conductor spacing, minimum conductor ground clearance, and standards for calculating maximum sag, electric line inspection requirements, and vegetation clearance requirements. The latter, governed by Rule 35, and inspection requirements, governed by Rule 31.2, are summarized below:

- Rule 35, *Tree Trimming*, defines minimum vegetation clearances around power lines. Rule 35 guidelines require 10-foot radial clearances for any conductor of a line operating at 110,000 Volts or more, but at less than 300,000 Volts. This requirement would apply to the proposed 230-kV lines.
- Rule 31.2, *Inspection of Lines*, requires that lines be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition, and that lines temporarily out of service be inspected and maintained in such condition so as not to create a hazard.

Power Line Hazard Reduction (PRC 4292)

Public Resources Code (PRC) 4292 requires a 10-foot clearance around any tree branches or ground vegetation at the base of power poles carrying more than 110 kV. The firebreak clearances required by PRC 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached and surrounding each dead-end or corner pole, unless such pole or tower is exempt from minimum clearance requirements by provisions of PRC 4296. Project structures would be exempt primarily because of their design specifications.

Power Line Clearance Required (PRC 4293)

PRC 4293 provides guidelines for line clearance, including a minimum of 10 feet of vegetation clearance around any conductor operating at 110 kV or higher.

Minimum Clearance Provisions (14 CCR 1254)

With respect to minimum clearance requirements, 14 CCR 1254 presents guidelines pertaining to non-exempt utility poles. Some utility poles are exempt under 14 CCR 1255; exemptions are determined by utility pole characteristics such as conductor continuousness and fire propagation potential. The project structures would be exempt from the clearance requirements, with the exception of cable poles and dead-end structures.

The firebreak clearances required by 14 CCR 1254 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached and surrounding each dead-end or corner pole, unless such pole or tower is exempt from the minimum clearance requirements by the provisions of 14 CCR 1255 or PRC 4296. The radius of the cylindroid is 10 feet, which is measured horizontally from the outer circumference of the specified pole or tower, with the height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole or tower. Flammable vegetation and materials located wholly or partially within the firebreak space would be treated as follows:

- At ground level: Remove flammable materials, including ground litter, duff, and dead or desiccated vegetation that would propagate fire.

- From 0 to 8 feet above ground level: Remove flammable trash, debris, or other materials, grass, and herbaceous and brush vegetation. Remove all limbs and foliage of living trees up to a height of eight feet.
- From 8 feet to the horizontal plane of highest point of the conductor attachment: Remove dead, diseased, or dying limbs and foliage from living sound trees and any dead, diseased, or dying trees in their entirety.

Utility Notification Requirements

Title 8, Section 1541 of the CCR requires excavators to determine the approximate locations of subsurface utility installations (e.g., sewer, telephone, fuel, electric, water lines, or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (Section 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members of, participate in, and share in the costs of a regional notification center are in compliance with this section of the code. Underground Services Alert of Southern California (known as DigAlert) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of DigAlert that may have underground facilities at the location of excavation. Members would mark or stake their facilities, provide information, or give clearance to dig (DigAlert 2017). This requirement would apply to this Project because any excavation would be required to identify underground utilities before excavation.

Hazardous Materials Release Response Plans and Inventory Act of 1985

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as unsafe raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

A Hazardous Materials Business Plan (HMBP) must be submitted to the local Certified Unified Program Agency (the Kern County Public Health Services Department/Environmental Health Services Division) if the facility handles, uses, or stores a hazardous material or mixture containing a hazardous material that has a quantity equal to or greater than 55 gallons of liquid, 500 pounds of a solid substance, or 200 cubic feet of compressed gas, a hazardous compressed gas in any amount, or hazardous waste in any amount. A HMBP must include the following:

- Inventory of hazardous materials at a facility.
- Emergency response plans and procedures in the event of a reportable release or threatened release of a hazardous material; and
- Training for all new employees and annual training for all employees in safety procedures in the event of a release or threatened release of a hazardous material (California Governor's Office of Emergency Services 2011).

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the Department of Toxic Substances Control (DTSC).

Hazardous Waste Control Act

The Hazardous Waste Control Act created the State Hazardous Waste Management Program, which is similar to but more stringent than the federal RCRA program. The act is implemented by regulations contained in Title 26 CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the California Department of Toxic Substances and Control (DTSC).

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Senate Bill 1082 (1993) created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). The Program Elements consolidated under the Unified Program are as follows:

- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs (i.e., Tiered Permitting);
- Aboveground Petroleum Storage Tank Program;
- Hazardous Materials Release Response Plans and Inventory Program (i.e., Hazardous Materials Disclosure or “Community-Right-To-Know”);
- California Accidental Release Prevention Program (Cal ARP);
- Underground Storage Tank (UST) Program; and
- Uniform Fire Code Plans and Inventory Requirements.

The Unified Program is intended to provide relief to businesses in complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more Program Elements in coordination with the CUPA. The CUPA in Kern County is the Environmental Health Services Division of the Kern County Public Health Services Department.

California Environmental Protection Agency

The California Environmental Protection Agency (Cal/EPA) was created in 1991 and unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), State Water Resource Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), CalRecycle, DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the Cal/EPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Their mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substances and Control

DTSC, a department of Cal/EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the Federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

USC 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Office of Emergency Services

In order to protect public health and safety, and the environment, the California Office of Emergency Services (OES) is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release, or threatened release, of hazardous materials. The OES requires that basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) be available to firefighters, public safety officers, and regulatory agencies. Typically, this information should be included in business plans in order to prevent or mitigate damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code, Article 1—Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2—Hazardous Materials Management (Sections 25531 to 25543.3).

Title 19 CCR, Public Safety, Division 2, Office of Emergency Services, Chapter 4 - Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for hazardous materials business plans. These plans must include the following: (1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7, (2) emergency response plans and procedures in accordance with Section 2731, and (3) training program information in accordance with Section 2732. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the State. Each business will prepare a hazardous materials business plan if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance;
- 55 gallons of a liquid;
- 200 cubic feet of compressed gas;
- A hazardous compressed gas in any amount; or
- Hazardous waste in any quantity.

California Occupational Safety and Health Administration

California Occupational safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Highway Patrol

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol (CHP), is required by the laws and regulations of State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by State regulations; or
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner.

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by the CHP under the authority of the State Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (14 CCR 6 [1] [1150–1152.10]). Inhalation hazards face similar, more restrictive rules and regulations (13 CCR 6 [2.5] [1157–1157.8]). Transportation of radioactive materials is restricted to specific safe routes.

Local

Construction and operation of the micro mill, 63-acre solar facility, ancillary buildings, and additional components would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies pertaining to the avoidance of hazards and adverse effects related to hazardous materials. The policies, goals, and implementation measures in the Kern County General Plan related to hazards and hazardous materials that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in Chapter 2, *Introduction*, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Kern County General Plan

Chapter 1. Land Use, Open Space and Conservation Element

1.1 Physical Constraints

Policy

Policy 3: Zoning and other land use controls will be used to regulate, and prohibit, if necessary, future development when physical hazards exist.

1.4. Public Facilities and Services

Policy

Policy 6: The County will ensure adequate fire protection to all Kern County residents.

1.3 Physical and Environmental Constraints

Goal

Goal 1: To strive to prevent loss of life, reduce personal injuries and property damage, and minimize economic and social diseconomies resulting from natural disaster by directing development to areas that are not hazardous.

Policy

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes 2.6–2.9 and Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in an unmitigated significant impact.

Chapter 2. Circulation Element

2.5.4 Transportation of Hazardous Materials

Goal

Goal 1: Reduce risk to public health from transportation of hazardous materials.

Policies

Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.

Policy 2: Kern County and affected cities should reduce use of County-maintained roads and city-maintained streets for transportation of hazardous materials.

Implementation Measure

Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

Chapter 4. Safety Element

4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint

Implementation Measure

Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

4.8 Critical Facilities and Hazardous Buildings

Policies

Policy 6: The County shall ensure the inventory, periodic inspection, and adoption of high seismic standards for potentially hazardous buildings.

4.9 Hazardous Materials

Implementation Measure

Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.

Chapter 5. Energy Element

5.4.5 Solar Energy Development

Policy

Policy 3: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.

Kern County Multi-Hazard Mitigation Plan

The purpose of the KCFD Multi-Jurisdiction Hazard Mitigation Plan (MJHMP) is to guide hazard mitigation planning to better protect the people and property of the County from the effects of hazard events. The plan was also developed to ensure Kern County and participating jurisdictions' continued eligibility for certain federal disaster assistance, specifically the FEMA Hazard Mitigation Assistance (HMA) grants, including the Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), and Flood Mitigation Assistance Program (FMA). This multi-jurisdictional plan includes Kern County, and the incorporated municipalities Arvin, Bakersfield, California City, Delano, Maricopa, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The plan also covers 37 special districts that include school, recreation and park, water, community service and other districts. The plan has been formally adopted in April of 2021 and is required to be updated a minimum of every five years (KCFD, 2021).

Kern County Wildland Fire Management Plan

The Kern County Wildland Fire Management Plan documents the assessment of wildland fire situations throughout the State Responsibility Areas within the County. The Kern County Fire Department Wildland Fire Management Plan provides for systematically assessing the existing levels of wildland protection services and identifying high-risk and high-value areas that are potential locations for costly and damaging wildfires. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. Based on this assessment, preventive measures are implemented, including the creation of wildfire protection zones.

Kern County Fire Code

Chapter 17.32 of the Kern County Municipal Code details the Kern County Fire Code, which is an adoption of the 2019 California Fire Code and the 2018 International Fire Code with some amendments. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release and/or explosion due to handling of dangerous and hazardous materials, conditions

hazardous to life or property in the occupancy and use of buildings and premises, the operation, installation, construction, and location of attendant equipment, the installation and maintenance of adequate means of egress, and providing for the issuance of permits and collection of fees (Kern County, 2018).

Kern County Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan was updated in April 2022 and is the most current document that assesses the wildland fire situation throughout the State Responsibility Area (SRA) within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires.

According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 1 (Tehachapi) and the project site is designated as a moderate fire hazard severity zone within the Tehachapi fire plan management area (KCFD, 2022).

Fire Prevention Standard No. 503-507 Solar Panels

The Kern County Fire Department Fire Prevention Division adopted Standard No. 503-507 Solar Panels (Ground Mounted, Commercial & Residential) on April 8, 2021. The standard is implemented in accordance with the 2019 CFC and Kern County Ordinance and is an official interpretation of the Kern County Fire Marshal's Office. This standard uses guidelines from several sources which outline solar panel installation requirements. This standard will be associated with the proper installation of photovoltaic ground mounted, and roof mounted solar systems. It will be applied indefinitely and reviewed/revised as part of the new code adoption process or as otherwise necessary. The proposed project would mount systems for the modules on steel support posts that would be pile driven into the ground and would therefore comply with the ground mounted requirements of this fire prevention standard. Ground mounted solar panel requirements of this standard include water supply, clearance and combustibles, stationary storage battery/energy storage systems, clean agent system permits, fire extinguisher placement, and emergency vehicle access (KCFD, 2021).

Kern County Public Health Services Department/Environmental Health Services Division

The County of Kern Environmental Health Services Division of the Public Health Services Department is the CUPA for the project area, which provides site inspections of hazardous materials programs (above ground storage tanks, USTs, hazardous waste treatment, hazardous waste generators, hazardous materials management and response plans, and the California Fire Code). This Department also provides emergency response to hazardous materials events, performing health and environmental risk assessment and substance identification.

Kern County and Incorporated Cities Hazardous Waste Management Plan

In response to the growing public concern regarding hazardous waste management, State Assembly Bill 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within the local government's jurisdiction.

The Kern County and Incorporated Cities Hazardous Waste Management Plan (Hazardous Waste Plan) was first adopted by Kern County and each incorporated city before September 1988 and was subsequently approved by the State Department of Health Services. The Hazardous Waste Plan was updated and incorporated by reference into the Kern County General Plan in 2004 as permitted by Health and Safety Code Section 25135.7(b) and, thus, must be consistent with all other aspects of the Kern County General Plan.

The Hazardous Waste Plan provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Kern County. In addition, the Hazardous Waste Plan discusses hazardous waste issues and analyzes current and future waste generation in the incorporated Cities, County, and State and federal lands. The purpose of the Hazardous Waste Plan is to coordinate local implementation of a regional action to affect comprehensive hazardous waste management throughout Kern County. The action program focuses on development of programs to equitably site needed hazardous waste management facilities; to promote onsite source reduction, treatment, and recycling; and to provide for the collection and treatment of hazardous waste from small-quantity generators. An important component of the Hazardous Waste Plan is the monitoring of hazardous waste management facilities to ensure compliance with federal and State hazardous waste regulations.

Airport Land Use Compatibility Plan and R_2508 Complex

An Airport Land Use Commission (ALUC) is required by California law in every county with an airport in its jurisdiction. Each ALUC must develop a plan for promoting and ensuring compatibility between each airport in the county and surrounding land uses, in the form of an Airport Land Use Compatibility Plan. The County of Kern adopted its Airport Land Use Compatibility Plan (ALUCP) on September 23, 1996.

Within the ALUCP, Section 4.20 *Joint Service Restricted R-2508 Complex*, notes the R-2508 Complex was designated to minimize flight hazards to non-military aircraft by military aircraft. Access to this airspace is greatly limited to civilian aircraft and only after obtaining prior permission. The R-2508 complex also contains internal complexes and operating areas and is the hub of a network of other major airspace ranges located in the southwestern United States. The area of R-2508 covers portions of Kern, Inyo, Mono, Los Angeles, San Bernardino and Tulare Counties and reaches into part of the State of Nevada. Over 3,200 square miles of eastern Kern County are within the complex. Within the R-2508 complex are also other designated restricted airspaces known as R-2505, R-2506, and R-2515 which are the immediate and adjacent airspace to China Lake NAWS and Edwards AFB.

4.9.4 Impacts and Mitigation Measures

Methodology

The methodology for determining impacts relating to hazardous materials focuses on (1) the potentially significant impacts related to the routine transport, use, or disposal of hazardous materials and the release of hazardous materials into the environment; and (2) proposed project components that could result in environmental contamination.

The methodology for determining impacts relating to wildland fires focuses on the fire severity at the project site and the surrounding areas based on existing state and local maps and land characteristics.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to hazards and hazardous materials.

A project would have a significant impact related to hazards and hazardous materials if it would:

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school;
- d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- e. For a project located within the adopted Kern County Airport Land Use Compatibility Plan, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
- f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;
- g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires;
- h. Would implementation of the project generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste?

Specifically, would the project exceed the following qualitative threshold:

The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:

- i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and
- ii. Are associated with design, layout, and management of project operations; and
- iii. Disseminate widely from the property; and
- iv. Cause detrimental effects on the public health or wellbeing of the majority of the surrounding population.

Impact 4.9-1: The project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction

Construction of the proposed project would not involve the routine transport, use, or disposal of substantive quantities of hazardous materials, as defined by the Hazardous Materials Transportation Uniform Safety Act. Most of the hazardous materials used and hazardous waste generated by the project would occur during the temporary construction period. Likely uses would include cleaning fluids, solvents, petroleum products, dust palliative, and herbicides. Some solid hazardous waste, such as welding materials and dried paint, may also be generated during construction. These materials would be transported to the project site during construction, and any hazardous wastes that are produced as a result of the construction of the project would be collected and transported away from the site in accordance with best management practices (BMPs). During construction of the project, material safety data sheets for all applicable materials present at the site would be made readily available to onsite personnel in accordance with required BMPs as part of a Stormwater Pollution Prevention Plan (see **Section 4.10 Hydrology and Water Quality**). Workers would be trained to properly identify and handle all hazardous materials. Any hazardous waste or hazardous materials would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. All hazardous waste shipped offsite for recycling or disposal would be transported by a licensed and permitted hazardous waste hauler and disposed of at an approved location.

During construction of the facilities, non-hazardous construction debris would be generated and disposed of in local landfills or recycled. Sanitary waste would be managed using: (a) portable toilets and portable hand washing facilities serviced by truck, located at a reasonably accessible onsite location, and (b) restroom facilities inside of commercial coaches, served by onsite septic systems. Mitigation Measure MM 4.1-3, found in **Section 4.1, Aesthetics**, would require debris and waste generated to be recycled to the extent feasible during construction and operation and the designation of a Recycling Coordinator to facilitate recycling of all waste, to the extent feasible, through coordination with the onsite contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes.

Hazardous materials such as petroleum fuels and lubricants used on field equipment would be subject to the Material Disposal and Solid Waste Management Plan and other measures to limit releases of hazardous materials and wastes (see further discussion of best management practice (BMP) requirements in **Section 4.10, Hydrology and Water Quality**, of this EIR), and an SPCC plan as described above. Recyclable materials including wood, shipping materials, and metals would be separated when possible for recycling. Liquids and oils in the transformers and other equipment would be used in accordance with applicable regulations. The disposal of all oils, lubricants, and spent

filters would be performed in accordance with all applicable regulations including the requirements of licensed receiving facilities.

Overall, the relatively limited use and small quantities of hazardous materials, and subsequently transport and disposal of such materials, during construction would be controlled through compliance with applicable regulations including the Kern County and Incorporated Cities Hazardous Waste Management Plan. As such, impacts during construction would be less than significant.

Operation

The operation of the proposed project will be akin to other similar industrial uses. The project is proposing to make rebar using recycled materials. These recycled materials would include recycled cars, appliances, sheet metal, and other consumer products that contain metal. The recycled metal would be melted then cured to make rebar that will be sold throughout California. Although imported scrap metal would be cleaned to industry standard prior to arrival on site, the potential for hazardous materials as a byproduct could be present. Additionally, scrap metal residuals or fabrication byproducts can also pose a number of hazards. Some of these hazards include toxicity, fire and explosion hazards, and health hazards. Regarding toxicity, scrap metal can contain toxic materials such as lead, mercury, and cadmium which can be released into the environment when scrap metal is recycled or disposed of improperly.

One such hazardous material that would be a byproduct of the rebar making process is Electric Arc Furnace dust. Electric Arc Furnace (EAF) dust is considered hazardous waste. It will be collected in a bag filter, transported in an enclosed conveyor to a silo and, in a completely enclosed process and with a dustless spout, the trucks will be loaded from the silo to be trucked out of the plant. The EAF dust will be sold to zinc recycling plants to recover the zinc.

Operational activities would also use other hazardous materials through the maintenance of the micro mill equipment and other equipment and vehicles on-site. Most of the maintenance undertaken on the micro mill components would be completed in the area in which they are located. Additionally, vehicle maintenance will be conducted on-site in the 27,385-square-foot storeroom and vehicle maintenance building. The equipment that will be serviced there will not only include vehicles, but will also include trailers, carts, and forklifts. Maintenance will include, but not be limited to, oil changes, tire rotations, light repair/replacement, engine servicing, and coolant and filter maintenance; autobody repairs would be made off-site. As a result, the maintenance process will include the use of hazardous materials. To mitigate any potential impacts of the use of hazardous materials, Mitigation Measure MM 4.9-1, which requires the preparation of a Hazardous Materials Business Plan that would describe proper handling, storage, transport, and disposal techniques and methods to be used to avoid spills and minimize impacts in the event of a spill, would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to maintenance workers and/or the public.

The PV modules that would be installed on the project site utilize CdTe thin film or crystalline silicon technology. PV modules are constructed as solid-state monolithic devices to achieve long-term field durability to withstand harsh environmental conditions for 25 years or more. Encapsulation of the module components is achieved with use of a polymer laminate material (e.g., ethylene vinyl acetate or polyolefin) in a glass-encapsulant-backsheet or glass-encapsulant-glass design. The encapsulant bond strength is on the order of 5 megapascals ($\sim 50 \text{ kg/cm}^2$) making the

modules very difficult to break open (i.e., to separate the front and back of the module). For example, this high encapsulant bond strength is the reason why efficient delamination is a core challenge for recyclers attempting to reverse engineer an end-of-life PV module into its raw materials.

As described above, CdTe is generally bound to a glass sheet by a vapor transport deposition during the manufacturing process, followed by sealing the CdTe layer with a laminate material, and then encapsulating it in a second glass sheet. It has been demonstrated that standard operation of CdTe PV systems does not result in cadmium emissions to air, water, or soil. The modules meet rigorous performance testing standards demonstrating durability in a variety of environmental conditions. The PV modules with CdTe thin film technology conform to the International Electrotechnical Commission (IEC) test standards IEC 61646 and IEC61730 PV as tested by a third-party testing laboratory certified by the IEC. In addition, the PV modules also conform to Underwriters Laboratory (UL) 1703 a standard established by the independent product safety certification organization. In accordance with UL 1703, the PV modules undergo rigorous accelerated life testing under a variety of conditions to demonstrate safe construction and monitor performance. During normal operations, CdTe PV modules do not present an environmental risk. CdTe releases are also unlikely to occur during accidental breakage or fire due to the high chemical and thermal stability of CdTe. Disposal risks of end-of-life CdTe PV modules are minimized because of the low solubility of CdTe and because the modules can be effectively recycled at the end of their approximately 30-year life. Studies indicate that unless the PV module is purposefully ground to a fine dust, use of CdTe in PV modules do not generate any emissions of CdTe. The project includes operational and maintenance protocols that would be used to identify and remove damaged or defective PV modules during annual inspections. The PV module manufacturer created the first global and comprehensive module collection and recycling program in the PV industry in 2005. Therefore, the use of a CdTe PV system would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during normal operations.

Environmental risks of both crystalline silicon and thin film CdTe PV technologies have been evaluated by the International Energy Agency, using U.S. Environmental Protection Agency (USEPA) environmental Fate (eFate) and transport methods for potential emissions to air, water, and soil from non-routine events such as fire and field breakage. Based on comparisons with USEPA health screening levels, crystalline silicon and thin film CdTe PV technologies do not present a health risk in the event of fire or breakage, with regards to their use of lead and cadmium compounds, respectively (P. Sinha et al., 2018 and P. Sinha et al., 2019).

In addition to the previously mentioned hazardous materials, dust palliatives and herbicides, if used during operations to control vegetation, may be transported to the project site. These materials would be stored in appropriate containers to prevent accidental release. State Route 14 would be the likely designated route for the transport of hazardous materials located on or immediately adjacent to the project site. In addition, implementation of Mitigation Measure MM 4.9-1, would further reduce impacts related to hazards to a less-than-significant level.

Finally, regarding the water treatment plant, water that has direct contact with contaminants in the steel making process (contact water) would be treated on-site, with water flowing to a settling basin where settleable matter would sink slowly to form sediment. An oil skimmer would remove oils from the water in the basin. Residual sediment and oils would be removed off-site and disposed of

at a licensed facility or treated at a licensed facility depending on the chemical composition. As described in **Section 4.19, *Utilities and Service Systems***, implementation of Mitigation Measure MM 4.19-1 would require all facilities of the water system to be designed and constructed to comply with Kern County Development Standards and approved by the Kern County Public Works Department. Thus, implementation of Mitigation Measures MM 4.9-1 and 4.19-1 would reduce impacts associated with the water treatment facility to a less-than-significant level.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency and energy transmission to the site. Impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility infrastructure would comply with all safety requirements and potential for hazardous materials impacts is minimal. SCE would also adhere to existing best management practices within their rights of way under the County's jurisdiction, or adhere to minimization measures applicable to the affected utility corridor within the boundaries of Edwards Air Force Base, including those regulations that relate to hazardous materials (see Appendix J1). Therefore, impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measures 4.1-3, (see **Section 4.1, *Aesthetics for full mitigation measure***) 4.9-1 and MM 4.19-1 (see **Section 4.19, *Utilities and System Services***, for full mitigation measure text).

MM 4.9-1: During the life of the project, the project operator shall prepare and maintain a Hazardous Materials Business Plan, as applicable, pursuant to Article 1 and Article 2 of California Health and Safety Code 6.95 and in accordance with Kern County Ordinance Code 8.04.030, by submitting all the required information to the California Environmental Reporting System at <http://cers.calepa.ca.gov/> for review and approval. The Hazardous Materials Business Plan shall:

- a. Delineate hazardous material and hazardous waste storage areas
- b. Describe proper handling, storage, transport, and disposal techniques including which routes will be used to transport hazardous materials
- c. Describe methods to be used to avoid spills and minimize impacts in the event of a spill
- d. Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction and operation
- e. Establish public and agency notification procedures for spills and other emergencies including fires
- f. Describe federal, state, or local agency coordination, as applicable, and clean-up efforts that would occur in the event of an accidental release.
- g. Include procedures to avoid or minimize dust from existing residual pesticides and herbicides that may be present on the site

The project proponent shall ensure that all contractors working on the project are familiar with the facility's Hazardous Materials Business Plan as well as ensure that one copy is available at the project site at all times. In addition, a copy of the approved Hazardous Materials Business Plan from California Environmental Reporting System shall be submitted to the Kern County Planning and Natural Resources Department for inclusion in the projects permanent record.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.1-3 (see **Section 4.1, Aesthetics**, for full mitigation measure) MM 4.9-1 and MM 4.19-1 (See Section 4.19, *Utilities and Service Systems* for full mitigation measure text), impacts would be less than significant.

Impact 4.9-2: The project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Construction

Based on a review of records maintained by the California Department of Conservation (DOC), Geologic Energy Management Division (CalGEM) oil and gas wells were not identified on the proposed project sites, and the proposed project is not within the jurisdictional boundaries of an oilfield (CalGEM, 2021). As a result, construction and development of the proposed project is unlikely to expose employees or construction workers to the dangers associated with operating a facility near an oil well. In addition, the Phase I ESA prepared for the proposed project did not identify any RECs on the project site.

Potential impacts that may result from construction of the project include the accidental release of materials, such as cleaning fluids and petroleum products including lubricants, fuels, and solvents. Implementation of Mitigation Measure MM 4.9-1 which would provide methods to be used to avoid spills and minimize impacts in the event of a spill by providing procedures for handling and disposing hazardous materials as well as public and agency notification procedures for spills and other emergencies including fires, would reduce this impact to a less-than-significant level.

Despite the relatively open spaces surrounding the different sites, nearby sensitive receptors could be exposed to pollutant emissions during construction of the project, resulting in a potentially significant impact. An adverse risk related to exposure to hazardous materials could result from the grading of the site, the application of herbicides, or other construction processes because of the distance between the sensitive receptors and the project site. The construction phase has the potential to accidentally release stored raw materials (carbon and fluxing agents), imported scrap metal residuals, fabrication byproducts, cleaning fluids and petroleum products including lubricants, fuels, and solvents. Implementation of established construction controls would reduce the risk of hazardous materials spills and releases during project construction. Implementation of BMPs would ensure that hazardous materials used on-site during operation would neither be released into the environment nor expose operational personnel to hazardous materials. Implementation of Mitigation Measure MM 4.9-2, which regulates the use of herbicides as described below, would reduce impacts related to sensitive receptors to a less-than-significant level.

Operation

The operation of the micro mill, ancillary buildings, and other components does have the potential to accidentally release hazardous materials into the environment. Specifically, these hazardous materials may include stored raw materials (carbon and fluxing agents), imported scrap metal residuals, or fabrication byproducts, and cleaning fluids and petroleum products including lubricants, fuels, and solvents.

Fluxing agents are substances that are used to remove oxidation from the surfaces of metals before soldering or brazing. They do this by dissolving the oxide layer and creating a protective layer on the metal surface. There are many different types of fluxing agents, but they all have the potential to be hazardous. These hazards include skin, eye, and respiratory irritation, skin sensitization, carcinogenicity, mutagenicity, and reproductive toxicity.

Scrap metal residuals or fabrication by products can also pose a number of hazards. Some of these hazards include toxicity, fire and explosion hazards, and health hazards. Regarding toxicity, scrap metal can contain toxic materials such as lead, mercury, and cadmium which can be released into the environment when scrap metal is recycled or disposed of improperly. Fire hazards may also occur when scrap metal is stored in large piles which can create potential for combustion and a subsequent fire. Lastly, a variety of health hazards can occur and can include respiratory complications, skin problems, and cancer.

Cleaning fluids and petroleum products, or metal working fluids, are a mix of oils, detergents, surfactants, biocides, lubricants, anti-corrosive agents, and other potentially toxic ingredients. Typically, these metal working fluids can cause a variety of health hazards, but mainly have negative effects on the skin, respiratory system, and can cause cancer. The two types of skin diseases associated with metal working fluids are dermatitis and acne. Metal working fluids mist or aerosol can irritate the lungs, throat, and nose. Certain types of cancers can also be associated with frequent exposure to metal working fluids which include cancer of the rectum, pancreas, larynx, skin, scrotum, and bladder.

As discussed previously, EAF dust will be a byproduct of the rebar making process and is considered a hazardous material. However, the EAF will be trucked off of the project site then sold to zinc recycling plants. The closest designated route for the transport of hazardous materials is State Route 14 approximately 1.25 miles west of the project site. Adherence to regulations and standard protocols during the storage, transportation, and usage of any hazardous materials would minimize and avoid the potential for significant impacts related to upset and accident conditions.

Furthermore, contact water would be treated on-site, with sediment and oils would be removed off-site and disposed of at a licensed facility or treated at a licensed facility depending on the chemical composition.

Regarding the operation phase for the 63-acre solar array, environmental risks for both crystalline silicon and thin film CdTe PV technologies, which is what makes the solar arrays, have been evaluated by the International Energy Agency, concluding that they do not present a health risk in the event of exceptional accidents such as fire or breakage, with regards to their use of lead and cadmium compounds, respectively.

To mitigate any potential impacts, Mitigation Measures MM 4.9-2 through MM 4.9-10 would be implemented. MM 4.9-2 would consist of the project proponent continuously complying with the conditions mentioned in the mitigation measure. MM 4.9-3 would consist of, prior to the issuance of a grading permit, a qualified hazardous materials specialist inspecting each power pole on-site with a transformer and those power poles containing polychlorinated biphenyls shall be removed by the hazardous specialist and disposed of at an appropriate hazardous materials disposal site to the satisfaction of Department of Toxic Substances Control. For MM 4.9-4, prior to start of construction, the abandoned petroleum prospect well shall be located, exposed, and re-abandoned, if required, to conform to the current abandonment requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources and the Kern County Department of Environmental Health Services. MM 4.9-5 would consist of applying a note regarding abandoned or unrecorded wells to all final maps and grading plans. MM 4.9-6 would consist of contacting the Underground Service Alert One-call center prior to grading or excavating. For MM 4.9-7, the Kern County Fire Department and SoCalGas Company should be contacted if a pipeline ruptures during excavation and construction. However, the project site will not be using natural gas and there are no natural gas lines near the site per previous site investigations. MM 4.9-8 would consist of destroying any on-site water wells that will not be used for irrigation or industrial purposes. MM 4.9-9 would consist of, prior to the issuance of grading or building permits, the contractor or personnel applying herbicides having the appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use. And lastly, MM 4.9-10 would consist of contacting the East Kern Air Pollution Control District if asbestos containing materials are identified during construction for removal and disposal procedures.

Implementation of Mitigation Measures MM 4.9-1 would reduce impacts associated with the water treatment facility to a less-than-significant level.

Overall, adherence to regulations and standard protocols during the storage, transportation, and usage of any hazardous materials, and implementation of Mitigation Measures MM 4.9-2 through MM 4.9-10 would minimize or reduce potential impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials, to a less-than-significant level.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure, whose energy use is included in the whole-project analysis, would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, the entire project would not result in significant impacts, and these off-site improvements are small parts of the overall project. SCE would comply with any existing adopted best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction, including those regulations that relate to hazardous materials. Therefore, the described off-site improvements would not create a significant hazard to the public or the environment through reasonably foreseeable upset and

accident conditions involving the release of hazardous materials into the environment and impacts would be less than significant.

Mitigation Measures

Implementation of Mitigation Measures of MM 4.9-1, as well as MM 4.9-2 through MM 4.9-10 listed below would be required.

MM 4.9-2: The project proponent shall continuously comply with the following:

- a. If suspect materials or wastes of unknown origin are discovered during construction on the project site, which is thought to include hazardous waste materials the following shall occur:
 1. All work shall immediately stop in the vicinity of the suspected contaminant; Project Construction Manager shall be notified;
 2. Area(s) shall be secured as directed by the Project Construction Manager;
 3. Notification shall be made to the Kern County Environmental Health Services Division/Hazardous Materials Section for consultation, assessment, and appropriate actions; and
 4. Copies of all notifications and correspondence shall be submitted to the Kern County Planning and Natural Resources Department.

MM 4.9-3: Prior to issuance of the grading permit, a qualified hazardous materials specialist shall inspect each power pole with a transformer. Those containing polychlorinated biphenyls shall be removed by the hazardous specialist and disposed of at an appropriate hazardous materials disposal site to the satisfaction of Department of Toxic Substances Control. The hazardous materials specialist shall provide a short report to the Kern County Planning and Natural Resources Department and the Kern County Environmental Health Services Division/Hazardous Materials Section for review and approval.

- a. Prior to construction, Southern California Edison Company (SCE) shall be contacted regarding the disposition of pole-mounted transformers. In the event of a future release or leak of insulating fluids from any of the pole-mounted transformers, SCE shall be contacted for their removal or replacement.

MM 4.9-4: Prior to start of construction, any abandoned petroleum prospect wells shall be located, exposed, and re-abandoned, if required, to conform to the current abandonment requirements of the California Department of Conservation, Geologic Energy Management Division (CalGEM) and the Kern County Department of Environmental Health Services.

MM 4.9-5: The following note shall appear on all final maps and grading plans: "If during grading or construction, any plugged and abandoned or unrecorded wells are uncovered or damaged, the California Department of Conservation – Geologic

Energy Management Division (CalGEM) will be contacted to inspect and approve any remediation required.”

- MM 4.9-6:** Underground Service Alert One-call. Prior to grading or excavating the Underground Service Alert One-call center shall be contacted . The proposed excavation area shall be delineated with white marking paint or with other suitable markers such as flags or stakes at least two days prior to commencing any excavation work. A “Dig Alert” ticket number would be issued at the time Underground Service Alert is contacted. Excavating is not permitted without this ticket number and is valid for twenty-eight days. Underground Service Alert would notify its member utilities having underground facilities in the area. Underground Service Alert does not notify nonmember utilities or energy companies, or California Department of Transportation (CalTrans).
- MM 4.9-7:** If a rupturing of a pipeline should occur during excavation and construction activities the Kern County Fire Department and SoCalGas Company should be contacted immediately. Natural gas transmission pipeline rupture most often indicated an emergency situation and 9-1-1 should be dialed. If an emergency is not indicated, the Kern County Fire Department Rosamond Station 15, located at 3219 35th St. West, Rosamond, CS 93560, should be contacted at (661) 256-2401. The Non- Emergency telephone numbers for the Kern County Fire Department is (661) 324-6551 and the project proponent shall follow all safety and cleanup regulations.
- MM 4.9-8:** If the on-site water wells are not to be used for irrigation or industrial purposes, they shall be destroyed in accordance with California Well Standards as governed by the California Department of Water Resources, and permit requirements of the Kern County Environmental Health Services Division.
- MM 4.9-9:** Prior to the issuance of grading or building permits for the project, if herbicides are to be utilized, the contractor or personnel applying herbicides must have the appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use.
- a. Herbicides shall be mixed and applied in conformance with the product manufacturer’s directions.
 - b. The herbicide applicator shall be equipped with splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and material safety data sheets for all hazardous materials to be used.
 - c. To minimize harm to wildlife, vegetation, and waterbodies, herbicides shall not be applied directly to wildlife, products identified as non-toxic to birds and small mammals shall be used if nests or dens are observed.
 - d. Herbicides shall not be applied if it is raining at the site, rain is imminent, or the target area has puddles or standing water, and shall not be applied when wind velocity exceeds 10 miles per hour.
 - e. If spray is observed to be drifting to a non-target location, spraying shall

be discontinued until conditions causing the drift have abated.

MM 4.9-10: If asbestos containing materials are identified during construction (particularly in the concrete irrigation (transite) pipe located on-site, then the East Kern Air Pollution Control District shall be contacted for removal and disposal procedures. These procedures shall be followed in order to eliminate asbestos exposure to construction workers and surrounding workers and residents.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.9-2 through MM 4.9-10 impacts would be less than significant.

Impact 4.9-3: The project would emit hazardous emissions or involves handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

The project site is not located within 0.25-mile of any school. The nearest school to the project site is the Rosamond High School and Abraham Lincoln Alternative School, located approximately 5 miles south of the project site in the unincorporated community of Rosamond. Therefore, there would be no impact related to hazardous emissions within 0.25-mile of a school.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure, whose energy use is included in the whole-project analysis, would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, the entire project would not result in significant impacts, and these off-site improvements are small parts of the overall project. However, reconductoring from the Rosamond Substation adjacent to Rosamond Boulevard would be within 0.25-mile of Tropico Middle School and Rosamond Christian School and adjacent to Rosamond High School, Rosamond Elementary School, Rare Earth Middle School and Abraham Lincoln Independent Study School. SCE would comply with any existing adopted best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction, including those regulations that relate to hazardous materials. Therefore, the described off-site improvements would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Additionally, construction impacts associated with reconductoring would be temporary, with construction estimated as one pole per day, and thus construction crews would only be in the vicinity of a school for several days before moving out of the school's immediate area. Once construction is complete, the reducted pole would operate per existing poles. As such, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.9-4: The project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

A review of the California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC) latest list of parcels relating to hazardous wastes pursuant to Section 65962.5 of the California Government Code indicates the project site is not listed. Additionally, the Phase 1 ESA that was conducted by Partner Engineering and Science, Inc. did not find evidence of RECs or controlled RECs (CREC in connection with the project site (Partner Engineering and Science Inc., 2020). Therefore, impacts would be less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SCE lines would occur simultaneously with existing transmission inspections and maintenance that already occur. Further, off-site improvements would not occur on land that is identified within the subject list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.9-5: For a project located within the adopted Kern County Airport Land Use Compatibility Plan, the project would result in a safety hazard or excessive noise for people residing or working in the project area.

The nearest aircraft operation facilities identified by the Kern County ALUCP are the Rosamond Sky Park, approximately 5.5 miles southwest of the project site and the Mojave Air and Space Port approximately 8 miles north of the project site. The project site is not within the Sphere of Influence (SOI) of any airport identified by the Kern County ALUCP. However, Edwards Air Force Base is located directly east of the project site, approximately 14 miles, and the project site is within the R-

2508 Complex and proximate to military training routes. The project would develop structures (e.g. cooling towers) that could impact operations associated with Edwards Air Force Base, however, adherence to FAA Advisory Circular AC 70/7460-1M Obstruction Marking and Lighting would ensure that there would be no safety hazard created by the proposed structures on-site to military aircraft. Further, per conversations with Edwards Air Force Base staff, the proposed project uses would not interfere with operations. Therefore, impacts would be less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation and would not pose a safety hazard or result in excessive noise for people residing or working in the project area. Therefore, impacts would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure MM 4.9-11 below would be required:

MM 4.9-11: Prior to issuance of building and grading permits for portions of the project that meet the Federal Aviation Administration's noticing requirements, the project proponent/operator shall comply with the following:

- a. Submit Form 7460-1 (Notification of Proposed Construction or Alteration) to the Federal Aviation Administration, in the form and manner prescribed in Code of Federal Regulation 77.17.
- b. Obtain a Federal Aviation Administration issued "Determination of No Hazard to Air Navigation" or make the Federal Aviation Administration's recommended changes to the project.
- c. Provide documentation to the Kern County Planning and Natural Resources Department demonstrating the project would comply with the Kern County Zoning Ordinance Figure 19.08.160 that all project components in the flight area would create no significant military mission impact and a copy of the site plan has been provided to the appropriate military authority responsible for operations in the flight area.
- d. Provide documentation to the Kern County Planning and Natural Resources Department demonstrating that a copy of the final site plan has been provided to the operators of Mojave Air and Space Port.

Level of Significance

With implementation of Mitigation Measure MM 4.9-11, impacts would be less than significant for the project.

Impact 4.9-6: The project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Direct access to the project site is located off Sopp Road, which is the northern portion of the proposed project site. In addition to the direct access located, in the event of an emergency, if coming from Rosamond, emergency vehicles would most likely access the site via State Route 14, then head east on Backus Road which intersects with Sierra Highway then travel south on Sierra Highway, turning east at the intersection of Sierra Highway and Sopp Road. Emergency vehicles coming from Rosamond could also take Sierra Highway then turn east onto Sopp Road where the two roads intersect. The location of the nearest Kern County Fire Department fire station and Kern County Sheriff's Office substation are both located in Rosamond.

The proposed project would not interfere with any known existing emergency response plans, emergency vehicle access, or personnel access to the project site. The project site is located in a dispersed industrial area with existing access roads available to access the property in the event of an emergency, as well as proposes new road improvements along the eastern boundary, which would provide new access to the project site. Impacts related to impairment of the implementation of, or physical interference with, an adopted emergency response plan or emergency evacuation plan would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.9-7: The project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

According to the Fire Hazard Severity Zones map published by the California Department of Forestry and Fire Protection (CalFire), the project site is not located within or near State Responsibility Areas (SRAs) or lands classified as very high fire hazard severity zones; see **Section 4.20, *Wildfire***, for additional information. However, there is sparse vegetation onsite and site preparation would involve the removal of additional vegetation, although natural vegetation may be maintained if it does not interfere with project construction or the health and safety of onsite personnel.

As discussed further in **Section 4.15, *Public Services***, of this EIR, the project proponent would implement Mitigation Measure MM 4.15-1, which would require the preparation and submittal of a Fire Safety Plan to the Kern County Fire Department for review and approval. The purpose of the Fire Safety Plan would be to eliminate causes of fire, prevent loss of life and property by fire, to comply with County and County Fire Protection District standards for solar facilities, and to comply with the OSHA standard of fire prevention, 29 CFR 1910.39. The fire safety plan would address fire hazards of the different components of the project, including the micro mill, 63-acre solar array, ancillary buildings, and other components, and would include BMPs to reduce the potential for fire and extinguishment techniques if a fire were to occur.

The project site is not adjacent to urbanized areas; however, there are isolated residences in proximity to the project site. While the project is not anticipated to significantly increase the risk of wildfire, Mitigation Measure MM 4.15-1 would be implemented to ensure a fire safety plan for construction and operation of the project is incorporated as part of the project. With mitigation, potential impacts from wildfire would be reduced to a less-than-significant level. See also **Section 4.20, *Wildfire***, of this EIR for additional discussion of wildfire issues.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SCE lines would occur simultaneously with existing transmission inspections and maintenance that already occur. Although encroachment within land that is identified within the subject list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 is unlikely, and impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.15-1 (see **Section 4.15, *Public Services***, for full text).

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.15-1, impacts would be less than significant.

Impact 4.9-8: The project would generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste. Specifically, the project would exceed the following qualitative threshold: The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:

- i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and**
- ii. Are associated with design, layout, and management of project operations; and**
- iii. Disseminate widely from the property; and**
- iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.**

The proposed project will consist of a micro mill, 63-acre solar array, ancillary buildings, and other project components. The construction and operational phases of the project are expected to bring a number of workers on-site. It is expected that the workers during both phases will produce a small quantity of waste which would be stored in enclosed containers, then transported to and disposed of at approved disposal facilities. Typically, waste that would attract vectors, such as flies, cockroaches, or rodents, to the project site would consist of food-related waste. Additionally,

standing water, agricultural products, and agricultural waste can attract mosquitoes, flies, cockroaches, and rodents.

During the construction phase, which is expected to last approximately 24 months, it is expected to bring a peak daily construction workforce of 515 workers. Throughout this time, the construction workers will bring, mostly, food-related waste which could attract a variety of vectors. Additionally, the operational phase is expected employ approximately 417 hourly and salaried employees with 23 third-party employees, for a total of approximately 440 employees. Not all 440 employees will be on-site at the same time. Rather, the employees working in the steel manufacturing operations will work in one of the three eight-hour shifts in a day, while the administrative staff will work one shift from 7:00 a.m. to 5:00 p.m. The project site will also be visited by approximately 97 trucks per day. Despite the number of employees working on-site, the amount of waste that could attract vectors is expected to be small.

Regarding other types of waste that have the potential to attract vectors, both phases of the project are not expected to produce them. These other types of vector-attracting waste consist of standing water, agricultural products, and agricultural waste. One of the project components is a settling basin that will be open. Additionally, the project is not agricultural in nature and will not produce any agricultural products or agricultural waste. To mitigate any potential impacts, Mitigation Measure MM 4.9-12 would be implemented. MM 4.9-12 would consist of establishing a long-term trash abatement program for construction, operation, and maintenance. As a result of the small amount of waste being produced on-site and the implementation of MM 4.9-12, the impacts on generating vectors would be less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. During construction and operation, workers would generate small quantities of solid waste (i.e., trash, food containers, etc.) that would be stored in enclosed containers, then transported to and disposed of at approved disposal facilities. Like the rest of the project, these aspects of the project elements would not create or exacerbate the potential hazards associated with generation of vectors in the area, such as mosquitoes, flies, cockroaches, or rodents. During operation and maintenance, SCE would comply with all applicable State and federal laws during construction and operation, including those regulations that relate to vector control. Therefore, impacts would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure MM 4.9-12 would be required.

MM 4.9-12: Prior to issuance of grading or building permits, a long-term trash abatement program shall be established for construction, operations and maintenance. Trash and food items shall be contained in closed containers and removed daily.

Level of Significance after Mitigation

Impacts would be less than significant for the project with the implementation of Mitigation Measure MM 4.9-12.

Cumulative Setting, Impacts, and Mitigation Measures

As described in **Chapter 3, *Project Description***, multiple projects, including several utility-scale solar and wind energy production facilities, are proposed throughout Kern County. As shown in **Table 3-4, *Cumulative Project List***, other projects are either operational, in construction or proposed within the region. The geographic scope of impacts associated with hazardous materials generally encompasses the project sites and a 0.25-mile-radius area around the project sites and for fire a 0.25-mile radius around the project sites. A 0.25-mile-radius area allows for a conservative cumulative analysis that ensures that all potential cumulative impacts will be assessed. Similar to other potential impacts, such as those related to geology and soils, risks related to hazards and hazardous materials are typically localized in nature since they tend to be related to onsite existing hazardous conditions and/or hazards caused by the project's construction or operation. A geographic scope of a 0.25-mile-radius area also coincides with the distance used to determine whether hazardous emissions or materials would have a significant impact upon an existing or proposed school, as discussed above. Given the existing topography, lack of vegetation for fuel, and other existing development surrounding the project site, a 0.25-mile radius for cumulative fire hazard impacts is appropriate.

Potential impacts stemming from the routine transport, use, or disposal of hazardous materials would be considered less than significant. As stated previously, the proposed project would use typical hazardous materials during the construction phase such as petroleum fuels and lubricants used on field equipment. Use of these hazardous materials would be subject to the Material Disposal and Solid Waste Management Plan and other measures to limit releases of hazardous materials and wastes and require a SPCC Plan. During the operation phase, the proposed project would also create EAF dust as a byproduct of the micro mill process. However, the EAF dust will be collected and transported off-site to zinc recycling plants. The operational phase will also include the servicing and maintenance of various vehicles and equipment used on-site. As a result, this will produce some hazardous materials such as oil and coolant which will be stored and disposed of according to regulations. Finally, the proposed project would consist of a 63-acre solar to help power the micro mill. The solar panels would be made from crystalline silicon or cadmium telluride (CdTe) and lead, which is considered hazardous. These would have small amounts of the hazardous materials which do not constitute a health risk. Other hazardous materials such as dust palliatives and herbicides maybe used on-site and would be stored and used properly according to regulations. With the implementation of MM 4.9-1, which consist of the project operator preparing and maintaining a Hazardous Materials Business Plan, the potential impacts would be less than significant.

Regarding potential impacts to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, impacts would be less than significant. As described previously, both phases of the proposed project would have the potential to accidentally release hazardous materials into the environment. These include

EAF dust, CdTe, herbicides and dust palliatives, and oil and coolant. To mitigate any potential impacts, Mitigation Measures 4.9-2 through MM 4.9-10 would be implemented.

In summary, MM 4.9-2 would consist of the project proponent continuously complying with the conditions mentioned in the mitigation measure. MM 4.9-3 would consist of, prior to the issuance of a grading permit, a qualified hazardous materials specialist inspecting each power pole on-site with a transformer and those power poles containing polychlorinated biphenyls shall be removed by the hazardous specialist and disposed of at an appropriate hazardous materials disposal site to the satisfaction of Department of Toxic Substances Control. For MM 4.9-4, prior to start of construction, the abandoned petroleum prospect well shall be located, exposed, and re-abandoned, if required, to conform to the current abandonment requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources and the Kern County Department of Environmental Health Services. MM 4.9-5 would consist of applying a note regarding abandoned or unrecorded wells to all final maps and grading plans. MM 4.9-6 would consist of contacting the Underground Service Alert One-call center prior to grading or excavating. For MM 4.9-7, the Kern County Fire Department and Pacific Gas and Electric Company should be contacted if a pipeline ruptures during excavation and construction. MM 4.9-8 would consist of destroying any on-site water wells that will not be used for irrigation or industrial purposes. MM 4.9-9 would consist of, prior to the issuance of grading or building permits, the contractor or personnel applying herbicides having the appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use. And lastly, MM 4.9-10 would consist of contacting the East Kern Air Pollution Control District if asbestos containing materials are identified during construction for removal and disposal procedures.

For potential impacts involving the location of the project and its potential proximity to an existing or proposed school, being potentially located on a site potentially containing hazardous materials pursuant to Government Code Section 65962.5 and being located in an adopted Kern County Airport Land Use Compatibility Plan (ALUCP), the proposed project would be less than significant. Although the project site is within the R-2508 Complex as identified in the Kern County ALUCP, implementation of Mitigation Measure MM 4.9-11 would ensure the proposed project would coordinate with FAA's noticing requirements and, subsequently, incorporate aviation safety design features for buildings and structures that exceed height thresholds. As such, the project site would not be within the proximity of any of these locations. As result, impacts would be considered less than significant, and no mitigation is required.

Potential impacts from the project regarding interference with an adopted emergency response plan or emergency evacuation plan would be less than significant. Direct access to the project site would come from Sopp Road and emergency vehicles would most likely use State Route 14 to Backus Road then to Sierra Highway to access the project site in case of an emergency. As proposed, the project site would not interfere with any known existing emergency response plans. Impacts would be considered less than significant, and no mitigation would be required.

The potential impacts from the project that would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires would be considered less than significant. The proposed project is not located within or near State Responsibility Areas (SRAs) or land classified as very high fire hazard severity zones. Additionally, the project is not adjacent to an urbanized area. To mitigate any potential impacts, Mitigation Measure 4.15-1 from

Section 4.15, *Public Services*, would be implemented. With the implementation MM 4.15-1, impacts would be less than significant.

Regarding the potential impacts stemming from the project generating vectors or having a component that includes agricultural waste, impacts would be considered less than significant. The proposed project is an industrial project and would not have an agricultural component and would not produce agricultural waste. However, up to 515 employees will be on-site during the peak construction phase and approximately 440 employees will be present during the operational phase, though not all at once. The employees on-site will produce waste that has the potential to attract vectors such as flies, mosquitoes, and rodents. To mitigation any potential impacts, Mitigation Measure MM 4.9-12 would be implemented which consists of establishing a long-term trash abatement program for the construction, operation, and maintenance phases. With the implementation of MM 4.9-12, impacts would be less than significant.

Conformance with existing State and County regulations, as well as implementation of Mitigation Measures MM 4.9-1 through MM 4.9-12, MM 4.15-1, of **Section 4.15, *Public Services***, (Fire Safety Plan) and MM 4.19-1, of **Section 4.19, *Utilities and Service Systems***, (design and construction of water system) would further reduce the potential for cumulative impacts. In addition, implementation of appropriate safety measures during construction of the project, as well as any other cumulative project, would reduce the impact to a level that would not contribute to cumulative effects. Therefore, impacts related to hazardous materials would not be cumulatively significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SCE lines would occur simultaneously with existing transmission inspections and maintenance that already occur. Accordingly, these elements of the project would require minimal ground disturbance, use of fuels, solvents, and other construction materials. The same mitigation measures as listed throughout this chapter also would be applied, as applicable, to these project elements. Once operational, these upgraded transmission lines would be managed by SCE in accordance with all safety and maintenance requirements including those for construction in proximity to and within existing utility easements.

Thus, these parts of the project would not create or exacerbate the potential for hazards or hazardous materials incidents. Impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility structures would not contribute to cumulatively considerable impacts and comparatively, these SCE improvements are small parts of the overall project. SCE would comply with all applicable State and federal laws and regulations during construction and operation, including those regulations that relate to hazards and hazardous materials. Given these offsite improvements would not result in a cumulatively considerable contribution to cumulative impacts, impacts in this regard would be less than significant.

Mitigation Measures

Implement of Mitigation Measures MM 4.9-1 through MM 4.9-12, MM 4.15-1, and MM 4.19-1 (see Sections 4.15-1, *Public Services*, and 4.19, *Utilities and System Services*, for full text).

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.9-1 through MM 4.9-12, MM 4.15-1, and MM 4.19-1, cumulative impacts would be reduced to less than significant.

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Section 4.10

Hydrology and Water Quality

4.10.1 Introduction

This section of the Environmental Impact Report (EIR) describes the hydrological environmental and regulatory settings, addresses potential impacts of the project on hydrology and water quality, and discusses mitigation measures to reduce impacts, where applicable. The information in this section is based on multiple online sources and published documents, as well as the technical documents prepared for the project including the *Preliminary Hydrology Study – Mojave Micro Mill* (Michael Baker International, 2023) located in Appendix K and the *Mojave Micro Mill Water Supply Assessment* (ESA, 2023c) located in Appendix L, and the project water eligibility letter (AVEK, 2023) in Appendix M of this EIR.

4.10.2 Environmental Setting

Regional Setting

The project site is located in the northwestern portion of the Mojave Desert on the northern end of the Antelope Hydrologic Unit. The Antelope Valley Region is a triangular-shaped, topographically closed basin bordered on the southwest by the San Gabriel Mountains, on the northwest by the Tehachapi Mountains, and on the east by a series of hills and buttes that generally follow the Los Angeles/San Bernardino County line (USGS, 2020).

Antelope Valley Hydrologic Unit (No. 626.00-626.80)

The project site is located in the Antelope Valley Hydrologic Unit (HU) in the southwestern corner of the Regional Water Quality South Lahontan Hydrologic Region. The Antelope Valley HU covers approximately 1.5 million acres (2,400 square miles) in the southwestern part of the Mojave Desert in southern California. The Antelope Valley HU is mostly located in Los Angeles County and Kern County, with a small part in San Bernardino County. It is within the South Lahontan Hydrologic Region. The South Lahontan Hydrologic Region represents about 17 percent of the land (26,732 square miles) area in California. The area is bounded to the north by the drainage divide between Mono Lake and East Walker River; to the west and south by the Sierra Nevada, San Gabriel, San Bernardino, and Tehachapi mountains; and to the east by the State of Nevada. The Antelope Valley HU elevation ranges from 2,300 to 3,500 feet above mean sea level (amsl).

The Antelope Valley HU is geographically unique because it does not outlet to the Pacific Ocean and is considered a closed system. Drainage for most of the watershed in the region is internal. Along with the arid climate, this accounts for the presence of many dry lakebeds or playas in the region. Major lakes and reservoirs within the region include Mono Lake, June Lake, Convict Lake, Crowley Lake, and Tinemaha Reservoir in the north and Lake Arrowhead, Silverwood Lake, and Lake Palmdale in the south. Most of the perennial rivers are in the northern portion of this hydrologic region.

Numerous streams originating in the mountains and foothills either infiltrate into the groundwater basin, evaporate, or flow across the valley floor to eventually pond in the dry lakes near the community of Rosamond and Edwards Air Force Base. The Antelope Valley HU generally lacks defined natural and improved channels outside of the foothills, and is subject to unpredictable sheet flow patterns. In general, groundwater flows northeasterly from the mountain ranges to the dry lakes. Due to the relatively impervious nature of the dry lake soil and high evaporation rates, water that collects on the dry lakes eventually evaporates rather than infiltrating into the groundwater.

Within the Antelope Valley HU, the project site is located in the Gloster Hydrologic Area (HA) (RWQCB, 2009). The drainage features associated with the Gloster HA are minor surface waters and washes that are not well defined. Much of the runoff occurs as sheet flow. The Gloster Sub-Watershed is a closed basin inside of the Antelope Valley; therefore, there is no connection to the ocean and any precipitation or surface water is transferred via ephemeral streams to existing playas. The closest playa to the project site is Rosamond Lake to the southeast of the project site, approximately 5 miles south of the proposed project.

Climate

The climate of the Mojave Desert Basin is characterized by hot, dry summers and cold winters with relatively low annual precipitation. Average temperatures recorded in the unincorporated community of Mojave range from a low of 33° Fahrenheit (F) in December to highs of 98° F in July and August (Western Regional Climate Center, 2020). The local climate is typical of the high desert areas of California. Winter nights often drop below freezing, and snow is not uncommon. **Table 4.10-1, *Average Monthly Temperatures and Precipitation for the Antelope Valley, Kern County***, summarizes average temperatures and precipitation for Mojave, CA, which is located approximately 14 miles northeast of the project site, but which can be considered typical of the Antelope Valley, including the project area (USGS, 2009).

Table 4.10-1: Average Monthly Temperatures and Precipitation for the Antelope Valley, Kern County

Station	Elevation	Average Maximum Temperature	Average Minimum Temperature	Average Annual Precipitation
Mojave, CA (Coop ID 045756)	2,735 feet	75.8°F	49.9°F	5.93 in/yr
Mojave 2 ESE, CA (Coop ID 045758)	2,680 feet	76.5°F	47.8°F	6.34 in/yr

SOURCE: Western Regional Climate Center, 2019.

More specifically, the project site is located near the unincorporated community of Rosamond, where, according to the nearest weather station of Backus Ranch, temperature ranges from an average monthly high of 98.5 degrees Fahrenheit in July to a low of 29 degrees Fahrenheit in January. Average rainfall is approximately 0.5 inches per month annually (WRCC, 2023).

Site Hydrology

Surface Hydrology and Drainage

Topography in the project site is in a relatively flat-lying plain and exhibit little topographic variation. The elevation of the project site ranges between approximately 2,554 and 2,564 feet above mean sea level (AMSL). The project site is relatively flat with a gentle southeast-facing slope. As a result, the project sites generally drains from the east to the west in an overall easterly direction. Hydrologically, the site is bounded by Sierra Highway to the west and Sopp Road to the north. Some off-site flow appears to reach the project area from the southeast. Runoff is conveyed easterly across the site via sheet flow and shallow concentrated flow during larger storms. Hydrologic soil groups are predominantly A and C, with a small area of B in the offsite portion.

Soil Types and Erosion

Soils within the project area are derived from downslope migration of loess and alluvial materials, mainly from granitic rock sources originating along the eastern slopes of the Tehachapi and San Gabriel Mountains.

The project sites consist of Alluvial Deposits and Wind Blown Deposits and are briefly described as follows (a complete description of the on-site soils and their characteristics is provided in Appendix H – Geotechnical Report).

Alluvial Deposits (Qa): Alluvial Deposits are defined as material deposited by rivers and consists of silt, sand, clay, and gravel. Quaternary aged alluvium (Alluvial Deposits) was encountered in all 32 test pits and 44 borings. It consists of medium to light gray to dark brown, fine to coarse silty sand with gravel. Caliche deposits, principally as nodules at or near the surface, were observed along with iron oxide staining. The alluvium was dry to moist and medium dense to dense. Oxide staining was observed in some areas.

Wind Blown Deposits (Qs): Holocene Aged Wind Blown Deposits were noted on site as a result of recent vegetation brushing of the subject property. As observed, these materials are a few inches in thickness on up to four feet where they accumulated along the barbed wire fences. Vegetation debris caught along the fence lines facilitated the thick accumulation of these deposits. The material consists of fine to coarse silty sand to sand in a dry and loose condition.

Groundwater Resources

Antelope Valley Groundwater Basin

The project site is located within the Antelope Valley Groundwater Basin, which underlies an extensive alluvial valley in the western Mojave Desert. The elevation of the valley floor ranges from 2,300 above mean sea level (msl) to 3,500 feet above msl. The Antelope Valley Groundwater Basin is bounded on the northwest by the Garlock fault zone at the base of the Tehachapi Mountains and on the southwest by the San Andreas fault zone at the base of the San Gabriel Mountains. The Antelope Valley Groundwater Basin is bounded on the east by ridges, buttes, and the low hills that form a surface and groundwater drainage divide and on the north by the Fremont Valley Groundwater Basin. The Antelope Valley Groundwater Basin and the Fremont Valley

Groundwater Basin are divided by a southeastward-trending line that extends from the mouth of Oak Creek through Middle Butte to exposed bedrock near Gem Hill and by the Rand Mountains farther east (DWR, 2004).

The complex Antelope Valley Groundwater Basin is divided by the U.S. Geological Survey (USGS) into 12 subunits based on differential ground flow patterns, recharge characteristics, and geographic location, as well as by controlling geologic structures. The Antelope Valley Groundwater Basin's subunits are Finger Buttes, West Antelope, Neenach, Willow Springs, Gloster, Chaffee, Oak Creek, Pearland, Buttes, Lancaster, North Muroc, and Peerless. The project sites are located within the Gloster sub-basin.

Groundwater in the Antelope Valley basin is used for both public water supply and local irrigation. The main aquifers in the basin are gravels, sands, silts, and clays, all derived from granitic parent material from the surrounding mountains. Public-supply wells in the basin are anywhere from 360 to 700 feet deep. Groundwater recharge in the Antelope Valley is primarily runoff from surrounding mountains, as well as direct infiltration from irrigation, sewer, and septic systems.

The Antelope Valley Groundwater Adjudication Judgment adjudicated the Basin to establish groundwater production rights among groundwater producers, including public water suppliers, in addition to landowners, small pumpers, and non-pumping property owners. The Basin was adjudicated in 2015 after 15 years of complex proceedings among more than 4,000 parties, including public water suppliers, landowners, small pumpers and non-pumping property owners, and the federal and state governments. The Antelope Valley Groundwater Basin Adjudication Judgment documented overdraft conditions, established water rights among groundwater producers, and ordered a ramp down of production to meet the native basin safe yield. Following the adjudication, the Antelope Valley Watermaster was formed to implement the Judgment. The Watermaster is charged with administering the adjudicated water rights and managing the groundwater resources within the adjudicated portion of the Antelope Valley. There are seven potential production categories identified in the Judgment: production rights, ramp down production, imported water return flows, carryover water, stored water, other rights to produce groundwater, and additional production. The Production right and imported water return flows are the primary water supply sources for AVEK (ESA, 2023c).

4.10.3 Regulatory Setting

Federal

Clean Water Act

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. By employing a variety of regulatory and non-regulatory tools, including establishing water quality standards, issuing permits, monitoring discharges, and managing polluted runoff, the CWA aims to restore and maintain the chemical, physical, and biological integrity of surface waters to support “the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water.”

The CWA required States to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain nonpoint – source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine Regional Water Quality Control Board (RWQCBs). The project site is within the Lahontan RWQCB. Projects that disturb one or more acres, including the proposed project, are required to obtain NPDES coverage under the Construction General Permits.

Section 401, Water Quality Certification. Section 401 of the CWA grants States the right to ensure that federal regulatory actions on Waters of the U.S. within their States do not result in negative impacts to water quality. Section 401 requires that any applicant for a federal permit to discharge into Waters of the U.S. must also provide certification that such discharges will comply with state-established water quality standards. Section 401 of the CWA requires that, prior to issuance of any federal permit or license, any activity, including river or stream crossing during road, pipeline, or transmission line construction, which may result in discharges into waters of the U.S., and according to the above, must be certified by the state, as administered by the RWQCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards.

Section 402, National Pollutant Discharge Elimination System. Section 402 of the CWA authorizes the State Water Resources Control Board (SWRCB) to issue a NPDES General Construction Storm Water Permit (Water Quality Order 2009-0009-DWQ), referred to as the “General Construction Permit.” Construction activities can comply with and be covered under the General Construction Permit provided that they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off site into receiving waters.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
- Perform inspections of all BMPs.

NPDES regulations are administered by the Lahontan RWQCB at the project site.

Section 404, Discharge of Dredged or Fill Materials. Section 404 of the CWA establishes programs to regulate the discharge of dredged and fill material in waters of the U.S., including wetlands. For purposes of Section 404 of the CWA, the limits of non-tidal waters extend to the ordinary high water line, defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris. When an application for a Section 404 permit is made the applicant must show it has:

- Taken steps to avoid impacts to wetlands or waters of the U.S. where practicable;
- Minimized unavoidable impacts on waters of the U.S. and wetlands; and
- Provided mitigation for unavoidable impacts.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the U.S. or wetlands. A water quality certification pursuant to Section 401 of the CWA is required for Section 404 permit actions. If applicable, construction would also require a request for water quality certification (or waiver thereof) from the Lahontan RWQCB. Project activities would adhere to state and federal water quality standards and would be in compliance with Sections 401 and 404 of the CWA.

Section 303, Water Quality Standards and Implementation Plans. Section 303(d) of the CWA (33 U.S. Code 1250, et seq., at 1313(d)) requires states to identify “impaired” water bodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the U.S. Environmental Protection Agency for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of total maximum daily loads (TMDL) requirements. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

National Flood Insurance Program

FEMA is responsible for managing the National Flood Insurance Program (NFIP), which makes federally-backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. The NFIP, established in 1968 under the National Flood Insurance Act, requires that participating communities adopt certain minimum floodplain management standards, including restrictions on new development in designated floodways, a requirement that new structures in the 100-year flood zone be elevated to or above the 100-year flood level (known as base flood elevation), and a requirement that subdivisions be designed to minimize exposure to flood hazards.

To facilitate identifying areas with flood potential, FEMA has developed FIRMs that can be used for planning purposes, including floodplain management, flood insurance, and enforcement of mandatory flood insurance purchase requirements. The project site and relation to FIRMs is discussed above under *Site Hydrology*. Kern County is a participating jurisdiction in the NFIP and, therefore, all new development must comply with the minimum requirements of the NFIP.

State

Department of Water Resources

The major responsibilities of the California Department of Water Resources (DWR) include preparing and updating the California Water Plan to guide development and management of the state's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations, supports watershed and river restoration programs, encourages water conservation, explores conjunctive use of ground and surface water, facilitates voluntary water transfers, and, when needed, operates a State drought water bank.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (PCWQCA) (Water Code Sections 13000 et seq.), passed in 1969, requires protection of water quality by appropriate designing, sizing, and construction of erosion and sediment controls. The PCWQCA is the principal law governing water quality regulation in California. It is the policy of the State, as set forth in Porter-Cologne, that the quality of all the waters of the State shall be protected, that all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason, and that the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the state from degradation.

The Porter-Cologne Act established the SWRCB and divided California into nine regions, each overseen by a RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies and has delegated primary implementation authority to the nine RWQCBs. The Porter-Cologne Act assigns responsibility for implementing the Clean Water Act Sections 401 through 402 and 303(d) to the SWRCB and the nine RWQCBs.

The Porter-Cologne Act requires the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters, provide the technical basis for determining waste discharge requirements, identify enforcement actions, and evaluate clean water grant proposals. The basin plans are updated every 3 years. Compliance with basin plans is primarily achieved through implementation of the NPDES, which regulates waste discharges as discussed above.

The Porter-Cologne Water Quality Control Act requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, which could affect the quality of the "waters of the State," file a report of waste discharge. Absent a potential effect on the quality of "waters of the State," no notification is required. However, the RWQCB encourages implementation of BMPs similar to those required for NPDES storm water permits to protect the water quality objectives and beneficial uses of local surface waters as provided in the Lahontan Region Water Quality Control Plan (Basin Plan) (RWQCB, 2015).

Sustainable Groundwater Management Act

In September 2014, California Governor Jerry Brown signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA) into law. The SGMA establishes a framework for local groundwater management and requires local agencies to bring over drafted basins into balanced levels of pumping and recharge. The California Statewide Groundwater Elevation Model Priority List ranks groundwater basins across the state with assessment rankings of High, Medium, Low, or Very Low. SGMA requires the formation of local-controlled groundwater sustainable agencies in high- and medium-priority groundwater basins. Groundwater Sustainability Agencies (GSAs) are responsible for developing and implementing groundwater sustainability plans to guide groundwater management decisions and ensure long-term sustainability in their basins. In adjudicated basins, the court identified Watermaster serves the purpose of the GSA, and the adjudication judgment serves as the groundwater sustainability plan.

The SGMA, however, does not apply to several adjudicated areas listed in Water Code Section 17820.8. As a result of the Antelope Valley Groundwater Basin Adjudication Judgment in 2015, the Antelope Valley Groundwater Basin is currently designated as a very low-priority basin and is not subject to SGMA requirements. Accordingly, the DWR identifies the Antelope Valley Groundwater Basin as a very low-priority groundwater basin (SGMA Basin Prioritization Dashboard, 2023).

Streambed Alteration Agreement (California Fish and Game Code)

California Fish and Game Code Section 1602 protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by the California Department of Fish and Wildlife (CDFW) in which there is, at any time, any existing fish or wildlife resources, or benefit for the resources. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state, and requires any person, state or local governmental agency, or public utility to notify the CDFW before beginning any activity that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake;
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

During final engineering and design of a project, if it is determined that any project-related actions would have the potential to necessitate a streambed alteration agreement, such an agreement would be prepared and implemented prior to construction of the project, thus maintaining compliance with Section 1602 of the California Fish and Game Code. A streambed alteration agreement is required if the CDFW determines the activity could substantially adversely affect an existing fish and wildlife resource. The agreement includes measures to protect fish and wildlife resources while conducting the project. The CDFW must comply with CEQA before it may issue a final lake or streambed alteration agreement; therefore, the CDFW must wait for the lead agency to fully comply with CEQA before it may sign the draft lake or streambed alteration agreement, thereby making it final.

Senate Bill 610

SB 610 was passed on January 1, 2002, amending California law to require detailed analysis of water supply availability for large development projects. An SB 610 Water Supply Assessment (WSA) must be prepared if the following three conditions are met:

- The project is subject to CEQA under the California Water Code 10910;
- The project meets criteria to be defined as a “Project” under California Water Code Section 10912; and
- The applicable water agencies current Urban Water Management Plan does not account for the water supply demand associated with the project.

A project would meet the definition of “Project” per California Water Code Section 10912(a) if it is:”

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant or industrial part planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects specifies in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water require by a 500-dwelling unit project.

Given the proposed project meets the criteria and definition of a “Project” as listed above, a WSA (ESA, 2023c; Appendix L) was prepared for the proposed project and supplemented by a will serve letter (AVEK, 2023; Appendix M).

Local

Construction and operation of the micro mill, 63-acre solar facility, ancillary buildings, and other project components would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to hydrology and water quality name. The policies and implementation measures in the Kern County General Plan related to hydrology and water quality that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Kern County General Plan

Chapter 1 Land Use, Open Space, and Conservation Element

1.3 Physical and Environmental Constraints

Goals

- Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

Policies

- Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.
- Policy 2: In order to minimize risk to Kern County residents and their property, new development will not be permitted in hazard areas in the absence of implementing ordinance and programs. The ordinances will establish conditions, criteria and standards for the approval of development in hazard areas.
- Policy 3: Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.
- Policy 11: Protect and maintain watershed integrity within Kern County.

Implementation Measures

- Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

1.8 Industrial**Goals**

- Goal 1: Ensure that an adequate and geographically balanced supply of land is designated for a range of industrial purposes.
- Goal 2: Promote the future economic strength and wellbeing of Kern County and its residents without detriment to its environmental quality.

Policy

- Policy 1: Locations for new industrial activities shall be provided with adequate infrastructure (water, sewage disposal systems, roads, drainage, etc.) to minimize effects on County services.

Implementation Measures

- Measure A: Evaluation of applications for any General or Specific Plan Amendment to an industrial designation will include sufficient data for review to facilitate desirable new industrial development proposals consistent with General Plan policies, using the following criteria and guidelines:
- (i) Location suitability with respect to market demand area.

- (ii) Provision of adequate access, ingress and egress facilities and services, and the mitigation of traffic impacts.
- (iii) Provision of adequate water, sewer, and other public services to be used.
- (iv) Provision of adequate on-site, nonpublic water supply and sewage disposal if no public systems are available or used.
- (v) Compatibility with adjacent uses (scale, noise, emissions, or other nuisances, etc.) and methods for buffering.
- (vi) Design, layout, and visual appearance coordinated with existing adjacent industrial uses.
- (vii) Overall consistency with the General Plan.

1.9 Resources

Policy

Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.

1.10 General Provisions

Goal

Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

1.10.1 Public Services and Facilities

Implementation Measures

Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the Environmental Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterizes the quality of upper groundwater in the project vicinity and evaluation of the extent to which, if any, the proposed use of alternative septic systems will adversely impact groundwater quality. If the evaluation indicates that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant shall be required to supply sewage collection, treatment and disposal facilities.

1.10.6 Surface Water and Groundwater

Policies

- Policy 34: Ensure that water quality standards are met for existing users and future development.
- Policy 39: Encourage the development of the County's groundwater supply to sustain and ensure water quality and quantity for existing users, planned growth, and maintenance of the natural environment.
- Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.
- Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.
- Policy 44: Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.
- Policy 46: In accordance with the Kern County Development Standards tank-truck hauling of domestic water for land developments or lots within new land developments is not permitted.

Implementation Measure

- Measure U: The Kern County Environmental Health Services Department will develop guidelines for the protection of groundwater quality which will include comprehensive well construction standards and the promotion of groundwater protection for identified degraded watersheds.
- Measure W: Applications for General or Specific Plan Amendments will include sufficient data for review to facilitate desirable new development proposals consistent with General Plan policies, using the following criteria and guidelines:
- (i) The provision of adequate water, sewer, and other public services to be used.
 - (ii) The provision of adequate on-site nonpublic water
- Measure X: Encourage effective groundwater resource management for the long-term benefit of the County through the following:
- (i) Promote groundwater recharge activities in various zone districts.
 - (ii) Support for the development of Urban Water Management Plans and promote Department of Water Resources grant funding for all water providers.
 - (iii) Support the development of Groundwater Management Plans.

(iv) Support the development of future sources of additional surface water and groundwater, including conjunctive use, recycled water, conservation, additional storage of surface water, and groundwater and desalination.

Measure Y: Promote efficient water use by utilizing measures such as:

- (i) Requiring water-conserving design and equipment in new construction.
- (ii) Encouraging water-conserving landscaping and irrigation methods; and
- (iii) Encouraging the retrofitting of existing development with water conserving devices.

Measure Z: General Plan Amendments subject to environmental review and not otherwise subject to California Water Code Section 10910 shall demonstrate through a water supply assessment that a long-term water supply for a 20-year timeframe is available. The water assessment shall include, but not limited to, the following:

- (i) Source and quantity of historical water use on the site.
- (ii) Estimated water consumption of the proposed development.
- (iii) Estimated storage, if any, in meeting the projected need.
- (iv) Recommendations for additional sources of water to address demand shortage. Such measures may include, but not limited to, development of future sources of additional surface water and groundwater, including water transfers, conjunctive use, recycled water, conservation, and additional storage of surface water, groundwater, and desalination.

Written acknowledgement that water will be provided by a community or public water system with an adopted Urban Water Management Plan shall constitute compliance with this requirement.

Kern County Code of Building Regulations

Kern County Grading Ordinance (17.28)

Chapter 17.28 Kern County Grading Code. Requirements of the Kern County Grading Code will be implemented. A grading permit will be obtained prior to commencement of construction activities. Of particular note with respect to hydrology and water quality is Section 17.28.140, Erosion Control, which addresses the following:

- **Slopes.** The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.
- **Other Devices.** Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.
- **Temporary Devices.** Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would

not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

A grading permit is required prior to commencement of grading activities within Kern County. Obtaining a grading permit from Kern County requires submittal of an application, which must include plans and specifications including but not limited to construction and material requirements, a soils engineering report, an engineering geology report, and engineering calculations and drainage computations. Plans must include information of the existing ground and details of terrain and area drainage, proposed elevations and grading, surface and subsurface drainages that would be constructed as part of the project. Recommendations in the soils engineering report and the engineering geology report must be incorporated into plans and specifications.

Kern County Development Standards

The Kern County Development Standards apply to all developments within Kern County that are outside of incorporated cities. These standards establish minimum design and construction requirements that will result in improvements that are economical to maintain and will adequately serve the general public. The requirements set forth in these standards are considered minimum design standards and will require the approval of the entity that will maintain the facilities to be constructed prior to approval by the County.

Kern County Water Quality Control Plan

Each of the nine RWQCBs adopts a Water Quality Control Plan which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's groundwater and surface waters, and local water quality conditions and problems. Water quality problems in the regions are listed in these plans, along with the causes, if they are known. Each RWQCB is to set water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of nuisance, with the understanding that water quality can be changed somewhat without unreasonably affecting beneficial uses.

The Kern County Engineering and Survey Services Department requires the completion of an NPDES applicability form for all construction projects disturbing one or more acre within Kern County. This form requires the project proponent to provide background information on construction activities. Project proponents must apply for the permit under one of the following four conditions:

1. All storm water is retained onsite and no storm water runoff, sediment, or pollutants from onsite construction activity can discharge directly or indirectly offsite or to a river, lake, stream, municipal storm drain, or offsite drainage facilities.
2. All storm water runoff is not retained on site, but does not discharge to a Water of the United States (i.e., drains to a terminal drainage facility). Therefore, a SWPPP has been developed and BMPs must be implemented.

3. All storm water runoff is not retained on site, and the discharge is to a Water of the United States. Therefore, a Notice of Intent (NOI) must be filed with the State Regional Water Resources Control Board prior to issuance of the building permit. Also, a SWPPP has been developed and BMPs must be implemented.
4. Construction activity is between 1 to 5 acres and an Erosivity Waiver was granted by the SWRCB. BMPs must be implemented.

Kern County – Applicability of NPDES Program for a Project Disturbing 1 Acre or Greater

As closed systems that never contact the ocean or other waters of the U.S., many of the waters within Kern County are technically not subject to protective regulations under the federal NPDES Program. The Kern County Public Works Department requires the completion of an NPDES applicability form for projects with construction activities disturbing one or more acres and requires the project proponent to provide information about construction activities and to identify whether storm water runoff has the potential of discharging into waters of the United States, waters of the state, or a terminal drainage facility. The purpose of the form is to identify which water quality protection measure requirements apply to different projects (if any). Should storm water runoff be contained on site and not discharge into any waters, no special actions are required. Should storm water runoff discharge into waters of the United States, compliance with the SWRCB Construction General Permit SWPPP requirements is required. Should storm water runoff not be contained on site and drains to waters of the state or a terminal drainage facility, the project proponent would be required to develop a SWPPP and BMPs.

Water Rights Adjudication

A groundwater rights adjudication process has been underway for over 15 years to manage the Antelope Valley Groundwater Basin, which includes the project site. The parties to the adjudication include non-governmental overlying users, appropriative users, non-user overlying land owners and federally reserved water rights. The case defines who controls and uses the water in the basin.

In May 2011, the Santa Clara Superior Court issued an official decision determining that the adjudication area is in a state of overdraft and establishing a safe yield for the basin of 110,000 acre-feet per year (AFY), although pumping in the area has ranged up to 150,000 AFY.

On December 23, 2015, Judge Komar issued a final judgment which set in motion court-directed procedures for on the Directors of the Antelope Valley-East Kern Water Agency (AVEK) to create a Watermaster organization empowered to monitor the groundwater basin. In their first meeting of the year following settlement of long-running litigation over water rights adjudication, AVEK, as directed by the court, took action to begin the Watermaster transition process. The judgment specifies that the Watermaster board be made up of five members, including a representative from AVEK; the Los Angeles County Waterworks District 40; one public water supplier selected by District 40, Palmdale Water District (PWD), Quartz Hill Water District (QHWD), Littlerock Creek Irrigation District (LCID), California Water Service Company (Cal Water), Desert Lake Community Services District (DLCSD), North Edwards Water District (NEWD), City of Palmdale, City of Lancaster, Palm Ranch Irrigation District (PRID), and Rosamond Community Services District (RCSD); and two landowner representatives. The Watermaster board was also tasked with

arriving at a unanimous decision on a Watermaster engineer. A Watermaster engineer was selected in April 2017 and will assign pumping allocations per user that will be metered and monitored on an annual basis. Although not anticipated due to the minor amount of water required for the proposed project, should project water demands exceed the assigned allocation, the proposed project would not be denied access to groundwater, but may be required to pay a replenishment fee for pumpage in excess of the user's allocation if groundwater is utilized.

4.10.4 Impacts and Mitigation Measures

Methodology

This section analyzes impacts on hydrology and water quality from the implementation of the project based on changes to the environmental setting as described above, identified drainage conditions in the project site, and the current regulatory framework. The project's potential impacts to hydrology and water quality have been evaluated using the *Preliminary Hydrology Study* (Michael Baker International, 2023), and the *Water Supply Assessment* (ESA, 2023c) prepared for the project, located in Appendices K and L of this EIR, respectively. Additional materials include the project water eligibility letter (AVEK, 2023; Appendix M) as well as a variety of resources, including multiple online sources and published documents. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on hydrology and water quality.

A project could have a have a significant impact on hydrology and water quality if it would:

- a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would
 - i. Result in substantial erosion or siltation onsite or offsite;
 - ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
 - iv. Impede or redirect flood flows;

- d. Result in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Project Impacts

Impact 4.10-1: The project would violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality.

The project proposes the construction of a steel “rebar” manufacturing micro mill facility, which includes multiple uses including warehouse, vehicle maintenance building, scrap metal building, rolling mill, rolling mill storage bay, stock bay, fabrication bay, storage areas, wastewater treatment plant, slag processing areas, parking areas, staging areas, and column yard. Approximately 63-acres of the overall 174-acre project site will be developed with photovoltaic solar arrays. The project site will be designed to preserve existing flow patterns to the furthest extent possible. The impervious percentage was calculated for the site based on proposed impervious cover. The overall site includes approximately 33% of impervious area for the proposed condition. Drainage sub-area delineations and flow paths have been maintained as compared to existing conditions. Two retention basins are proposed to retain the runoff volume from the project site post-development, 10-year, 5-day storm event per Bulletin 11-02. The westerly and southerly portions of the site are slated for solar panels per future, separate permit. Allowances for future impervious area have been accounted for now and included in the 10-year, 5-year runoff determination.

Construction

Project construction is expected to last approximately 24 months and is proposed for completion in one phase with operations starting immediately after construction is completed. Construction would include clearing, mowing, excavation, and grading portions of the project site. Grading will also be used for establishing the foundations of the micro mill, solar array, ancillary buildings, other project components, internal roads, the two retention basins and would be performed selectively throughout the project site to minimize disturbance. It is anticipated that grading depth would not be extensive in most areas as the project area is relatively flat.

Short-term impacts related to water quality can occur during the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest. Additionally, impacts could occur prior to the establishment of ground cover, when the erosion potential may remain relatively high. Potential impacts on water quality from erosion and sedimentation are expected to be localized to the project site and would be temporary during construction. Further, as the proposed project would disturb more than one acre of land surface, it would be required to obtain coverage under the NPDES storm water program. The NPDES Construction General Permit program calls for the implementation of BMPs to reduce or prevent pollutant discharge from these activities to the Maximum Extent Practicable for urban runoff and meeting the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology standards for construction storm water.

To reduce potential impacts during construction, the proposed project would implement Mitigation Measure MM 4.10-1, which requires a project-specific stormwater pollution prevention plan (SWPPP) that includes BMPs designed to prevent the occurrence of soil erosion and discharge of other construction-related pollutants that could contaminate water quality and would be applicable to all areas of the project. In addition, prior to the commencement of construction activities, the project proponent would be required to adhere to the requirements of the Kern County Grading Code. This includes implementation of various measures designed to prevent erosion and control drainage onsite, thereby further preventing the potential sedimentation and subsequent degradation of stormwater.

During project construction, activities that results in the accidental release of hazardous or potentially hazardous materials could result in water quality degradation. Materials that could contribute to this impact include, but are not limited to, diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, lubricant grease, cement slurry, and other fluids utilized by construction and maintenance vehicles and equipment. Motorized equipment could leak hazardous materials such as motor oil, transmission fluid, or antifreeze due to inadequate or improper maintenance, unnoticed or unrepaired damage, improper refueling, or operator error. To reduce potential impacts associated with hazardous materials, the project would implement Mitigation Measure MM 4.10-2, which requires the preparation of a hydrologic study and drainage plan per the Kern County Development Standards and the Kern County Code of Building Regulations prior to issuance of a grading permit. Based on the findings of the hydrologic study, the drainage plan would recommend an onsite design that complies with all channel setback requirements and ensure facilities are located in such a way to lessen their impact on drainage areas and their water quality. Mitigation Measure MM 4.10-2 would require that ground disturbance is minimized within drainage areas and timed to avoid the rainy season where possible. This would decrease the potential of stormwater mixing with construction-related materials and degrading water quality.

Therefore, while construction and grading activities would affect current drainage patterns and could result in erosion and sedimentation on the project site, implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2 and compliance with the established regulatory framework would reduce potential impacts to less than significant.

Operation

The project would result in a significant increase in impervious surfaces on the site as result of the construction of the micro mill, ancillary buildings, other project components, and internal roads, which will be paved with asphalt. Panels from the 63-acre solar array are not considered impervious surfaces, as stormwater falling on the panels would drip and infiltrate into the ground below or run off during larger storm events. However, the proposed project would be required to adhere to all federal, state, and local requirements for avoiding violation of water quality standards during operations.

Operation of the micro mill would require the use of certain materials that could be considered hazardous materials. These materials would mainly be used in the production of the steel rebar and consist of stored raw materials (carbon and fluxing agents), imported scrap metal residuals, or fabrication byproducts, and cleaning fluids and petroleum products including lubricants, fuels, and solvents. Accidental release of these materials could result in water quality degradation should the

materials become entrained in stormwater. This would result in a potentially significant impact on water quality. However, as described in **Section 4.9, Hazards and Hazardous Materials** of this EIR, the proposed project would incorporate Mitigation Measure MM 4.9-1 that would require the project proponent to provide a Hazardous Materials Business Plan for the life of the project, that would delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill. Implementation of Mitigation Measure MM 4.9-1 would ensure safe handling of hazardous materials onsite and provide the means for prompt cleanup in the event of an accidental hazardous material release.

Water quality could also be degraded by non-hazardous materials during operation activities, as the project would result in an increase in impervious surfaces. During dry periods, impervious surfaces can collect greases, oils, and other vehicle-related pollutants. During storm events, these pollutants can mix with stormwater and degrade water quality. However, a drainage plan would be prepared in accordance with the Kern County Development Standards and Kern County Code of Building Regulations. The drainage plan would include post-construction structural and nonstructural BMPs. Adherence to these requirements would minimize potential for operation period water quality degradation. Apart from infrequent cleaning of panels with water that would result in minimal runoff, no other discharges would occur when the project is operational. Additionally, two retention basins will be built and in use during the operational phase. These basins will retain any stormwater runoff from the project site. Therefore, following compliance with the established regulatory framework, project operation would not violate water quality standards or waste discharge requirements, or otherwise degrade water quality.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, the entire project would not result in significant impacts, and these off-site improvements are small parts of the overall project. SCE would comply with any existing adopted best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction, including those regulations that relate to protection of water quality. Therefore, the described off-site improvements would not violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality and impacts would be less than significant.

Mitigation Measure

Implementation of Mitigation Measure MM 4.9-1 (see **Section 4.9, Hazards and Hazardous Materials** for full mitigation measure) and

MM 4.10-1: Prior to issuance of a grading permit, the project proponent/operator shall submit a Stormwater Pollution Prevention Plan for review and approval by the Kern

County Planning and Natural Resources Department and/or Kern County Public Works Department. The Stormwater Pollution Prevention Plan shall be designed to minimize runoff and shall specify best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sediment or any other pollutants from moving offsite and into receiving waters. The requirements of the Stormwater Pollution Prevention Plan shall be incorporated into design specifications and construction contracts. Recommended best management practices to be incorporated in the Stormwater Pollution Prevention Plan shall include the following:

- a. Minimization of vegetation removal;
- b. Implementing sediment controls, including silt fences as necessary;
- c. Installation of a stabilized construction entrance/exit and stabilization of disturbed areas;
- d. Properly containing and disposing of hazardous materials used for construction onsite;
- e. Properly covering stockpiled soils to prevent wind erosion;
- f. Proper protections and containment for fueling and maintenance of equipment and vehicles; and
- g. Appropriate disposal of demolition debris, concrete and soil, and aggressively controlling litter.
- h. Cleanup of silt and mud on adjacent street due to construction activity.
- i. Checking all lined and unlined ditches after each rainfall.
- j. Restore all erosion control devices to working order to the satisfaction of the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department after each rainfall run-off.
- k. Install additional erosion control measures as may be required due to uncompleted grading operations or unforeseen circumstances which may arise.

MM 4.10-2: Prior to the issuance of a grading permit, the project proponent/operator shall complete a hydrologic study and final drainage plan designed to evaluate and minimize potential increases in runoff from the project site. The study shall include, but is not limited to the following:

- a. A numerical stormwater model for the project site that evaluates existing and proposed (with project) drainage conditions during storm events ranging up to the 100-year event.
- b. The study shall also consider potential for erosion and sedimentation in light of modeled changes in stormwater flow across the project area that would result from project implementation.

- c. Engineering recommendations to be incorporated into the project design and applied within the site boundary. Engineering recommendations will include measures to offset increases in stormwater runoff that would result from the project, as well as implementation of design measures to minimize or manage flow concentration and changes in flow depth or velocity so as to minimize erosion, sedimentation, and flooding onsite or offsite.
- d. The hydrologic study and drainage plan shall be prepared in accordance with the Kern County Grading Code and Kern County Development Standards, and approved by the Kern County Public Works Department prior to the issuance of grading permits.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.9-1, MM 4.10-1, and MM 4.10-2, impacts would be less than significant.

Impact 4.10-2: The project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

The project site within the boundaries of the South Lahontan Hydrologic Region, the Antelope Valley Groundwater Basin, the Gloster Subbasin, and within the boundaries of the Antelope Valley Groundwater Adjudication Area. The water use in the Gloster subbasin is confined to urban and mining (quarry pits) activity. Groundwater flows mainly to the southeast and east into the Chaffee subbasin. Depth to water for the southeast area of the subbasin ranges from 50 to 100 feet; other water level data is sparse.

The project site is currently undeveloped and contains pervious surface. Project implementation would result in intensification of development and addition of impervious surfaces that would reduce infiltration.

Construction

Construction of the micro-mill facility, ancillary buildings, and additional site components including the solar array would require water for dust suppression, soil compaction, excavation, grading activities, equipment cleaning, vehicle wash downs, washout basins, and re-compaction of backfill materials, concrete pouring and related activities. It is assumed that construction of the micro mill facility would take up to two years with installation of the solar array completed within six months.

Construction activities for the proposed project would occur on approximately 3.25 million sf (75 acres). Based on projects of similar size and duration, a conservative estimate of construction water use for the proposed project could be up to 50 gallons per day per 1000 square-feet (gpd/1000 sf). Construction water use for the solar array was estimated based on water demand for similar solar installations. Based on these assumptions of construction water use at the project site, water use during construction is assumed to be 32,679 gallons per day (gpd), or approximately 37 AFY. Water use over the two-year construction period would be up to approximately 22 million-gallons

(MG) or 69 AF. Construction water demand of 37 AFY is expected to remain unchanged in all water year types until completion in 2026.

Operation

The operational water usage of the proposed project was determined by analyzing industrial and domestic water demand data provided by PGS for select project facilities (the micro mill, ancillary buildings and additional site components). The calculated operational water demand for the proposed project was estimated to be 1,018 AFY. This would be new demand within AVEK's service area. An additional 400 gallons, or 0.001 AF, of water is estimated for bi-annual maintenance, such as washing and cleaning of the 10 megawatt-hour (MWh) solar array. This assumes 20 gallons per MWh of water demand. Thus, the resulting operational water use is estimated to be 1,018 AFY. It is anticipated that operational water demand of approximately 1,018 AFY generated by the proposed project will remain unchanged in all water year types including single-dry and multiple-dry years.

Water supplies for the project would be supplied by AVEK, a wholesale supplier of the State Water Project (SWP) water to the greater Antelope Valley Region. AVEK its supply from both surface water and groundwater sources. The primary constraint on availability of SWP supplies has been extreme drought conditions. Water supplies in the SWP depends on rainfall, snowpack, runoff, reservoir storage, pumping capacity of SWP facilities, and regulatory and environmental requirements on SWP operations.

Based on the WSA prepared for the proposed project (Appendix L) and confirmation of water availability indicated by the will serve letter (Appendix M), AVEK can meet all water demands in normal, single-dry, and multiple-dry years by utilizing its current water supply portfolio of SWP supplies and groundwater. Additional recovery of imported water from AVEK groundwater banks would be available to meet demand over multiple dry years including five-year drought similar to the 1988 – 1992 drought. Therefore, AVEK, as the water supplier, has sufficient water supplies available to serve the proposed project, its member agencies now and over a 20-year planning horizon. In addition, AVEK's groundwater, including its groundwater banks, are reliable in all water year types and can be pumped during dry years to meet demand within its service area, including the project site.

The proposed project would result in an increase in impervious surfaces on the site from the equipment foundations and the proposed industrial facilities. These areas, however, would occupy a small portion of the project site and the vast majority of the area developed with solar arrays would remain permeable. While rainfall would not infiltrate through the materials, they are not considered impervious surfaces as stormwater falling on the panels would run off and either infiltrate into the ground below or run off during larger storm events into constructed drainage basins. The remaining permeable area would allow natural drainage and groundwater infiltration. In addition, the planned detention basins would further facility capture of runoff and facilitate infiltration.

The Water Supply Assessment found that AVEK, as the water supplier has sufficient water supplies available to serve the proposed project, its member agencies now and over a 20-year planning horizon. In addition, AVEK's groundwater, including its groundwater banks, are reliable in all water year types and can be pumped during dry years to meet demand within its service area. With

that understanding, AVEK has sufficient water supplies to meet existing demands combined with the proposed project demands and cumulative demands in 2025, in 2035, and to the 2045 planning horizon of its draft 2020 UWMP. In other words, the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Additionally, the project proponent would implement MM 4.10-1, which requires the project proponent to submit a SWPPP for review and approval by the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department. Thus, the project would have a less than significant impact on groundwater supplies related to groundwater recharge at the site with the implementation of Mitigation Measure MM 4.10-1.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, and ultimately, there would be no operational water use related to these transmission facilities.

SCE would comply with any existing adopted best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction, including those regulations that relate to groundwater supplies and recharge. For both the temporary construction phase and long-term operational phase of utilizing these new transmission structures, these off-site improvements would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin and impacts would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure MM 4.10-1.

Level of Significance after Mitigation

With the implementation Mitigation Measure MM 4.10-1, impacts would be less than significant for the project.

Impact 4.10-3: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner than would result in substantial erosion and/or sedimentation/siltation on-site or off-site.

The project site is located on flat terrain and is surrounded by land is flat. The project site drains in an easterly direction currently and would continue to drain across the site in an easterly direction after the project site has been developed. Post-development discharge is not anticipated for storms

up to the 100-year, 24-hour event given the site is topographically lower than the surrounding roads; coupled with the inclusion of two (2) on-site retention basins designed to retain the 10-year, 5-day runoff volume (Michael Baker International, 2023).

Due to the relatively flat nature of the projects site, grading is not anticipated to be substantial and would not substantially change the existing drainage patterns. The drainage patterns during both construction and operation would be such that water received on-site during rain event and off-site flow that enters the site would continue to flow through the site much as it does currently.

As described above, the project would implement MM 4.10-2, which requires the completion of a hydrologic study and final drainage plan for the proposed project prior to the issuance of a grading permit; the plan would demonstrate that the project site has been designed to minimize potential increases in runoff. Minimization of runoff increases could require inclusion of a retention basin onsite to capture high storm flows. Any stormwater management features would be consistent with existing regulatory requirements and would minimize any erosion or sedimentation to less than significant levels. With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, however SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to drainage patterns of the area and implement any existing best management practices and adopted minimization measures, along with all. As such, impacts related to substantial erosion and/or sedimentation on-site or off-site would be less than significant in this regard.

Mitigation Measures

Implement Mitigation Measure MM 4.10-2.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant.

Impact 4.10-4: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in flooding onsite or offsite.

The proposed project site is relatively flat and is unlikely to alter existing drainage pattern. The project site runoff will continue to drain easterly across the site after the project site has been developed. Additionally, no rivers exist within the project site or near it.

The project does propose to add a substantial amount of impervious surface to facilitate the micro mill, ancillary buildings, and other components. Approximately 67% of the project site will contain impervious surfaces. This will also include any parking areas and internal roadways within the project but will not include the 63-acre area intended for the solar array. Most of the impervious surfaces will consist of either concrete, concrete with embedded rail, or asphalt. As a result, this has the potential to create flooding onsite and offsite (Michael Baker International, 2023).

Per Mitigation Measure MM 4.10-2, construction would require preparation of a hydrologic study and drainage plan; the drainage plan would recommend an onsite design that complies with requirements and ensure facilities are located in such a way to lessen their impact. Construction-related ground disturbance needed for the project and would be minimized and timed to avoid the rainy season when possible. Ground disturbances within known floodplains and across existing drainage flow paths would be planned and scheduled, to the maximum extents practicable, to avoid potential exacerbated flooding. Therefore, following compliance with applicable regulations and implementation of Mitigation Measures MM 4.10-2, flooding caused by construction of the proposed project is not expected to occur during construction or operational phase. Impacts would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, and or all temporary and long-term ground disturbance activities that may affect existing drainage patterns of the area or contribute to substantial changes in the addition of impervious surfaces, SCE would comply with any existing best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction, including those regulations that relate to drainage patterns of the area. As such, impacts related to flooding on-site or off-site would be less than significant in this regard.

Mitigation Measures

Implement Mitigation Measures MM 4.10-2.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant for the project.

Impact 4.10-5: The project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

The project site is located in a remote dispersed industrial area with no existing stormwater infrastructure. To capture any potential stormwater runoff, the project will incorporate two retention basins; accessible concrete lined fore-bays and perimeter fencing are proposed for each retention basin. Each of the two retention basins will provide storage in exceedance of the post-development 100-year, 24-hour storm event. Additionally, the proposed development is unlikely to pose an adverse impact or flood risk to the adjacent properties as compared to pre-development conditions.

The project would also be required to adhere to Kern County Public Works Department storm water requirements, which include measures to address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. Further, the drainage plan required by Mitigation Measure MM 4.10-2 would detail any necessary design features required to properly control stormwater runoff onsite; design features would be appropriately sized for storm events per the final hydrology study performed for the site. Impacts related to storm water drainage systems would be less than significant with the implementation on MM 4.10-2.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, and overall, the improvement areas would generally remain pervious since these upgraded facilities will either be attached to existing transmission structures within these corridors, or attached to replaced transmission structures. As such, there would be no new impervious surfaces created and therefore storm water infiltration would be similar post construction compared to existing conditions. Nonetheless, SCE would comply with all applicable State and federal laws and regulations during construction, including those regulations that relate to drainage runoff and implement existing best management practices and adopted minimization measures. As such, impacts related to excess or polluted runoff would be less than significant in this regard.

Mitigation Measures

Implement Mitigation Measure MM 4.10-2.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant.

Impact 4.10-6: The project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.

The proposed project would not impede or redirect flood flows from any streams or rivers nor is within a 100-year floodplain. However, the proposed project would require significant soil disturbance within the project site during project construction. Development of the proposed project site would increase the impervious surface area of the project site and could result in increased sheet flow across the project site. To mitigate the potential impacts from increased sheet flow across the project site, two retention basins are proposed to be built which would retain the water on-site.

In addition to building the two retention basins to capture water from the project site, Mitigation Measure MM 4.10-2, which requires the preparation of a hydrologic study and final drainage plan designed to evaluate and minimize potential increases in runoff from the project site, would be required. Therefore, impacts regarding the potential impeding or redirecting of flood flows would be less than significant with the implementation of MM 4.10-2.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, and or all temporary and long-term ground disturbance activities that may affect existing drainage patterns of the area or contribute to substantial changes in the addition of impervious surfaces, SCE would comply with any existing best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction, including those regulations that relate to impeded or redirected flows. As such, impacts be less than significant in this regard.

Mitigation Measures

Implement Mitigation Measure MM 4.10-2 would be required.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant.

Impact 4.10-7: The project would result in a flood hazard, tsunami, or seiche zone, and risk release of pollutants due to project inundation.

A tsunami is a series of ocean waves generated by sudden displacements in the sea floor, landslides, or volcanic activity. A seiche is a standing wave in an oscillating body of water. The project site is located approximately 66 miles northwest of the Pacific Ocean and there are no enclosed bodies of water within the project vicinity: therefore, the risk for tsunami or seiche in the project area is very low and there would be little or no chance for an impact involving release of pollutants during such events. Additionally, the project site is not located in a floodplain.

Further, as discussed more thoroughly in **Section 4.9, Hazards and Hazardous Materials**, the proposed project would include the use, storage, and disposal of significant quantities of hazardous materials similar to other industrial uses. During construction, the hazardous materials, such as petroleum fuels and lubricants used on field equipment, would be subject to the Material Disposal and Solid Waste Management Plan and other measures to limit releases of hazardous materials and wastes as noted in the BMP. The project proposes to make rebar using recycled materials. As a result, the potential for hazardous materials as a byproduct would be present. However, proper handling, storage, transport, and disposal techniques and methods would be conducted in accordance with proven practices to minimize exposure to maintenance workers and/or the public in addition to the implementation of Mitigation Measure MM 4.9-1 (see **Section 4.9, Hazards and Hazardous Materials** for full mitigation measure). Furthermore, the project site is on an area of minimal flood hazard in addition to the implementation of the drainage plan required by Mitigation Measure MM 4.10-2, which would provide flood protection measures, the potential for release of pollutants due to project inundation would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, and these areas are not susceptible to seiche or tsunamis given is distance from the ocean or enclosed bodies of water. Moreover, the improvement route is located outside of the 100-year flood zone and the nearest floodways, SCE would comply with any existing best management practices and adopted minimization measures, along with all applicable State and federal laws and regulations during construction, including those regulations that relate to risk of pollutant release due to project inundation. As such, impacts be less than significant in this regard.

Mitigation Measures

Implement Mitigation Measures MM 4.9-1 (see **Section 4.9, Hazards and Hazardous Materials** for full mitigation measure) and MM 4.10-2.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.9-1 and MM 4.10-2, impacts would be less than significant.

Impact 4.10-8: The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

As noted above, the project site is located within the South Lahontan RWQCB and is subject to the applicable requirements of the Basin Plan administered by the RWQCB in accordance with the Porter-Cologne Water Quality Control Act. The project site is located within the Antelope Valley Groundwater Basin, most of which is in an adjudicated area for groundwater management.

The proposed project is not subject to a sustainable groundwater management plan and, therefore, is not under a specific Groundwater Sustainability Plan (GSP) area. Although the proposed project is not within a GSP required area, the project site is within the Antelope Valley Groundwater Basin, which is under existing adjudication. As discussed above, the project would include required BMPs and drainage control requirements that would be consistent with the Basin Plan.

The adjudication provides a framework to sustainably manage the basin and reduce groundwater level declines and subsidence. To administer the judgment, the court directed appointment of the Watermaster (a five-member board). In 2016, the Watermaster board and an advisory committee (both entities required under the Judgment) were formed. A Watermaster engineer (required by the judgment) was hired at the end of April 2017 to provide hydrogeological and technical analyses and to guide administrative functions to fulfill the judgment. Under the judgment, the Watermaster engineer has the responsibility of preparing annual reports to the court, the most recent of which was published in 2018 for the 2017 water year. The project would require water for construction and operation phases. A will serve letter from the Antelope Valley Eastern Kern water agency was issued to the project proponent, confirming the availability of potable water service to the project site. The water provider to the project would be required to comply with any restrictions that might result from the Watermaster's oversight of the basin and compliance with the Basin Adjudication Judgment, the purpose of which is to alleviate the basin's over drafted condition. According to the Water Supply Assessment prepared for the project, the water need to support the project construction and operations is sufficient for the next 20 years. Therefore, the project would not conflict with the groundwater management of the area and the potential impacts would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation

of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed) operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, and these improvement areas are not anticipated to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Nonetheless, SCE would comply with all applicable State and federal laws and regulations during construction, including those regulations that relate to water quality control plans or sustainable groundwater management plans, and implement any existing best management practices and adopted minimization measures. As such, impacts be less than significant in this regard.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Cumulative Setting, Impacts, and Mitigation Measures

As described in **Chapter 3, Project Description**, of this EIR, there are approximately 36 various projects proposed or approved within the project vicinity.

Similar to the proposed project, none of the cumulative projects are anticipated to discharge to waters of the United States due to their location within the Antelope Valley, which is a closed basin with no outlet to the Pacific Ocean. Regardless, Mitigation Measure MM 4.10-1 would require the proposed project to prepare and implement a SWPPP in accordance with County requirements. All other similar projects would be required to prepare a SWPPP. These SWPPP would be required to include BMPs, similar to those of the proposed projects, and/or designed specifically for those projects to prevent the mixture of sediment and other pollutants with stormwater. This would help prevent cumulative degradation of water quality in the basin.

Furthermore, the proposed project would implement a Hazardous Materials Business Plan as part of Mitigation Measure MM 4.9-1 (see **Section 4.9, Hazards and Hazardous Materials** for full mitigation measure) that would require appropriate handling of hazardous materials onsite to ensure they do not come into contact with stormwater and affect water quality. All other projects in the vicinity that would handle hazardous materials also would be required to comply with hazardous material regulations. Therefore, cumulative scenario impacts associated with water quality degradation would not be cumulatively considerable, and the project would not contribute to a cumulative impact on water quality.

The project site is within the Antelope Valley Groundwater Basin, which is subject to a court adjudication. With regard to water supply, the proposed project will obtain its water supply from a AVEK which pumps water from the basin. The water purveyor for the project would be required to comply with any restrictions that might result from the Watermaster's oversight of the basin and

compliance with the Basin Adjudication Judgement, the purpose of which is to alleviate the basin's over drafted condition. The Water Supply Assessment prepared for the project also determined that there are sufficient supplies for both proposed project construction and operation for the next twenty years; the project's use of water would be highest during the operational phase. Thus, while the Basin is in a state of overdraft, the project's water use, in combination with other cumulative scenario projects requiring water from the Antelope Valley Groundwater Basin would be less than significant.

With respect to erosion, drainage, and flooding, the project would implement Mitigation Measure MM 4.10-2, which would minimize direct impacts related to erosion, drainage, and flooding. Similar to above, it is anticipated that other cumulative scenario projects would be required to implement similar measures, in order to minimize erosion, drainage, and flooding related impacts. Additionally, drainage related impacts from cumulative scenario projects would be primarily localized. Therefore, cumulative scenario impacts related to erosion, drainage, and flooding are not anticipated to be cumulatively considerable, and the project would not contribute to a cumulative impact on flooding, erosion, or drainage.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include any occupied structures and all would be constructed in accordance with all applicable regulatory standards, including those regulations that relate to the protection of water quality. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. Construction of new transmission structure would involve temporary ground disturbance around the new structure locations, however use of these areas for these project elements would not exacerbate the potential result in a cumulative impact related to hydrology and water quality. As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts, and these necessary improvements are small parts of that overall project. Consequently, these impacts would be less than significant in this regard.

Mitigation Measures

Implement Mitigation Measures MM 4.9-1 (see **Section 4.9**, *Hazards and Hazardous Materials* for full mitigation measure), MM 4.10-1, and MM 4.10-2.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.9-1, MM 4.10-1, and MM 4.10-2 cumulative impacts would be less than significant.

Section 4.11 Land Use and Planning

4.11.1 Introduction

This section of the EIR describes the affected environment and regulatory setting of the project for impacts that may affect land use and planning. It also describes the environmental and regulatory setting and discusses the need for mitigation measures where applicable. The information in this section is based primarily, but not exclusively, on a review of the project's consistency with the Kern County General Plan and the Kern County Zoning Ordinance.

4.11.2 Environmental Setting

Onsite Land Uses

The proposed project is located on approximately 174 acres of undeveloped, privately owned land in unincorporated Kern County (APNs: 431-010-02 and 431-030-02). The project site is relatively flat with a gentle southeast-facing slope. The elevation of the project site ranges between approximately 2,554 and 2,564 feet above mean sea level (AMSL). Although the project site is predominantly vacant land, the northwest corner was previously used as a seasonal farming operation with outdoor agricultural storage. An approximate 2.25-acre portion of the project site at the northern boundary had historically been used for unpermitted storage by the previous property owner, however, the project site is currently vacant and previous code violations on the project site have been abated.

The project site is designated as Zone "X" based upon the Flood Insurance Rate Map (FIRM) overlay as issued by the Federal Emergency Management Agency (FEMA), which indicates the project site is not in an area of flood hazard as shown in **Figure 3-7, Flood Zones Map**. Although the project site is located within the historical boundaries of Agricultural Preserve Number 24, the project site is not included in the Agriculture Preserve, nor is it designated as Prime Farmland and Unique Farmland by the Department of Conservation Farmland Mapping and Monitoring Program (FMMP). Further, there are no existing or active agricultural land use contracts or Williamson Act Contracts on the project site. The project site is not located within any critical habitat units for federally-listed species or any other designated conservation area.

The project site is currently designated map code 8.5 (Resource Management – min. 20 acres) by the Kern County General Plan and classified A-1 (Limited Agriculture) by the Kern County Zoning Ordinance. The project would include requests for a General Plan Amendment from map code 8.5 to 7.3 (Heavy Industrial), a Zone Classification Change from A-1 to the M-3 PD (Heavy Industrial – Precise Development Combining) District, as well as Conditional Use Permits, a Precise Development Plan, and Zone Variances. **Table 4.11-1, Project Site and Surrounding Land Use Designations and Zoning Classifications**, outlines the existing land use designations and zoning for the project site.

Surrounding Land Uses

The proposed project is located in the western extent of the Mojave Desert, approximately five miles northeast of the unincorporated community of Rosamond, California and approximately eight miles southeast from the unincorporated community of Mojave. The project site is approximately 12 miles southeast of the Tehachapi Mountain Range and is approximately 22 miles northeast of the Central Transverse Range. The project site and surrounding land are in a relatively flat-lying plain and exhibit little topographic variation.

Land uses immediately surrounding the project site are varied but sparsely developed. To the west, land uses include the Union Pacific Railway and Sierra Highway, followed by SR-14 approximately 0.75 miles away; the nearest residence to the site is approximately 1000 feet northwest and across Sierra Highway, with the next cluster of residential uses located approximately 1 mile west beyond SR-14. To the east, the fully operational Edwards Sanborn Solar Project sits just within the boundaries of Edwards Airforce Base (EAFB) adjacent to the site, whereas the Base itself located approximately 14 miles from the proposed project site. To the south, there are no discernable land uses, however, the unincorporated community of Rosamond is about five miles southwest. Immediately north, land is generally characterized as dispersed industrial, with medium-industrial uses including the Shemshad Food Products, Inc. for warehouse storage and residual outdoor storage for the former Desert Block Company manufacturing and distribution facility. See **Table 4.11-1**, below for the General Plan Land Use Designations and Zoning Classifications for the surrounding areas.

Table 4.11-1: Project Site and Surrounding Land Use Designations and Zoning Classifications

Location	Existing Land Use	Existing Map Code Designation	Existing Zoning Classification
Project Site	Agriculture – storage and seasonal	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)
North	Mixed Industrial	4.2/7.2 (Interim Rural Community Plan/Service Industrial)	M-2 (Medium Industrial)
East	Edwards Air Force Base; Edwards Sanborn Solar Project	1.1 (State and Federal Land)	A-1 (Limited Agriculture)
South	Vacant Agriculture Land	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)
West	Vacant Agriculture Land; Sierra Highway; Union Pacific Railroad	8.5 (Resource Management – min. 20 acres)	A-1 (Limited Agriculture)

The nearest airports are the Rosamond Sky Park located approximately 5.5 miles southwest of the project site and the Mojave Air and Space Port located approximately 8 miles north of the project site, however the proposed project is not located within an Airport Sphere of Influence (SOI) of any existing airport, per the Kern County Airport Land Use Compatibility Plan (ALUCP). The ALUCP does identify the EAFB R-2508 Complex, which includes all the airspace and associated land presently used and managed by the three principal military activities in the Upper Mojave Desert region: Naval Air Weapons Station (NAWS) China Lake; National Training Center, Fort Irwin; and Air Force Test Center, EAFB. The R-2508 Complex is composed of internal restricted

areas, Military Operations Areas, Air Traffic Control Assigned Airspace areas, and other special use airspace. Use of these areas include bombing ranges, supersonic corridors, low altitude high speed maneuvers, radar intercept areas, and refueling areas. The R-2508 Complex is one of the largest military “special use” areas in the United States. Located around the Mojave Desert, it covers approximately 20,000 square miles. The project site is within the R-2508 complex, as discussed in **Section 4.9, Hazards and Hazardous Materials**.

4.11.3 Regulatory Setting

Federal and State

California Public Utilities Commission (CPUC)

The proposed project’s off-site improvement work for Southern California Edison’s (SCE) transmission lines are regulated by the California Public Utilities Commission. SCE is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the EAFB utility corridor. The connection will continue north within EAFB’s utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road. See **Figure 3-14 – Existing and Proposed Offsite Improvements**.

Where the CPUC has jurisdiction over a public utility facility, local governments such as cities and counties are generally preempted from regulating such projects pursuant to the California constitution and the California Public Utilities Code. The CPUC regulates most public utility electric generating plants; transmission, power, and distribution line facilities; and substations pursuant to General Order 131-D (GO 131-D), which “clarifies that local jurisdictions are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission’s jurisdiction.”

Local

Land use and planning decisions within and adjacent to the project site are guided and regulated by the Kern County General Plan and the Kern County Zoning Ordinance. The Kern County General Plan contains goals, objectives, and policies and provides an overall foundation for establishing land use patterns. For this land use impact analysis, this section lists all relevant goals, objectives, policies, and implementation measures related to the proposed project. The Zoning Ordinance contains regulations through which the General Plan’s provisions are implemented. The most relevant regulations pertaining to industrial development are presented below.

Kern County General Plan

The Kern County General Plan is a policy document designed to provide long-range guidance for planning decisions that affect the growth and resources of unincorporated Kern County. Included in the Kern County General Plan is the Land Use, Open Space, and Conservation Element, which provides for a variety of land uses for future economic growth while also assuring the conservation of Kern County's agricultural, natural, and resource attributes. Within the Land Use, Open Space and Conservation Element, policy areas are separated by overlay designations, known as "Map Codes", which are identified on the Kern County General Plan maps for each section of the County and include the following categories: (1) non-jurisdictional land (State and federal); (2) environmental constraints overlay; (3) public facilities; (4) non-jurisdictional land (accepted county plan areas, rural communities and specific plan required); (5) residential; (6) commercial; (7) industrial; and (8) resource. Each Map Code/overlay area contains specific goals, policies, and implementation measures to guide development within them.

As discussed above, the project site is located within the Kern County General Plan and includes the following land use designation: Map Code 8.5 (Resource Management – Min. 20 Acre Parcel). Each Map Code/overlay area contains specific goals, policies, and implementation measures to guide development within them.

In addition to the Land Use, Open Space, and Conservation Element, the Kern County General Plan includes other elements related to circulation, noise, and energy. Each element establishes goals, policies, and implementation measures that guide planning decisions in unincorporated Kern County. The goals, policies, and implementation measures relevant to the proposed project are listed below.

1. Land Use, Open Space, and Conservation Element

1.3 Physical and Environmental Constraints

Goal

Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

Policies

Policy 3: Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.

Policy 11: Protect and maintain watershed integrity within Kern County.

Implementation Measures

Measure D: Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.

Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

1.4 Public Facilities and Services

Goals

- Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.
- Goal 3: Distribute the cost of new services or facilities equitably among the beneficiaries.
- Goal 4: Provide coordination between public entities to ensure infrastructure standards and equitable fiscal support.
- Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.
- Goal 6: Provide a healthful and sanitary means of collecting, treating, and disposing of sewage and refuse for the residents and industries of Kern County.
- Goal 7: Facilitate the provision of reliable and cost effective utility services to residents of Kern County.
- Goal 10: Ensure landfill capacity for Kern County residents and industries.

Policies

- Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.
- Policy 6: The County will ensure adequate fire protection to all Kern County residents.
- Policy 7: The County will ensure adequate police protection to all Kern County residents.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the CEQA documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

Implementation Measures

- Measure B: Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.

- Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- Measure D: Involve utility providers in the land use and zoning review process.
- Measure E: Continue to establish coordinated efforts between government entities and private enterprise to identify and preserve unique scenic qualities of existing natural resources and to enhance the image of the County as a whole.
- Measure L: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.
- Measure N: Secure complete and accurate information on all hazardous wastes generated, handled, stored, treated, transported, and disposed of within or through Kern County.
- Measure O: Reduce to the greatest degree possible the amount of waste to be disposed of by encouraging private industry to construct and manage a high quality system of transfer stations, recycling facilities, treatment plants, and incinerators located near the generators of hazardous waste.
- Measure R: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.
- Measure T: Amend the County's EIR Procedures to include consideration of fiscal impacts of development proposals, so that the character and extent of possible public service or facility deficiencies can be identified during the course of the normal project review process.

1.8 Industrial

Goals

- Goal 1: Ensure that an adequate and geographically balanced supply of land is designated for a range of industrial purposes.
- Goal 2: Promote the future economic strength and wellbeing of Kern County and its residents without detriment to its environmental quality.
- Goal 3: Ensure compatibility with land use designations such as residential, commercial, or other land uses that may be affected by such activities.

Policies

- Policy 1: Locations for new industrial activities shall be provided with adequate infrastructure (water, sewage disposal systems, roads, drainage, etc.) to minimize effects on County services.
- Policy 5: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.

- Policy 6: Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.
- Policy 8: The County shall give priority to proposed industrial developments where:
- i. Specific uses are proposed in conjunction with submittal of a concurrent precise development plan; and
 - ii. Where multiple phases, tenants, or lots are proposed through the adoption of a master precise development plan in conjunction with a General Plan Amendment.
- Policy 13: Where feasible, locate future industrial activities in close proximity to railroad facilities and inter- and intra-State transportation corridors to minimize extensive travel through urban areas and to promote alternative transportation of goods.

Implementation Measures

- Measure A: Evaluation of applications for any General or Specific Plan Amendment to an industrial designation will include sufficient data for review to facilitate desirable new industrial development proposals consistent with General Plan policies, using the following criteria and guidelines:
- i. Location suitability with respect to market demand area.
 - ii. Provision of adequate access, ingress and egress facilities and services, and the mitigation of traffic impacts.
 - iii. Provision of adequate water, sewer, and other public services to be used.
 - iv. Provision of adequate on-site, nonpublic water supply and sewage disposal if no public systems are available or used.
 - v. Compatibility with adjacent uses (scale, noise, emissions, or other nuisances, etc.) and methods for buffering.
 - vi. Design, layout, and visual appearance coordinated with existing adjacent industrial uses.
 - vii. Overall consistency with the General Plan.

1.9 Resource

Goals

- Goal 1: To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.
- Goal 2: Protect areas of important mineral, petroleum, and agricultural resources potential for future use.
- Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

Policies

- Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.
- Policy 16: The County will encourage development of alternative energy sources by tailoring its Zoning and Subdivision Ordinances and building standards to reflect Alternative Energy Guidelines published by the California State Energy Commission.

Implementation Measures

- Measure C: The County Planning Department will seek review and comment from the County Engineering and Survey Services Department on the implementation of the National Pollution Discharge Elimination System for all discretionary projects.

1.10 General Provisions**Goal**

- Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

1.10.1 Public Services and Facilities**Policies**

- Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.
- Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Implementation Measures

- Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact

groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.

1.10.2 Air Quality

Policies

- Policy 18: The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.
- Policy 19: In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision making body, as part of its deliberations, will ensure that:
- (1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
 - (2) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.
- Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.
- Policy 21: The County shall support air districts efforts to reduce PM₁₀ and PM_{2.5} emissions.
- Policy 22: Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.

Implementation Measures

- Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.
- Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:
- a. Minimizing idling time.
 - b. Electrical overnight plug-ins.

- Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:
- Pave dirt roads within the development.
 - Pave outside storage areas.
 - Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
 - Use of alternative fuel fleet vehicles or hybrid vehicles.
 - Use of emission control devices on diesel equipment.
 - Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
 - Provide bicycle lockers and shower facilities on site.
 - Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
 - The use and development of park and ride facilities in outlying areas.
 - Other strategies that may be recommended by the local Air Pollution Control Districts.
- Measure J: The County should include PM₁₀ control measures as conditions of approval for subdivision maps, site plans, and grading permits.

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

- Policy 25: The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

- Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.
- Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.
- Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.
- Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- Measure O: On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading

or other construction activities on discretionary projects that are subject to a CEQA document.

1.10.5 Threatened and Endangered Species

Policies

- Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
- Policy 28: County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.
- Policy 29: The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
- Policy 31: Under the provisions of the California Environmental Quality Act, the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document is prepared.

Implementation Measures

- Measure Q: Discretionary projects shall consider effects to biological resources as required by CEQA.
- Measure R: Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.

1.10.6 Surface Water and Groundwater

Policies

- Policy 34: Ensure that water quality standards are met for existing users and future development.
- Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.
- Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.
- Policy 44: Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.

Implementation Measure

Measure W: Applications for General or Specific Plan Amendments will include sufficient data for review to facilitate desirable new development proposals consistent with General Plan policies, using the following criteria and guidelines:

- i. The provision of adequate water, sewer, and other public services to be used.
- ii. The provision of adequate on-site nonpublic water supply and sewage disposal if no public systems are available or used.

Measure Y: Promote efficient water use by utilizing measures such as:

- i. Requiring water-conserving design and equipment in new construction;
- ii. Encouraging water-conserving landscaping and irrigation methods; and
- iii. Encouraging the retrofitting of existing development with water conserving devices.

Measure Z: General Plan Amendments subject to environmental review and not otherwise subject to California Water Code Section 10910 shall demonstrate through a water supply assessment that a long-term water supply for a 20-year timeframe is available. The water assessment shall include, but not limited to, the following:

- i. Source and quantity of historical water use on the site.
- ii. Estimated water consumption of the proposed development.
- iii. Estimated storage, if any, in meeting the projected need.
- iv. Recommendations for additional sources of water to address demand shortage. Such measures may include, but not limited to, development of future sources of additional surface water and groundwater, including water transfers, conjunctive use, recycled water, conservation, and additional storage of surface water, groundwater, and desalination.

Written acknowledgement that water will be provided by a community or public water system with an adopted Urban Water Management Plan shall constitute compliance with this requirement.

1.10.7. Light and Glare**Policies**

Policy 47: Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.

Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.

Implementation Measure

Measure AA: The County shall utilize *CEQA Guidelines* and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.

Chapter 2. Circulation Element**2.1 Introduction****Goals**

Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.

2.3.3 Highway Plan**Goals**

Goal 5: Maintain a minimum Level of Service (LOS) D.

Policies

Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and mid-section lines. This is because the road center line can be determined by an existing survey.

Policy 3: This plan's road-width standards are listed below. These standards do not include state highway widths that would require additional right-of-way for rail transit, bike lanes, and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis.

- Expressway [Four Travel Lanes] Minimum 110-foot right-of-way;
- Arterial [Major Highway] Minimum 110-foot right-of-way;
- Collector [Secondary Highway] Minimum 90-foot right-of-way;
- Commercial-Industrial Street Minimum 60-foot right-of-way; and
- Local Street [Select Local Road] Minimum 60-foot right-of-way.

Implementation Measure

Measure A: The Planning Department shall carry out the road network Policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that includes road standards related to urban and rural planning requirements. These ordinances also regulate access points. Planning Department can help developers and property owners in identifying where planned circulation is to occur.

2.3.4 Future Growth

Goal

Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

Policies

Policy 2: The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below Level of Service (LOS) D. Utilization of the CEQA process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.

Policy 4: As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along State routes are necessary then roads shall be built to Caltrans standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.

Policy 5: When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.

Policy 6: The County may accept a developer's road into the county's maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.

Implementation Measure

Measure A: The County should relate traffic levels to road capacity and development levels. To accomplish this Roads Department and Planning Department should set up a monitoring program. The program would identify traffic volume to capacity ratios and resulting level of service. The geographic base of the program would be traffic zones set up by Kern Council of Governments.

Measure C: Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.

2.3.10 Congestion Management Programs

Goals

- Goal 1: To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.
- Goal 2: To coordinate congestion management and air quality requirements and avoid multiple and conflicting requirements.

2.5.1 Trucks and Highways

Goals

- Goal 1: Provide for Kern County's heavy truck transportation in the safest way possible.
- Goal 2: Reduce potential overweight trucks.
- Goal 3: Use State Highway System improvements to prevent truck traffic in neighborhoods.

Policies

- Policy 1: California Department of Transportation (Caltrans) should be made aware of the heavy truck activity on Kern County's roads.

2.5.4 Transportation of Hazardous Materials

Goal

- Goal 1: Reduce risk to public health from transportation of hazardous materials.

Policy

- Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.

Implementation Measures

- Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

Chapter 3. Noise Element

3.3 Sensitive Noise Areas

Goals

- Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.

- Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

Policies

- Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.
- Policy 2: Require noise level criteria applied to all categories of land uses to be consistent with the recommendations of the California Division of Occupational Safety and Health.
- Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.
- Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.
- Policy 5: Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into the project design. Such mitigation shall be designed to reduce noise to the following levels:
- a) 65 dB L_{dn} or less in outdoor activity areas;
 - b) 45 dB L_{dn} or less within interior living spaces or other noise sensitive interior spaces.
- Policy 7: Employ the best available methods of noise control.

Implementation Measures

- Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.
- Measure C: Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.
- Measure F: Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB L_{dn} and interior noise levels in excess of 45 dB L_{dn}.
- Measure G: At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:
- a) Be the responsibility of the applicant.
 - b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.

- c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.

Measure I: Noise analyses shall include recommended mitigation, if required, and shall:

- a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
- b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10 – 20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
- c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
- d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.

Measure J: Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

Chapter 4. Safety Element

4.1 Introduction

Goal

Goal 1: Minimize injuries and loss of life and reduce property damage.

Goal 2: Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.

4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint

Implementation Measures

Measure C: Require detailed site studies for ground shaking characteristics, liquefaction potential, dam failure inundation, flooding potential, and fault rupture potential as background to the design process for critical facilities under County discretionary approval.

Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific

actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Policy

Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

Implementation Measure

Measure B: Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.

Measure C: The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.

4.5 Landslides, Subsidence, Seiche, and Liquefaction

Policies

Policy 3: Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

Implementation Measures

Measure D: Discretionary actions will be required to address and mitigate impacts from inundation, land subsidence, landslides, high groundwater areas, liquefaction and seismic events through the CEQA process.

4.6 Wildland and Urban Fire

Policies

Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.

Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.

Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.

Policy 6: All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Implementation Measures

Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

4.9 Hazardous Materials

Implementation Measure

Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.

Chapter 5. Energy Element

5.2 Importance of Energy to Kern County

Policies

- Policy 7: The processing of all discretionary energy project proposals shall comply with California Environmental Quality Act (CEQA) Guidelines directing that the environmental effects of a project must be taken into account as part of project consideration.
- Policy 8: The County should work closely with local, state, and federal agencies to assure that energy projects (both discretionary and ministerial) avoid or minimize direct impacts to fish, wildlife, and botanical resources, wherever practical.
- Policy 10: The County should require acoustical analysis for energy project proposals that might impact sensitive and highly-sensitive uses in accordance with the Noise Element of the General Plan.

5.4.5 Solar Energy Development

Policies

- Policy 3: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.
- Policy 4: The County shall encourage solar development in the desert and valley regions previously disturbed, and discourage the development of energy projects on undisturbed land supporting state or federally protected plant and wildlife species.

Kern County Zoning Ordinance

Title 19 of the Kern County Ordinance provides a description of permitted uses for the various zoning classifications within the County. The Kern County Zoning Ordinance (KCZO) consists of two primary parts: a Zoning Map that delineates the boundaries of zoning districts; and a Zoning Code that explains the purpose of the districts, specifies permitted and conditional uses, and establishes development and performance standards. The intent of the Zoning Code is to protect public health, safety, and the general welfare of residents and visitors in the County. Together with the Zoning Map, the Zoning Code identifies the particular uses permitted on each parcel of land in the County and sets forth regulations and standards for development to ensure that the policies, goals, and objectives of the General Plan are implemented. In addition to land use regulations, the Zoning Code contains development standards that can lessen a new structure's impacts on a location or area. These standards control the height, setbacks, parking, lot coverage, gross floor

area, etc. for new structures. The Zoning Code also regulates which uses are permitted in each of the County's zoning districts to ensure compatibility between land uses, and outlines the public hearing process with respect to the requested land use permit. The following is a description of the zone district currently designated within the project site property.

Limited Agriculture (A-1) District

The purpose of the Limited Agriculture (A-1) District is to designate areas suitable for a combination of estate-type residential development, agricultural uses, and other compatible uses. Final map residential subdivisions are not allowed in the A-1 District. The existing zoning for the project site is A-1, however as noted previously, the proposed project includes a proposed change in zone classification to M-3 PD (Heavy Industrial – Precise Development Combining), which are identified below.

Heavy Industrial (M-3) District

The purpose of the Heavy Industrial (M-3) District is to designate areas suitable for heavy manufacturing and industrial uses which have the greatest potential for producing undesirable or adverse by-products, including traffic, noise, odors, dust, and vibrations. The M-3 District should be located in places substantially removed from residential areas.

Precise Development (PD) Combining District

The purpose of the Precise Development (PD) Combining District is to designate areas with unique site characteristics or environmental conditions or areas surrounded by sensitive land uses to ensure that development in such areas is compatible with such constraints. All development in the PD Combining District shall be subject as a minimum to Special Development Standards as specified in Chapter 19.80 of the KCZO; however, a Special Development Standards Plot Plan Review shall not be required. The application of the PD District may be initiated by either the property owner or the County. The PD District may be combined with any base district. The regulations established by the PD District shall be in addition to the regulations of the base district with which the PD District is combined.

Land Use Entitlements

As described previously in **Chapter 3, Project Description**, implementation of the proposed project includes the following requests:

- General Plan Amendment No. 3, Map No. 213 – From Map Code 8.5 (Resource Management) to 7.3 (Heavy Industrial), or a more restrictive map code designation
- Zone Change Case No. 62, Map No. 213 – From zone classification A-1 (Limited Agriculture) to M-3 PD (Heavy Industrial – Precise Development Combining) on approximately 174 acres
- Conditional Use Permit No. 71, Map No. 213 – to allow on-site capture of carbon dioxide (CO₂) and temporary storage for eventual transport for off-site distribution (Sections 19.08.085 & 19.06.920)

- Conditional Use Permit No. 72, Map No. 213 – to allow an on-site water treatment plant (Section 19.40.030.K)
- Precise Development Plan No. 3, Map No. 213 – to allow for the construction and operation of an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, served by a 63-acre solar array accessory to the proposed use on 174 total acres in the M-3 PD District (Sections 19.40.020.E.1 & 19.40.020.H)
- Zone Variance No. 24, Map No. 213 – to allow for a reduction in the required number parking spaces from 993 spaces to 306 spaces (Sections 19.82.020 and 19.106.030).
- Zone Variance No. 25, Map No. 213 – to allow for a maximum building and structure height of 165 feet where 150 feet is permitted (Sections 19.40.080.A & 19.08.160.B) in the M-3 PD (Heavy Industrial – Precise Development Combining) District.

As such, the basis of approval for the requested Conditional Use Permits, Precise Development Plan and Zone Variances are listed below.

Section 19.56.150 Basis for Approval for Precise Development Plan

The decision-making authority may approve or conditionally approve an application for a precise development plan if it finds all of the following:

- A. The proposed development is consistent with the designations, goals, and policies of the applicable General or Specific Plan.
- B. The proposed development will not be materially detrimental to the health and safety of the public or to property and residents in the vicinity.

Section 19.104.040 Basis for Approval for Conditional Use Permit

The decision-making authority may approve or conditionally approve an application for a conditional use permit if it finds all of the following:

- A. The proposed use is consistent with the goals and policies of the applicable General or Specific Plan.
- B. The proposed use is consistent with the purpose of the applicable district or districts.
- C. The proposed use is listed as a use subject to a conditional use permit in the applicable zoning district or districts or a use determined to be similar to a listed conditional use in accordance with the procedures set out in Sections 19.08.030 through 19.08.080 of this title.
- D. The proposed use meets the minimum requirements of this title applicable to the use.
- E. The proposed use will not be materially detrimental to the health, safety, and welfare of the public or to property and residents in the vicinity.

Section 19.106.040 Basis for Approval for Zone Variance

The decision-making authority may approve or conditionally approve an application for a variance if it finds all of the following:

- A. Special circumstances exist applicable to the subject property, including size, shape, topography, location, or surroundings, such that the strict application of this title deprives such property of privileges enjoyed by other property in the vicinity and in the same zoning district or districts.
- B. The granting of the variance does not constitute a grant of special privilege inconsistent with the limitations upon other properties in the vicinity and zoning district in which such property is located.
- C. The granting of the variance will not be materially detrimental to the public health, safety, or welfare or to property or residents in the vicinity.

Regional Transportation Plan

The most recent adopted Regional Transportation Plan (RTP) was prepared by the Kern Council of Governments (COG), and was adopted in 2022. The 2022 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, State, and federal agencies. Included in the 2022 RTP is the Sustainable Communities Strategy (SCS) required by California's Sustainable Communities and Climate Protection Act, of Senate Bill (SB) 375. The California Air Resources Board (ARB) set targets for Kern's greenhouse gas (GHG) emissions reductions from passenger vehicles and light-duty trucks at 9 percent per capita by 2020 and 15 percent per capita by 2035 as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA) ensuring consistency between low income housing needs and transportation planning.

The intent of the SCS is to achieve the State's emissions reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County. The RTP/SCS seeks to: improve economic vitality; improve air quality; improve the health of communities; improve transportation and public safety; promote the conservation of natural resources and undeveloped land; increase access to community services; increase regional and local energy independence; and increase opportunities to help shape the community's future.

The 2022 RTP/SCS financial plan identifies how much money is available to support the region's transportation investments. The plan includes a core revenue forecast of existing local, State, and federal sources along with funding sources that are considered to be reasonably available over the time horizon of the RTP/SCS. These new sources include adjustments to State and federal gas tax rates based on historical trends and recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission), leveraging of local sales tax measures, local transportation impact fees, potential national freight program/freight fees, future State bonding programs, and mileage based user fees (Kern COG, 2022).

Kern County's Solid Waste Management Plan

The Solid Waste Management Plan is a comprehensive guide for all solid waste management activities in the County. The plan identifies the existing solid waste generation and disposal facilities in Kern County, estimates future solid waste disposal demand, and identifies programs to meet this future need.

Kern County and Incorporated Cities Hazardous Waste Management Plan

The Kern County and Incorporated Cities Hazardous Waste Management Plan focuses on the siting of hazardous waste disposal facilities, the transport of hazardous waste in the County, protection of water resources from hazardous waste contamination, and public education concerning the use and disposal of hazardous waste.

4.11.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses, in consideration of the applicable planning goals identified above. Compliance with the aforementioned policies is illustrated in consistency tables provided in the project Impacts section below. The change in the land use on the project site is significant if the project results in the effects described in the thresholds of significance below. The evaluation of project impacts is based on professional judgment, analysis of the County's land use policies and the significance criteria established in Appendix G of the CEQA Guidelines, which the County has determined appropriate for this EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on land use.

A project could have a have a significant adverse effect on land use if the project would:

- a. Physically divide an established community; or
- b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Project Impacts

Impact 4.11-1: The project would cause a significant environmental impact due to physically dividing an established community.

The proposed project would be located on vacant, undeveloped land in southeastern Kern County and would not physically divide an established community. Although there are dispersed industrial immediately north of the project site across Sopp Road, and scattered clusters of residences in the

project vicinity, the nearest singular residence is approximately 1000 feet away to the west across Sierra Highway, followed by the nearest clusters approximately one mile to the north as well as one mile west of the project site beyond Sierra Highway and SR 14. The project site is approximately five miles north of the nearest unincorporated community, Rosamond. The project would neither physically encroach into nor divide or restrict access to surrounding communities within the region. In addition, no new roadways or other linear elements that would have the potential to restrict existing access or movement within the local community are proposed. The proposed project would not physically divide or restrict access to the residential development or any other community. Impacts in this regard are less than significant and mitigation is not required.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include structures or facilities requiring permanent staffing or visitors on site. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. Although the existing routes of SCE transmission lines run partially through the nearest unincorporated community of Rosamond along Rosamond Boulevard, the new poles and circuits would be placed entirely within SCE's existing easements and transmission corridors, and therefore will not result in the expansion or encroachment into an established community that would result in the potential to divide or restrict access to the community. Nonetheless, all temporary construction and ground disturbance activities would adhere to all federal and state regulations related to such construction, and SCE would implement best practices that are already utilized as well as the appropriate adopted minimization measures as identified in the Edwards Air Force Base (EAFB) Environmental Assessment pertaining to on-base utility corridors. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.11-2: The project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Kern County General Plan and the Kern County Zoning Ordinance establish land use policies and regulations that are applicable to the project. The following discussion evaluates the project's conformity to these plans, policies and regulations. As listed previously, the proposed project would require approval of the following to enable construction and operation of the micro mill facility.

- General Plan Amendment No. 3, Map No. 213 – From Map Code 8.5 (Resource Management) to 7.3 (Heavy Industrial), or a more restrictive map code designation
- Zone Change Case No. 62, Map No. 213 – From zone classification A-1 (Limited Agriculture) to M-3 PD (Heavy Industrial – Precise Development Combining) on approximately 174 acres
- Conditional Use Permit No. 71, Map No. 213 – to allow on-site capture of carbon dioxide (CO₂) and temporary storage for eventual transport for off-site distribution (Sections 19.08.085 & 19.06.920)
- Conditional Use Permit No. 72, Map No. 213 – to allow an on-site water treatment plant (Section 19.40.030.K)
- Precise Development Plan No. 3, Map No. 213 – to allow for the construction and operation of an approximate 489,200 square-foot micro mill facility with an additional 61,721 square feet of accessory buildings, for a total of 550,921 square feet, served by a 63-acre solar array accessory to the proposed use on 174 total acres in the M-3 PD District (Sections 19.40.020.E.1 & 19.40.020.H)
- Zone Variance No. 24, Map No. 213 – to allow for a reduction in the required number parking spaces from 993 spaces to 306 spaces (Sections 19.82.020 and 19.106.030).
- Zone Variance No. 25, Map No. 213 – to allow for a maximum building and structure height of 165 feet where 150 feet is permitted (Sections 19.40.080.A & 19.08.160.B) in the M-3 PD (Heavy Industrial – Precise Development Combining) District.

Kern County General Plan

The existing general plan designation on the project site is map code 8.5 (Resource Management – min. 20 acres) which includes uses such as recreational activities, livestock grazing, dry land farming, etc. This designation would not support the proposed micro mill facilities, therefore the project would include a GPA to designate the project site map code 7.3 (Heavy Industrial), which would be compatible with the proposed uses on-site. With the approval of the GPA the project would not conflict with the Kern County General Plan land use designation and therefore impacts would be less than significant in this regard.

Additionally, **Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use**, presents an evaluation of the project's consistency with the Kern County General Plan. The table lists the goals and policies identified above in the regulatory setting and provides analysis on the project's general consistency with overarching policies. Additionally, the table provides goals and policies of issue areas that are presented in more detail in other sections of the EIR. As evaluated

in detail in **Table 4.11-2**, the project is generally consistent with the goals and policies of the Kern County General Plan and therefore does not result in significant impacts due to a conflict with any land use plan or policy adopted for the purpose of avoiding or mitigating an environmental effect.

Kern County Zoning Ordinance

The existing zoning on-site is classified A-1 (Limited Agriculture), which includes but is not limited to the following permitted uses: agriculture, residential, temporary commercial, transmission lines and supporting structures, utility substations, etc. This zoning classification would not support the proposed uses of the micro mill facility. The proposed project would include a zone classification change to M-3 PD (Heavy Industrial – Precise Development Combining) District, for which the project would be a permitted use pursuant to Sections 19.40.020.E.1 & 19.40.020.H. The proposed project would also require a Precise Development Plan that would demonstrate conformity with the proposed Precise Development Combining zoning. Further, a CUP would be required for the implementation for a carbon capture and storage system, and an additional CUP to allow for an on-site water treatment plant. The proposed project would also include a Zone Variance for a reduction in the number of standard parking stalls required on site from 993 to 306. Lastly, an additional Zone Variance to allow a 165-foot high Fume Treatment Plant stack, in excess of the maximum permitted height of 150 feet in the M-3 (Heavy Industrial) District. Due to the proposed project's unique location being adjacent to EAFB's western perimeter, within the R-2508 Complex, and requiring military review and coordination due to the 165-foot Fume Treatment Plant stack height surpassing the 100-foot threshold as identified in Figure 19.08.160 of the KCZO, Preliminary coordination between the project proponent and EAFB indicates the base does not anticipate the proposed project impacting daily operations. With the approval of the above mentioned ZCC, PD Plan, ZV(s), and CUP(s) the project would be consistent with applicable land use policies and regulations, and impacts related to consistency with the Zoning Ordinance would be less than significant.

Off-Site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. While the majority of the improvement areas are flat and would require minimal to no ground disturbance, it is understood that some ground disturbance will be required, establishing temporary pull/splice sites, temporary landing zones, temporary guard structures, crossing structure temporary work areas, replacement structure temporary work areas, and underground temporary work areas. A portion of these off-site improvements would be located within Utility Corridor No. 3, as identified in the *Environmental Assessment for Proposed Utility Corridors at Edwards Air Force Base, California*, included as Appendix B to this EIR. However, implementation of SCE's existing maintenance and operation protocols, as well as adopted minimization measures for utility corridors within EAFB, would reduce potential impacts. Additionally, the project would implement mitigation measure **MM 4.11-1**, which would require consultation with the Department of Defense to ensure there would be no frequency conflict with military operation. Therefore, impacts would be less than significant in this regard.

Mitigation Measures

MM 4.11-1: Prior to the issuance of building permits, the operator shall consult with the Department of Defense to identify the appropriate Frequency Management Office officials to coordinate the use of telemetry to avoid potential frequency conflicts with military operations.

Level of Significance

Impacts would be less than significant for the project. Impacts would be less than significant with MM 4.11-1, for the off-site improvements.

Cumulative Setting, Impacts, and Mitigation Measures

The geographic scope of analysis for this chapter is the western Antelope Valley. This scope was selected to analyze the cumulative impact to regional land use patterns of project development in the area, and because there is some uniformity to existing land use patterns in this region. As described in more detail in **Chapter 3, Project Description**, in **Table 3-3, Cumulative Projects List**, of this EIR, 36 projects are proposed within the geographic scope. While the surrounding area is sparsely developed, the project, along with related projects, has the potential to contribute to a cumulative influence on proposed land uses in and around the project site.

The anticipated impacts of the project in conjunction with cumulative development in the area of the project would increase the urbanization and result in the loss of agricultural space. However, potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. As described below in **Table 4.11-2** the proposed project would be consistent with the goals and policies of the Kern County General Plan. In addition, with approval of the GPA, ZCC, PD Plan, ZV(s), and CUP(s), development of the micro mill, solar array, and ancillary structures for the proposed project would be an allowable use that would not conflict with the land use or zoning classification for the project site. Therefore, as proposed the project would be consistent with the goals and policies of the Kern County General Plan and the Kern County Zoning Ordinance and would therefore not contribute to a cumulatively considerable impact regarding land use.

Furthermore, all other past, present, and future projects would be required to undergo separate environmental review on a case-by-case basis in accordance with the requirements of CEQA. Each related project would also be required to demonstrate consistency with all applicable planning documents governing the project site, including the Kern County General Plan and the Kern County Zoning Ordinance, should those projects be within the plan area. Therefore, cumulative land use impacts would be considered less than significant.

Off-site Improvements

As discussed previously, off-site improvement work involving the re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines does not require the extension or expansion of SCE's established easements and transmission corridors. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. Construction of new transmission equipment would involve temporary

ground disturbance around the new structure locations, however use of these areas for these project elements would neither physically divide an established community or conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts with mitigation incorporated, and these necessary improvements are small parts of that overall project, thus not contributing to cumulative significant land use or planning impacts. When considered with other past, present and future projects, these improvements would not be cumulatively considerable.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Cumulative impacts would be less than significant.

Project Consistency with the Kern County General Plan

Table 4.11-2, summarizes the consistency of the project with all applicable goals and policies of the Kern County General Plan and relevant planning documents that are applicable to the project site.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
KERN COUNTY GENERAL PLAN CHAPTER 1, LAND USE, OPEN SPACE AND CONSERVATION ELEMENT		
1.3 Physical and Environmental Constraints		
Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.	Consistent with implementation of Mitigation Measure MM 4.10-2	Consistent with this policy, the proposed project would develop a micro mill, 63-acre solar array, ancillary building, and other project components in an area that is not located on a hazardous site. As described in Section 4.7, <i>Geology and Soils</i> , of this EIR, the project site is not transected by a known active or potentially active fault and is not located within a State of California Alquist-Priolo Earthquake Fault Zone. In addition, construction of the proposed project would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08). Adherence to all applicable regulations would mitigate any potential impacts associated with fault rupture adjacent to the proposed project site. Based on the absence of any known active faults that cross, or are located in close proximity to, the project site and project compliance with applicable ordinances of the Kern County Building Code, the potential impact of fault rupture would be less than significant. Additionally, the proposed project would implement the recommendations of the final design level geotechnical report. The final report's recommendations would be consistent with the Kern County Building Code (Chapter 17.08) and the most recent version of the California Building Code. As described in Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, the project site is not located within the 100-year floodplain. Implementation of Mitigation Measure MM 4.10-2 would require preparation of a drainage plan that would design project facilities to have one-foot of freeboard clearance above the calculated maximum flood depths for the solar arrays or the finished floor of any permanent structures and grading for the project would be designed so that water surface elevations during flood events would not be increased by more than one foot. Further, the project would be developed in accordance with the General Plan and Floodplain Management Ordinance. Thus, final review of the proposed project by the Kern County Planning and

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
		Natural Resources Department, as well as adherence to all applicable local, state and federal regulations, would ensure that the proposed project would not pose significant environmental or public health and safety hazards. As such, with implementation of mitigation measures the project would be consistent with this goal.
Policy 3: Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.	Consistent with implementation of Mitigation Measure MM 4.9-1	<p>The project proponent proposes a GPA (No. 3, Map No. 213), ZCC (No. 62, Map No. 213), CUP (No. 71, Map No. 213), CUP (No. 72, Map No. 213), PD Plan (No. 3, Map No. 213), ZV (No. 24, Map No. 214), and ZV (No. 25, Map No. 213). The project would comply with the guidelines and regulations associated with the proposed GPA, ZC, PD Plan, and Zone Variance for development in hazardous areas. In addition, construction of the proposed project would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08)</p> <p>Additionally, impacts to hazards and hazardous materials are evaluated in Section 4.9, Hazards and Hazardous Materials, of this EIR. Mitigation Measure MM 4.9-1 requires the project proponent to prepare and maintain a Hazardous Materials Business Plan (HMBP) and provide it to the California Environmental Reporting System for review and approval.</p>
Policy 11: Protect and maintain watershed integrity within Kern County.	Consistent with implementation of Mitigation Measures MM 4.9-1 and MM 4.10-1	As described in Section 4.9, Hazards and Hazardous Materials of this EIR, the project would implement Mitigation Measure MM 4.9-1 which would require the project proponent to provide a Hazardous Materials Business Plan to reduce mixing of pollutants with stormwater onsite, thereby maintaining the integrity of the watershed. As discussed in Section 4.10, Hydrology and Water Quality , of this EIR, the project site would also implement BMPs consistent with a National Pollution Discharge Elimination Systems (NPDES) permit and MM 4.10-1 which would require a Stormwater Pollution Prevention Plan (SWPPP) during construction to avoid impacts to water quality.
Measure D: Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize	Consistent with implementation of	As discussed in Section 4.10, Hydrology and Water Quality , of this EIR, the project would implement Mitigation Measure

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
permitted topographic alteration and soil erosion while maintaining soil stability.	Mitigation Measures MM 4.10-1 and MM 4.10-2	MM 4.10-1 which would require the preparation of a storm water pollution prevention plan (SWPPP) which would require the project operator to conform to the requirements of Kern County's National Pollutant Discharge Elimination System (NPDES) Program and that would include erosion control and sediment control BMPs designed to prevent disturbed soils from moving offsite. Mitigation Measure MM 4.10-2 would also require the project to implement a drainage plan that would minimize the potential for changes in onsite drainage patterns that could increase erosion and sedimentation. Adherence to Chapter 17.28 of the Kern County Grading Ordinance would ensure both structural and nonstructural BMPs such as filtration systems, energy dissipators, wash racks, etc., are included.
Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.	Consistent with implementation of Mitigation Measure MM 4.10-1 and MM 4.10-2	Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, discusses impacts related to soil-disturbing activities and required compliance with Kern County's National Pollutant Discharge Elimination System (NPDES) Applicability legislation, which requires projects to comply with the State Water Resources Control Board's Construction General Permit, as applicable. Further, as the project is larger than one-acre in size, the project would implement Mitigation Measure MM 4.10-1, which would include the development of a SWPPP, which includes BMPs consistent with Regional Water Quality Control Board and MM 4.10-2 which would require the completion of a hydrologic study and final drainage plan to minimize runoff from the site.
1.4 Public Facilities and Services		
Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.	Consistent with implementation of Mitigation Measure MM 4.15-2	As discussed in Section 4.15, <i>Public Services</i> , of this EIR, the project would implement Mitigation Measure MM 4.15-2 which would require the project proponent to work with the county to ensure sales and taxes from the construction of the project is maximized.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Goal 3: Distribute the cost of new services or facilities equitably among the beneficiaries.	Consistent with implementation of Mitigation Measures MM 4.15-2 and MM 4.15-3	See 1.4, <i>Public Facilities and Services</i> , Goal 1, above. Additionally, the project would include MM 4.15-3 which would encourage all contractors of the project site to hire at least 50 percent of their workers from local Kern County communities.
Goal 4: Provide coordination between public entities to ensure infrastructure standards and equitable fiscal support.	Consistent with implementation of Mitigation Measures MM 4.15-2 and MM 4.15-3	See 1.4, <i>Public Facilities and Services</i> , Goal 1, above.
Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.	Consistent	Public utility impacts are evaluated in Section 4.19, <i>Utilities and Service Systems</i> , of this EIR. As described therein, the project site is located within the Antelope Valley Groundwater Basin; which is under adjudication. Project operations would require approximately 1,018 AFY of water. Impacts related to water supply would be less than significant and there would be sufficient water supply for other uses in Kern County. Water supply is discussed in more detail in Section 4.19, <i>Utilities and Service Systems</i> , of this EIR.
Goal 6: Provide a healthful and sanitary means of collecting, treating, and disposing of sewage and refuse for the residents and industries of Kern County.	Consistent	See 1.4, <i>Public Facilities and Services</i> , Goal 1 and Goal 5, and 1.9 <i>Resources, Goal 11</i> . Public utility impacts are evaluated in Section 4.19, <i>Utilities and Service Systems</i> , of this EIR. Due to the lack of connectable waste water and sewage lines, the proposed project is including an engineered septic system that must be designed and approved to form by the Kern County Public Health Services Department – Environmental Health Division, in addition to an on-site water treatment plant intended to treat process water that may contain contaminants during the fabrication process. Such contaminants would be filtered and contained entirely on site.
Goal 7: Facilitate the provision of reliable and cost effective utility services to residents of Kern County.	Consistent with implementation of Mitigation Measures	See 1.4 <i>Public Facilities and Services</i> , Goal 1, above.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
	MM 4.15-2 and MM 4.15-3	
Goal 10: Ensure landfill capacity for Kern County residents and industries.	Consistent with implementation of Mitigation Measures MM 4.1-3, MM 4.15-2 and MM 4.15-3	As discussed in Section 4.1, Aesthetics , during construction, demolition debris and construction wastes would be recycled to the extent feasible. As such, implementation of Mitigation Measure MM 4.1-3 requires on-site contractors to coordinate with the Kern County Public Works – Waste Management Division to ensure wastes are diverted from the project site to the appropriate facilities. Further, See 1.4, <i>Public Facilities and Services</i> , Goal 1, above.
Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.	Consistent with implementation of Mitigation Measures MM 4.15-2 and MM 4.15-3	See 1.4, <i>Public Facilities and Services</i> , Goal 1, above.
Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.	Consistent	Public utility impacts are evaluated in Section 4.19, Utilities and Service Systems , of this EIR. As described therein, the project would have less-than-significant impacts on water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. In addition, off-site improvement work resulting in upgraded SCE transmission facilities is necessary to ensure adequate power is provide to the site, however the surrounding community is expected to incidentally benefit from the new poles and circuits.
Policy 6: The County will ensure adequate fire protection to all Kern County residents.	Consistent with implementation of Mitigation Measure MM 4.15-1	As discussed in Section 4.15, Public Services , the proposed project would not diminish existing police protection or decrease response times to Kern County residences. Additionally, the project would implement MM 4.15-1 which would require the project proponent to prepare a Fire Safety Plan to the Kern County Fire Department for review and approval. This plan would ensure fire procedures would not conflict with existing Kern County Fire Department standards.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Policy 7: The County will ensure adequate police protection to all Kern County residents.	Consistent with implementation of Mitigation Measures MM 4.15-1 and MM 4.15-2	As discussed in Section 4.15, Public Services , the proposed project would not diminish existing police protection or decrease response times to Kern County residences. Implementation of Mitigation Measure MM 4.15-2 would ensure sufficient taxes would be calculated and paid, thereby contributing to the County General Fund that enables funding for police protection services.
Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the CEQA documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.	Consistent with implementation of Mitigation Measure MM 4.15-2	See 1.4, <i>Public Facilities and Services</i> , Goal 1, Policy 1, 3, 6 and 7, above. The project would implement Mitigation Measure MM 4.15-2, which would require the project proponent to coordinate with the County to determine how the use of taxes from construction of the project can be maximized to benefit public services within the County. Additionally, as identified in Section 4.15, Public Services the project was found to result in minimal increase of demand for public services and would not be substantially affected.
Measure B: Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.	Consistent with implementation of Mitigation Measure MM 4.15-2	See 1.4, <i>Public Facilities and Services</i> , Goal 1, Policy 1, 3, 6 7, and 15, above. The project would implement Mitigation Measure MM 4.15-2 , which would require the project proponent to coordinate with the County to determine how the use of taxes from construction of the project can be maximized to benefit public services within the County. Furthermore, the aforementioned mitigation measure includes an alternative process in which the project proponent/operator may make arrangements with Kern County for a single payment that is equivalent to the amount of sales and use taxes that would have otherwise been received (less any sales and use taxes actually paid), with the amount of the single payment to be determined via a formula approved by Kern County. The proposed project would support a prosperous economy and assure the provision of adequate public services.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.	Consistent with implementation of Mitigation Measures MM 4.1-3, MM 4.10-1, MM 4.10-2, MM 4.19-1, and MM 4.19-2	Project effects related to utilities are discussed in Section 4.19, Utilities and Service Systems , of this EIR. The project would result in less-than-significant impacts to utilities with Mitigation Measures MM 4.1-3 (See Section 4.1, Aesthetics), MM 4.10-1 and MM 4.10-2 (See Section 4.10, Hydrology and Water Quality), and MM 4.19-1 and MM 4.19-2 (See Section 4.19-1, Utilities and Service Systems). Furthermore, the proposed project would include the development of an approximately 63-acre solar array that will partially offset the energy needed to operate the micro mill.
Measure D: Involve utility providers in the land use and zoning review process.	Consistent with implementation of Mitigation Measures MM 4.1-3, MM 4.10-1, MM 4.10-2, MM 4.19-1, and MM 4.19-2	See 1.4, <i>Public Services and Facilities</i> , Measure C, above.
Measure E: Continue to establish coordinated efforts between government entities and private enterprise to identify and preserve unique scenic qualities of existing natural resources and to enhance the image of the County as a whole.	Consistent with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-4	Potential impacts to scenic qualities from the development of the project are addressed in Section 4.1, Aesthetics , of this EIR. The nearest site considered a scenic vista would be the Pacific Crest Trail portion located near Tehachapi which is approximately 13 miles northwest of the project site. The closest Eligible State Scenic Highways is State Route 58, located approximately 11 miles north of the project site. Due to the distance from the project site to the scenic vista and Eligible State Scenic Highway the project would not impact the unique scenic quality of the natural resources of the County.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
		Additionally, Mitigation Measures MM 4.1-1 through MM 4.1-4 would reduce visual impacts associated with the proposed project by limiting vegetation removal, planting native vegetation, providing privacy fencing, reducing the visibility of project features, and ensuring that the site is kept free of debris and trash. Native vegetation would be left in place around the proposed project area where feasible, allowing for a natural screening of project components. In addition, proposed landscaping would include receiving areas for western Joshua trees that may be relocated as a result of the proposed development. Furthermore, the color treatment of buildings would help these components to better blend in with the natural landscape.
Measure L: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.	Consistent with implementation of Mitigation Measure MM 4.15-1	Impacts to fire protection services are evaluated in Section 4.15, Public Services , of this EIR and the nearest Kern County Fire Department is the Rosamond Station 15 approximately 5.5 miles southwest of the project site. Mitigation Measure MM 4.15-1 requires implementation of a fire safety plan during project construction and operation that would include notification procedures and emergency fire precautions to help reduce fire risks and the consequential need for fire protection services onsite.
Measure N: Secure complete and accurate information on all hazardous wastes generated, handled, stored, treated, transported, and disposed of within or through Kern County.	Consistent with the implementation of Mitigation Measure MM 4.9-1	Impacts to hazardous waste are evaluated in Section 4.9, Hazards and Hazardous Materials , of this EIR. Mitigation Measure MM 4.9-1 requires the project operator to prepare and maintain a Hazardous Materials Business Plan (HMBP) and provide it to the California Environmental Reporting System for review and approval.
Measure O: Reduce to the greatest degree possible the amount of waste to be disposed of by encouraging private industry to construct and manage a high quality system of transfer stations, recycling facilities, treatment plants, and incinerators located near the generators of hazardous waste.	Consistent with implementation of Mitigation Measures MM 4.1-3	See 1.4, <i>Public Services and Facilities</i> , Goal 1, 4, 6, 7, and 10 above.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Measure R: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.	Consistent with the implementation of Mitigation Measure MM 4.9-1	See 1.4, <i>Public Services and Facilities</i> , Measure N, above.
Measure T: Amend the County's EIR Procedures to include consideration of fiscal impacts of development proposals, so that the character and extent of possible public service or facility deficiencies can be identified during the course of the normal project review process.	Consistent with implementation of Mitigation Measure MM 4.15 2	See 1.4, <i>Public Services and Facilities</i> , Public Services, Goal 1, Measure B and C, Policy 1, 3, 6 7, and 15, above.
1.8 Industrial		
Goal 1: Ensure that an adequate and geographically balanced supply of land is designated for a range of industrial purposes.	Consistent	By approving the proposed General Plan Amendment and Zone Change from 8.5 (Resource Management) and A-1 (Limited Agriculture) to 7.3 (Heavy Industrial) and M-3 PD (Heavy Industrial – Precise Development Combining), Kern County will contribute an additional 174 acres of land that is available for heavy industrial purposes. This will also result in an southward extension of an already industrially zoned corridor along Sierra highway, while creating a cluster of industrial development in the proposed project's area.
Goal 2: Promote the future economic strength and well being of Kern County and its residents without detriment to its environmental quality.	Consistent	In order to promote the future economic growth and well being of Kern County residents without detriment to the environmental quality, the proposed project is being subjected to the EIR process, which solicits public engagement during preparation of the document and subsequently through the public hearing process. This will ensure that any impacts to the environment and citizens of Kern County are disclosed publicly and mitigated to the greatest extent feasible.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Goal 3: Ensure compatibility with land use designations such as residential, commercial, or other land uses that may be affected by such activities.	Consistent	Adjacent to the proposed project site are parcels that are zoned M-2 (Medium Industrial) immediately north across Sopp Road. None of the parcels adjacent to the proposed project site are zoned residential or commercial, with most zoned A-1 (Limited Agriculture) to the south. By changing the zoning to M-3 PD (Heavy Industrial), it would result in a southward expansion of industrially zoned land and a cluster industrially compatible development.
Policy 1: Locations for new industrial activities shall be provided with adequate infrastructure (water, sewage disposal systems, roads, drainage, etc.) to minimize effects on County services.	Consistent	The proposed project site is located on Sopp Road, five miles north of the unincorporated community of Rosamond. To access Sopp Road, trucks delivering recycled metal and delivering the finished products would use existing roads: State Route 14, Backus Road, and Sierra Highway. The proposed project intends to connect to water service provided by AVEK and develop a pre-treatment water system as well as a waste-water treatment plan on site. Multiple drainage basins would be installed on site to control runoff and an engineered septic system would be constructed for sewage disposal.
Policy 5: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.	Consistent	As stated above, by amending the General Plan map code designation from 8.5 (Resource Management) to 7.3 (Heavy Industrial), and changing the zone classification from A-1 (Limited Agriculture) to M-3 PD (Heavy Industrial – Precise Development Combining), this will allow for clustering of new industrial development adjacent to existing industrial uses. Additionally, the project will be located along Sierra Highway and close to State Route 14 to facilitate the import of raw material and export of finished rebar.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Policy 6: Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.	Consistent with implementation of Mitigation Measures MM 4.1-1, MM 4.1-2 and MM 4.1-4	According to the site plans for the proposed project, the northern perimeter of the project site would have landscaping. The landscaping will fit the aesthetic of the surrounding environment as required by Kern County which will be required as part of Mitigation Measure MM 4.1-4. Mitigation Measure MM 4.1-1 would require buildings and structures to be treated with non-reflective colors to blend in with colors found in the surrounding natural landscape. MM 4.1-2 requires screening of roof-top structures located within 1000 feet of Sierra Highway. Additionally, should there be perimeter fencing, the project will also adhere to the requirements of MM 4.1-4.
Policy 8: The County shall give priority to proposed industrial developments where: i. Specific uses are proposed in conjunction with submittal of a concurrent precise development plan; and ii. Where multiple phases, tenants, or lots are proposed through the adoption of a master precise development plan in conjunction with a General Plan Amendment.	Consistent	The project is proposed to be built on two adjacent lots with the project site being located on Sopp Road. Implementation of the proposed project will involve both construction and operational phases of development. The construction phase is expected to last approximately 24 months with the operational phase following immediately after construction has been completed. In addition, the proposed project will be required to submit a precise development plan for approval with the proposed General Plan Amendment.
Policy 13: Where feasible, locate future industrial activities in close proximity to railroad facilities and inter- and intra-State transportation corridors to minimize extensive travel through urban areas and to promote alternative transportation of goods.	Consistent	The proposed project will be sited on Sopp Road, approximately five miles north of the unincorporated community of Rosamond. The proposed project will be consistent with this policy because the proposed project site will be located approximately one mile southeast of an onramp/offramp for State Route 14. Specifically, this will be located at the intersection of State Route 14 and Backus Road. The trucks that will be delivering recycled metal and delivering the finished products will be using State Route 14 as the main transportation route. Although Union Pacific Railroad is adjacent to and runs along the western boundary of the proposed project site, import and export activities are not expected to occur at this location due to lack of cargo transfer facilities.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
<p>Measure A: Evaluation of applications for any General or Specific Plan Amendment to an industrial designation will include sufficient data for review to facilitate desirable new industrial development proposals consistent with General Plan policies, using the following criteria and guidelines:</p> <ul style="list-style-type: none"> i. Location suitability with respect to market demand area. ii. Provision of adequate access, ingress and egress facilities and services, and the mitigation of traffic impacts. iii. Provision of adequate water, sewer, and other public services to be used. iv. Provision of adequate on-site, nonpublic water supply and sewage disposal if no public systems are available or used. v. Compatibility with adjacent uses (scale, noise, emissions, or other nuisances, etc.) and methods for buffering. vi. Design, layout, and visual appearance coordinated with existing adjacent industrial uses. vii. Overall consistency with the General Plan. 	Consistent	<p>The proposed project will consist of a micro mill, a 63-acre solar array, and ancillary buildings and other project components. All of the elements of the project will be analyzed in this EIR, which is prepared by the Kern County Planning and Natural Resources Department and subsequently reviewed by the appropriate hearing bodies. Additionally, the proposed project is being evaluated against all of the criteria and guidelines mentioned in Measure A will be reviewed throughout the EIR process as well as the public hearing process.</p>
1.9 Resources		
<p>Goal 1: To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.</p>	Consistent	<p>The project site is located on land that is currently zoned as A-1 (Limited Agriculture), but proposed to be rezoned to M-3 PD (Heavy Industrial – Precise Development Combining). Implementation of the proposed project would preclude livestock grazing or any other agricultural uses on the site. The project would not involve additional change in the existing environment besides those described in this EIR and would not directly lead to other projects that would result in the loss of agricultural land. Direct disturbance related to the project would be approximately 174 acres. Additionally, the site is currently vacant and not being used for petroleum, agriculture, rangeland, or mineral production. Therefore, the proposed project would be consistent with this goal.</p>

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Goal 2: Protect areas of important mineral, petroleum, and agricultural resource potential for future use.	Consistent	See 1.9, <i>Resources</i> , Goal 1 above. The proposed project would not occur within areas with known mineral or petroleum resources nor an area classified as farmland and are not under Williamson Act Contracts. The project would not result in the direct loss of these resources and would not preclude the use on adjacent lands.
Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.	Consistent with Mitigation Measure MM 4.6-1	Consistent with this policy, the proposed project would develop a 63-acre solar array that will power a substantial portion of the proposed micro mill, specifically the electric arc furnace. Therefore, the project would develop a clean energy source that would create fewer fossil fuel emissions, thus contributing to the protection of the environment through use of renewable energy in lieu of the equivalent use of non-renewable energy and its associated extraction/production/emissions .
Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2	As discussed in Section 4.10, Hydrology and Water Quality , of this EIR, the project would be required to adhere to the Kern County Development Standards and Kern County Code of Building Regulations which require site drainage plans that include development standards designed to protect water quality. Specifically, the project proponent would be required to prepare and submit a drainage plan to the Kern County Public Works Department, prior to the issuance of grading permits. Routine structural BMPs are intended to address water quality impacts related to drainage that are inherent in development. As discussed in Section 4.10, Hydrology and Water Quality , of this EIR, the proposed project includes on-site retention basins to meet County drainage requirement. Consistent with this policy, the proposed project would require the submission of a drainage plan to the County for review and would implement Mitigation Measures MM 4.10-1, which requires a Stormwater Pollution Prevention Plan, and MM 4.10-2, which requires a final hydrologic study and drainage plan designed to evaluate and minimize potential increases in runoff from the project site.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Policy 16: The County will encourage development of alternative energy sources by tailoring its Zoning and Subdivision Ordinances and building standards to reflect Alternative Energy Guidelines published by the California State Energy Commission.	Consistent	The proposed project includes the development of a 63-acre alternative energy solar development that would be consistent with the Alternative Energy Guidelines published by the California State Energy Commission. The proposed micro mill would use the energy produced from the solar array to power a substantial portion of the operation.
Measure C: The County Planning Department will seek review and comment from the County Engineering and Survey Services Department on the implementation of the National Pollution Discharge Elimination System for all discretionary projects.	Consistent with Mitigation Measure MM 4.10-1	The proposed project would be subject to the implementation of Mitigation Measure MM 4.10-1. This will require the project proponent to submit a SWPPP for review and approval to the Kern County Planning and Natural Resources Department and/or the Kern County Public Works Department – Floodplain Management Section.
1.10 General Provisions		
Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.	Consistent with implementation of Mitigation Measure MM 4.15-2	The project would be consistent in that the project would be away from hazardous areas (See 1.3, <i>Physical and Environmental Constraints</i> , Goal 1). The project would be consistent in preserving valuable natural resources (See 1.9, <i>Resources</i> , Goal 1, 2, and 6). Consistent with this goal, the proposed project will undergo the project review and approval process. In addition, conformance with other discretionary action approvals such as General Plan Amendments and zone changes would ensure compliance with all applicable and associated policies. As discussed in Section 4.15, Public Services , the proposed project would implement Mitigation Measure MM 4.15-2 to support a prosperous economy through the payment of taxes and assuring the provision of adequate public services (See 1.4, <i>Public Facilities and Services</i> , Goal 1, Policy 1, 3, 6, 7, and 15, and Measure B).
1.10.1 Public Services and Facilities		
Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.	Consistent with implementation of Mitigation Measure MM 4.15-2	See 1.4, <i>Public Facilities and Services</i> , Goal 1, Policy 1, 3, 6, 7, and 15, and Measure B. Impacts to public services are evaluated in Section 4.15, Public Services , of this EIR. The project would implement Mitigation Measure MM 4.15-2 to provide its pro

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
		rata share of the local cost of expansions in services, facilities, and infrastructure with the proposed project.
Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.	Consistent with implementation of Mitigation Measures MM 4.17-3, MM 4.19-1 and MM 4.19-2	Public service impacts are evaluated in Section 4.19, <i>Utilities and Service Systems</i> , of this EIR, which serves to comply with this policy. The project would implement Mitigation Measures MM 4.19-1 and MM 4.19-2 to ensure adequate public or private resources are available to serve the proposed development. As discussed in Section 4.17, <i>Traffic and Transportation</i> , signal warrants are triggered based on the influx of truck trips required of the proposed project, and as such implementation of Mitigation Measure MM 4.17-3 requires the installation of traffic signals at the SR-14 northbound ramp and Backus Road intersection by opening day, as well as a signal at the SR-14 southbound ramp and Backus Road intersection by 2042. Additional road widening would be required, in addition to the addition of lanes along the Sierra Highway segment between Sopp Road and Backus Road. These improvements would be funded entirely by the applicant in coordination with both the Kern County Public Works and CalTrans – District 9. Lastly, off-site improvements involving the re-poling and reconductoring of SCE’s transmission lines are necessary to ensure adequate power is available at the site. Although these improvements are necessitated due to the proposed project, the upgraded off-site facilities would incidentally provide a public benefit to the surrounding community.
Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.	Consistent	See 1.10.1, <i>Public Services and Facilities</i> , Policy 15, above.
Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.	Consistent	See 1.10.1, <i>Public Services and Facilities</i> , Policy 15, above.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Measure D: Involve utility providers in the land use and zoning review process.	Consistent	See 1.10.1, <i>Public Services and Facilities</i> , Policy 15, above.
Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.	Consistent with implementation of Mitigation Measures MM 4.7-9 and MM 4.7-10	Water and wastewater impacts are evaluated in Section 4.10, Hydrology and Water Quality , and Section 4.19, Utilities and Service Systems , of this EIR. The proposed project would require water supply lines and septic systems, in order to serve restroom for the estimated 440 full-time equivalent employees that would be on the project site during the operational phase. As discussed in Section 4.7, Geology and Soils , and required by Mitigation Measures MM 4.7-9 and MM 4.7-10, the septic system would be constructed in accordance with Kern County Public Health Services Department requirements and would treat sewage and would provide limited recharge to the nearby aquifer given that no offsite sewage or disposal connections to a municipal sewer system exist or are proposed. During the construction phase, it is expected that portable toilets and hand washing facilities would be utilized, which would be serviced by truck and any resulting wastewater would be disposed of at an approved off-site disposal facility. Final review of the proposed project by the Kern County Planning and Natural Resources Department, the Kern County Public Health Services Department – Environmental Health Division, as well as adherence to all applicable local, state and federal regulations, would ensure that the proposed project would promote this measure.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
1.10.2 Air Quality		
Policy 18: The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.	Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5	Air quality and GHG impacts are evaluated in Section 4.3, <i>Air Quality</i> , and Section 4.8, <i>Greenhouse Gas Emissions</i> , of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-5, which would reduce impacts to air quality to less than significant. Air quality mitigation measures include diesel emission-reduction measures during construction, fugitive dust control measures, and Valley Fever exposure minimization measures.
<p>Policy 19: In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision making body, as part of its deliberations, will ensure that:</p> <p>(1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and</p> <p>(2) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.</p>	Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5	See 1.10.2, <i>Air Quality</i> , Policy 18, above. This EIR serves to comply with this policy. The project includes MM 4.3-1 through MM 4.3-5 that would reduce impacts to less than significant. Findings would not be required.
Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.	Consistent with implementation of Mitigation Measures MM 4.3-2	Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i> , of this EIR. As discussed therein, implementation of Mitigation Measure MM 4.3-2 would further reduce fugitive dust emissions during construction and operation, in compliance with the adopted rules and regulations of the Eastern Kern County Air Pollution Control District on ministerial permits.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Policy 21: The County shall support air districts efforts to reduce PM ₁₀ and PM _{2.5} emissions.	Consistent with implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2	See 1.10.2, <i>Air Quality</i> , Policy 18 and 20, above. Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i> , of this EIR. Mitigation Measures MM 4.3-1 and MM 4.3-2 would further reduce PM ₁₀ and PM _{2.5} emissions during construction and operation.
Policy 22: Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.	Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5	See 1.10.2, <i>Air Quality</i> , Policy 18, 19, and 20, above. Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i> , of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-5, which would reduce impacts to air quality to the less than significant. The project would be in compliance with all applicable Eastern Kern County Air Pollution Control District, rules and regulations.
Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.	Consistent	Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i> , of this EIR. Consistent with this measure, the necessary discretionary permits shall be referred to the Eastern Kern Air Pollution Control District for review and comment.
Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to: 1. Minimizing idling time. 2. Electrical overnight plug-ins.	Consistent with implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2	Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i> , of this EIR. Consistent with this measure, implementation of Mitigation Measure MM.4.3-1 and MM 4.3-2 would require diesel exhaust reduction strategies.
Measure H: Discretionary projects may use one or more of the following to reduce air quality effects: a. Pave dirt roads within the development. b. Pave outside storage areas. c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans. d. Use of alternative fuel fleet vehicles or hybrid vehicles. e. Use of emission control devices on diesel equipment.	Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5	Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i> , of this EIR. Consistent with this measure, implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5 would further reduce adverse air quality effects.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
<ul style="list-style-type: none"> f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces. g. Provide bicycle lockers and shower facilities on site. h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86). i. The use and development of park and ride facilities in outlying areas. j. Other strategies that may be recommended by the local Air Pollution Control Districts. 		
Measure J: The County should include PM ₁₀ control measures as conditions of approval for subdivision maps, site plans, and grading permits.	Consistent with implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2	Air quality impacts are evaluated in Section 4.3 , <i>Air Quality</i> , of this EIR and see 1.10.2, <i>Air Quality</i> , Policy 21, above. As discussed in that section, implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2 would further reduce PM ₁₀ and PM _{2.5} emissions during construction and operation.
1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation		
Policy 25: The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.	Consistent with implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5	Cultural resource impacts are evaluated in Section 4.5 , <i>Cultural Resources</i> , of this EIR. This EIR serves to comply with this policy and includes Mitigation Measures MM 4.5-1 through MM 4.5-5 to promote the preservation of cultural and historic resources where necessary.
Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.	Consistent Mitigation Measures MM 4.5-3	Cultural resource impacts are evaluated in Section 4.5 , <i>Cultural Resources</i> , of this EIR. Consistent with this measure, copies of reports will be provided to the Kern County Planning and Natural Resources Department and to the Southern San Joaquin Valley Information Center at California State University, Bakersfield, per Mitigation Measure MM 4.5-3.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.	Consistent with implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5	Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i> , of this EIR. Consistent with this measure, impacts to archaeological and historical resources are evaluated in accordance with CEQA. This EIR serves to comply with this policy.
Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.	Consistent with implementation of Mitigation Measures MM 4.5-1 through MM 4.5-4	Paleontological resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i> , of this EIR. Mitigation Measures MM 4.5-1 through MM 4.5-4 which would reduce potential impacts to unknown paleontological resources through hiring a qualified paleontologist that shall be retained to monitor all ground-disturbing activity, document, and implement measures as needed.
Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.	Consistent	Tribal Cultural resource impacts are evaluated in Section 4.18, <i>Tribal Cultural Resources</i> , of this EIR. Consistent with this measure, notification regarding the proposed project would be accomplished in accordance with the established procedures for discretionary projects as required by SB 18, AB 52 and CEQA documents.
Measure O: On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.	Consistent with implementation of Mitigation Measures MM 4.5-1 and MM 4.5-2	Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i> , of this EIR. This EIR serves to comply with this measure and includes Mitigation Measures MM 4.5-1 and MM 4.5-2, which would require consultation with the Native American monitor(s) to conduct Cultural Resources Sensitivity Training for all personnel working on the proposed project.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
<i>1.10.5 Threatened and Endangered Species</i>		
Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.	Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7	Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i> , of this EIR. This EIR serves to comply with this policy and reduce potential impacts with mitigation. Through the adoption of the listed mitigation and other impact minimization strategies that would be implemented as part of project design, the project would be developed and operated in accordance with all local, state and federal laws pertaining to the preservation of sensitive species.
Policy 28: County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.	Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7	Biological Resource impacts are evaluated in Section 4.4, <i>Biological Resources</i> , of this EIR. This EIR serves to comply with this policy and reduce potential impacts with mitigation. As part of the biological resources evaluation and habitat assessment, state and federal agencies were consulted to ensure that appropriate information about the project site were being gathered, information disclosed, and mitigation incorporated. Specifically, a Notice of Preparation (NOP) for the EIR was sent to state and federal agencies, such as California Department of Fish and Wildlife, requesting their input on the biological resource evaluation. Similarly, the EIR is to circulate for a 45 day review period to allow these agencies as well as any other interested parties with pertinent information and provide them with the opportunity to comment on the biological resources evaluation. Therefore, the County is complying with this policy for the project.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Policy 29: The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.	Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7	See 1.10.5, <i>Threatened and Endangered Species</i> , Policy 27 and 28, above. Biological resource impacts are evaluated in Section 4.4, Biological Resources , of this EIR. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7 would further increase cooperative efforts with local, State, and federal agencies to support threatened and endangered plant and wildlife.
Policy 31: Under the provisions of the California Environmental Quality Act, the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document is prepared.	Consistent	See 1.10.5, <i>Threatened and Endangered Species</i> , Policy 27 and 28, above.
Measure Q: Discretionary projects shall consider effects to biological resources as required by CEQA.	Consistent	Biological resource impacts are evaluated in Section 4.4, Biological Resources , of this EIR. Consistent with this measure, the evaluation of impacts to biological resources was performed in accordance with CEQA.
Measure R: Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.	Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7	Biological resource impacts are evaluated in Section 4.4, Biological Resources , of this EIR. Consistent with this measure, the project would implement mitigation measures that require consultation with the CDFW. The County has and will respond to all comments from reviewing agencies during the CEQA process.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
1.10.6 Surface Water and Groundwater		
Policy 34: Ensure that water quality standards are met for existing users and future development.	Consistent with implementation of Mitigation Measures MM 4.9-1, MM 4.10-1, and MM 4.10-2.	Water quality impacts are evaluated in Section 4.10, Hydrology and Water Quality , of this EIR. Consistent with this policy, the proposed project would include containing required National Pollution Discharge Elimination System (NPDES) permits implement best management practices (BMPs) during construction to avoid impacts to water quality. As discussed in Section 4.9, Hazards and Hazardous Materials , the project would also implement a Hazardous Materials Business Plan (HMBP) to reduce mixing of pollutants with stormwater onsite, thereby maintaining the integrity of the watershed. The implementation of mitigation measures MM 4.9-1, MM 4.10-1, and MM 4.10-2 would ensure adherence to Policy 34.
Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.	Consistent	See 1.4, <i>Public Facilities and Services</i> , Goal 5, above. As discussed in Section 4.10, Hydrology and Water Quality , the proposed project and the Water Supply Assessment have been reviewed by AVEK and in response, the project proponent was granted formal correspondence demonstrating eligibility of water services by AVEK.
Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2	See 1.9, <i>Resources</i> , Policy 11, and 1.10.6 <i>Surface Water and Groundwater</i> , Policy 34, above.
Policy 44: Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2	See 1.9, <i>Resources</i> , Policy 11, and 1.10.6 <i>Surface Water and Groundwater</i> , Policy 34, above. In addition, Section 4.10, Hydrology and Water Quality , of this EIR, discusses impacts and mitigation for potential impacts to the watershed during construction from pollutants, alteration of flow patterns, and changes in impervious surfaces. Consistent with this policy, construction-related impacts related to alteration of flow patterns and impervious surfaces would be less than significant.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
<p>Measure W: Applications for General or Specific Plan Amendments will include sufficient data for review to facilitate desirable new development proposals consistent with General Plan policies, using the following criteria and guidelines:</p> <p>(i) The provision of adequate water, sewer, and other public services to be used.</p> <p>(ii) The provision of adequate on-site nonpublic.</p>	<p>Consistent with the implementation of Mitigation Measures MM 4.9-1, MM 4.15-2, and MM 4.19-1</p>	<p>See 1.4, <i>Public Facilities and Services</i>, Goal 1, 3, 5, 10, Policy 3, 6, 7, and 15, and Measure C, L, N, O, and T, above.</p>
<p>Measure Y: Promote efficient water use by utilizing measures such as:</p> <p>(i) Requiring water-conserving design and equipment in new construction;</p> <p>(ii) Encouraging water-conserving landscaping and irrigation methods; and</p> <p>(iii) Encouraging the retrofitting of existing development with water conserving devices.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.1-4, MM 4.19-1 and MM 4.19-2</p>	<p>The proposed project will consist of a new micro mill facility, 63-acre solar array, ancillary buildings, and other project components. Part of the micro mill process will be to capture contact water and treat the water on-site for usage as cooling water to control temperatures of the steel making process which will limit the amount of water needed for the steel making process. As described in Section 4.19, <i>Utilities and Service Systems</i>, Mitigation Measures MM 4.19-1 and MM 4.19-2 require the proposed on-site water systems, both the pre-treatment water system and the wastewater treatment plant, to be designed and constructed to comply with all Kern County Development Standards in consultation with the Kern County Public Works Department and the Kern County Public Health Services – Environmental Health Division. Additionally, along the perimeter, drought tolerant plants will serve as the required landscaping which will blend in with the surrounding environment and conserve water usage; this will be implemented via Mitigation Measure MM 4.1-4 and in accordance with the Kern County zoning ordinance requirements Chapter 19.86 – Landscaping.</p>

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
<p>Measure Z: General Plan Amendments subject to environmental review and not otherwise subject to California Water Code Section 10910 shall demonstrate through a water supply assessment that a long-term water supply for a 20-year timeframe is available. The water assessment shall include, but not limited to, the following:</p> <ul style="list-style-type: none"> i. Source and quantity of historical water use on the site. ii. Estimated water consumption of the proposed development. iii. Estimated storage, if any, in meeting the projected need. iv. Recommendations for additional sources of water to address demand shortage. Such measures may include, but not limited to, development of future sources of additional surface water and groundwater, including water transfers, conjunctive use, recycled water, conservation, and additional storage of surface water, groundwater, and desalination. <p>Written acknowledgement that water will be provided by a community or public water system with an adopted Urban Water Management Plan shall constitute compliance with this requirement.</p>	Consistent	See 1.4, <i>Public Facilities and Services</i> , Goal 5, above. See Section 4.10, Hydrology and Water Quality , in this EIR. A water eligibility letter from the Antelope Valley Eastern Kern (AVEK) water agency was issued confirming the availability of potable water service to the project site, and a water supply assessment was completed for the proposed project to analyze potential impacts to groundwater.
1.10.7 Light and Glare		
<p>Policy 47: Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.</p>	Consistent with implementation of Mitigation Measures MM 4.1-5 through MM 4.1-7	Aesthetic impacts are evaluated in Section 4.1, Aesthetics , of this EIR. The proposed project would result in an increase of light and glare during construction and operation of the project, but include design features and implementation of Mitigation Measures MM 4.1-5 through MM 4.1-7 would reduce impacts to less than significant. This EIR serves to comply with this policy and reduce potential impacts through implementation of mitigation such as downward directed and shielded lighting and use of diffusion coatings for solar panels would ensure impacts are less than significant.
<p>Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.</p>	Consistent with implementation of	See 1.10.7, <i>Light and Glare</i> , Policy 47, above.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
	Mitigation Measures MM 4.1-5 and MM 4.1-7	
Measure AA: The County shall utilize <i>CEQA Guidelines</i> and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.	Consistent with implementation of Mitigation Measures MM 4.1-5 through MM 4.1-7	See 1.10.7, <i>Light and Glare</i> , Policy 47, above.
CHAPTER 2 CIRCULATION ELEMENT		
2.1 Introduction		
Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.	Consistent with implementation of Mitigation Measure MM 4.10-1, MM 4.10-2, and MM 4.9-1.	See 1.3, <i>Physical and Environmental Constraints</i> , Goal 1 and Policy 11, above.
2.3.3 Highways Plan		
Goal 5: Maintain a minimum Level of Service (LOS) D.	Consistent with implementation of Mitigation Measures MM 4.17-1 and MM 4.17-3	Traffic impacts are evaluated in Section 4.17, <i>Transportation and Traffic</i> , of this EIR. Consistent with this goal, AM Peak hour trips and maintain a minimum LOS D with the implementation of Mitigation Measure MM 4.17-1, which requires a Construction Traffic Control Plan, scheduling construction worker to arrive either outside the AM and PM peak periods or in staggered shifts, and/or instituting incentives for carpool and/or vanpool to and from the project site, and Mitigation Measure MM, which outlines the Construction Traffic Control Plan. Mitigation Measure MM 4.17-3 requires the installation of traffic signals at the SR-14 northbound ramp and Backus Road intersection by opening day, as well as a signal at the SR-14 southbound ramp and Backus Road intersection by 2042. Additional road widening would be required, in conjunction with the addition of lanes along the Sierra Highway segment between Sopp Road and Backus Road. These improvements would be funded entirely by the applicant in

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
		coordination with both the Kern County Public Works Department and CalTrans – District 9.
Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and mid-section lines. This is because the road center line can be determined by an existing survey.	Consistent	Section 4.17, <i>Transportation</i> , of this EIR provides a discussion of County circulation consistency. The project would include internal service roads. Consistent with this policy, all road improvements would be completed per Caltrans and/or County code and regulations. If access roads need to be built along lines other than those on the circulation diagram map, the project proponent would negotiate necessary easements to allow this, in accordance with the County.
Policy 3: This plan's road-width standards are listed below. These standards do not include state highway widths that would require additional right-of-way for rail transit, bike lanes, and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis. <ul style="list-style-type: none"> • Expressway [Four Travel Lanes] Minimum 110-foot right-of-way; • Arterial [Major Highway] Minimum 110-foot right-of-way; • Collector [Secondary Highway] Minimum 90-foot right-of-way; • Commercial-Industrial Street Minimum 60-foot right-of-way; and • Local Street [Select Local Road] Minimum 60-foot right-of-way. 	Consistent	Traffic impacts are evaluated in Section 4.17, <i>Transportation</i> , of this EIR. Consistent with this measure, the proposed project would be in compliance with the road network policies and would implement the Kern County Development Standards as they relate to road standards and planning requirements.
Measure A: The Planning Department shall carry out the road network Policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that includes road standards related to urban and rural planning requirements. These ordinances also regulate access points. Planning Department can help developers and property owners in identifying where planned circulation is to occur.	Consistent	See 2.3.3, <i>Highways Plan</i> , Policies 1 and 3, of the Kern County General Plan, above.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
2.3.4 Future Growth		
Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.	Consistent	See 1.10, <i>General Provisions</i> , Goal 1, of the Kern County General Plan, above.
Policy 2: The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below Level of Service (LOS) D. Utilization of the CEQA process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.	Consistent with implementation of Mitigation Measures MM 4.17-1 through MM 4.17-3	See 2.3.3, <i>Highways Plan</i> , Goal 5 and Policies 1 and 3, of the Kern County General Plan, above. Traffic impacts are evaluated in Section 4.17, <i>Transportation</i> , of this EIR. Consistent with this policy, the proposed project would maintain a minimum LOS D or better for intersections utilized to access the proposed project with implementation of Mitigation Measures MM 4.17-1, which requires the preparation of a Construction Traffic Control Plan to be reviewed and approved by Kern County and Caltrans, which would further reduce impacts to traffic and transportation, and MM 4.17-2 outlining the Construction Traffic Control Plan. Mitigation Measure MM 4.17-3 would also include installation of traffic signals and road widening at intersections and street segments whose levels of service diminish as a result of the proposed project.
Policy 4: As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along State routes are necessary then roads shall be built to Caltrans standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.	Consistent	See 2.3.3, <i>Highways Plan</i> , Policies 1 and 3, above. Although the project is located in a remote area, two major corridors (SR-14 and Sierra Highway) are both within .75 mile of the project site, with Sopp Road providing primary access to the property. Within the project site, a network of internal roads will facilitate access throughout the entire site and an additional private access along the eastern boundary of the property will be constructed to facilitate the import of raw material and the export of finished rebar.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Policy 5: When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.	Consistent	Consistent with this policy, the project proponent would fund improvements to project-related driveways that provide access to County, city, or State roads. In addition, see 2.3.3, <i>Highways Plan</i> , Policies 1 and 3, above, that discusses that all improvements would meet applicable roadway improvement standards.
Policy 6: The County may accept a developer's road into the county's maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.	Consistent with Mitigation Measure MM 4.17-2	See 2.3.3, <i>Highways Plan</i> , Policy 1, above. The proposed project would not develop a public road, but consistent with this policy, the project proponent would obtain approval from the County via an encroachment permit if any proposed private access driveways for the project would intersect public right-of-way with implementation of MM 4.17-2. All improvements would be made to County and/or Caltrans standards.
Measure A: The County should relate traffic levels to road capacity and development levels. To accomplish this Roads Department and Planning Department should set up a monitoring program. The program would identify traffic volume to capacity ratios and resulting level of service. The geographic base of the program would be traffic zones set up by Kern Council of Governments.	Consistent	See 2.3.3, <i>Highways Plan</i> , Policy 2, above.
Measure C: Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards. 2.3.6 Vacation of Existing or Recorded Future Streets, Highways, or Public Easements.	Consistent	Traffic impacts are evaluated in Section 4.17, <i>Transportation and Traffic</i> , of this EIR. Consistent with this policy, the proposed project would comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards regarding any roadway vacations that may be require as part of the development review and approval process.
2.3.10 Congestion Management Programs		
Goal 1: To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.	Consistent with implementation of Mitigation Measures	Traffic impacts are evaluated in Section 4.17, Transportation and Traffic , of this EIR. Consistent with this goal, the proposed project would implement Mitigation Measures MM 4.17-1 and

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
	MM 4.17-1 and MM 4.17-2	MM 4.17-2, and comply with the requirements of the Kern Council of Government's Congestion Management Program.
Goal 2: To coordinate congestion management and air quality requirements and avoid multiple and conflicting requirements.	Consistent with implementation of Mitigation Measures MM 4.17-1 and MM 4.17-2	See 2.3.10, <i>Congestion Management Programs</i> , Goal 1, above. Additionally, see 1.10.2, <i>Air Quality</i> , Policies 18 and 19 and Measure H, above.
2.5.1 Trucks and Highways		
Goal 1: Provide for Kern County's heavy truck transportation in the safest way possible.	Consistent with implementation of Mitigation Measures MM 4.17-1 through MM 4.17-3	Traffic impacts are evaluated in Section 4.17, <i>Transportation and Traffic</i> , of this EIR. Consistent with this goal, the proposed project would implement Mitigation Measure MM 4.17-2, requiring preparation of a traffic control plan. This, and the project overall, would comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards, and would ensure the provision of heavy truck transportation resulting from project implementation occurs in the safest way possible. Mitigation Measure MM 4.17-3 requires the installation of traffic signals at the SR-14 northbound ramp and Backus Road intersection by opening day, as well as a signal at the SR-14 southbound ramp and Backus Road intersection by 2042. Additional road widening would be required, in addition to the addition of lanes along the Sierra Highway segment between Sopp Road and Backus Road. These improvements would be funded entirely by the applicant in coordination with both the Kern County Public Works and CalTrans – District 9.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Goal 2: Reduce potential overweight trucks.	Consistent with implementation of Mitigation Measure MM 4.17-2	See 2.5.1, <i>Trucks and Highways</i> , Goal 1, above. As part of the traffic control plan, management actions for the use of heavy trucks would be implemented. Furthermore, any necessary encroachment permits will be obtained from Caltrans and Kern County for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort, with the implementation of Mitigation Measure MM 4.17-2.
Goal 3: Use State Highway System improvements to prevent truck traffic in neighborhoods.	Consistent with implementation of Mitigation Measure MM 4.17-2 and MM 4.17-3	See 2.5.1, <i>Trucks and Highways</i> , Goal 1 and 2, above. The proposed project would not result in increased truck traffic within existing neighborhoods with implementation of MM 4.17-2, which specifies both construction-related vehicle travel and oversize load haul routes and avoiding residential neighborhoods to the maximum extent feasible. Short-term truck traffic would be required along adjacent major roadways to deliver materials to the project site to enable construction of the project. Additionally, long-term traffic adjacent to major roadways for deliveries and worker commuting would occur. Mitigation Measure MM 4.17-3 requires the installation of traffic signals at the SR-14 northbound ramp and Backus Road intersection by opening day, as well as a signal at the SR-14 southbound ramp and Backus Road intersection by 2042. Additional road widening would be required, in addition to the addition of lanes along the Sierra Highway segment between Sopp Road and Backus Road. These improvements would be funded entirely by the applicant in coordination with both the Kern County Public Works and CalTrans – District 9.
Policy 1: Caltrans should be made aware of the heavy truck activity on Kern County's roads.	Consistent with implementation of Mitigation Measure MM 4.17-2	See 2.5.1, <i>Trucks and Highways</i> , Goals 1, 2, and 3, above. As discussed in Section 4.17, Transportation of this EIR, coordination and consultation with Caltrans will occur as necessary, consistent with this policy. In addition, encroachment permits will be obtained will be obtained from Caltrans and Kern County for the work within the road right-of-way or use of

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
		oversized/overweight vehicles that will utilize county maintained road with implementation of Mitigation Measure MM 4.17-2 and, therefore, would address this policy.
2.5.4 Transportation of Hazardous Materials		
Goal 1: Reduce risk to public health from transportation of hazardous materials.	Consistent with implementation of Mitigation Measures MM 4.9-1 and MM 4.17-2	<p>Section 4.9, Hazards and Hazardous Materials, of this EIR provides a discussion of Hazardous Materials Transportation and existing regulatory requirements of the California Vehicle Code (CVC) that pertain to transport of hazardous materials and wastes. Consistent with this policy, the proposed project would not pose a significant risk to public health from transportation of hazardous materials with implementation of Mitigation Measure MM 4.9-1, which requires the preparation of a Hazardous Materials Business Plan (HMBP) that would describe proper handling, storage, transport, and disposal techniques and methods to be used to avoid spills and minimize impacts in the event of a spill, would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to maintenance workers and/or the public.</p> <p>In addition, MM 4.17-2 requires the preparation of a Traffic Control Plan that would be submitted to Kern County Public Works Department-Development Review and the California Department of Transportation. As part of this plan would be management strategies that would reduce the risk of potential hazardous materials incidents.</p>
Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.	Consistent with implementation of Mitigation Measures MM 4.9-1 and MM 4.17-2	See 2.5.4, <i>Transportation of Hazardous Materials</i> , Goal 1, above.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.	Consistent with implementation of Mitigation Measures MM 4.9 1 and MM 4.17-2	See 2.5.4, <i>Transportation of Hazardous Materials</i> , Goal 1, and Policy 1, above. All hazardous waste shipped offsite for recycling or disposal would be transported by a licensed and permitted hazardous waste hauler and disposed of at an approved location. Furthermore, the project would comply with the Kern County and Incorporated Cities Hazardous Waste Management Plan, which includes applicable regulations to the transport and disposal of hazardous materials. See Section 4.9, Hazards and Hazardous Materials .
KERN COUNTY GENERAL PLAN CHAPTER 3, NOISE ELEMENT		
3.3 Sensitive Noise Areas		
Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.	Consistent with implementation of Mitigation Measures MM 4.13-1 and 4.13-2	Noise impacts, sensitive receptors and County noise thresholds are evaluated in Section 4.13, Noise , of this EIR. As discussed in that section, the proposed project would not cause significant impacts to sensitive receptors. There would be two sensitive receptors within approximately 1000 feet from the project site. In addition, implementation of MM 4.13-1 and MM 4.13-2 include measures that would further reduce and ensure impacts remain less than significant.
Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.	Consistent	See 3.3 <i>Sensitive Noise Areas</i> , Goal 1, above. See Section 4.13, Noise , and Chapter 3, Project Description , of this EIR which further discusses the land uses proposed by the project. See 1.8, <i>Industrial</i> , Goal 1, above.
Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.	Consistent	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1 and 2, above.
Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.	Consistent	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1, above. Consistent with this policy the project would be encouraged to provide vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise. The project would include landscaping where feasible, preserving limited vegetation removal, planting native vegetation,

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
		providing privacy fencing, and accommodating the relocation of on-site western Joshua trees. Description of proposed landscaping is available in Section 4.1, Aesthetics , of this EIR. However, due to the fabrication process occurring indoors, noise emissions on-site would be mostly contained. Further, the micro mill facility will serve as a physical buffer between the raw material out-door storage areas, which may create the largest source of on-site noise emissions at times of truck unloading, and the nearest sensitive receptors.
Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.	Consistent with implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2	See 3.3, <i>Sensitive Noise Areas</i> , Goal 2, and Policy 3 above. Noise-sensitive land uses are evaluated in Section 4.13, Noise , of this EIR. The construction phase of the proposed project is expected to generate new sources of noise emissions, however construction and ground disturbance activities will be temporary. During operations, the entirety of the fabrication process would occur indoors and noise emissions on-site would be mostly contained. Further, the micro mill facility will serve as a physical buffer between the raw material out-door storage areas, which may create the largest source of on-site noise emissions at times of truck unloading, and the nearest sensitive receptors. The proposed project includes MM 4.13-1 and MM 4.13-2, and would not conflict with this policy.
Policy 7: Employ the best available methods of noise control.	Consistent	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1, and Policy 3 and 4, above.
Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.	Consistent	See Section 4.13, Noise . See 3.3, <i>Sensitive Noise Areas</i> , Goal 2, and Policy 3 and 4, above, which discuss that the project would reduce impacts to surrounding land uses. In addition, as discussed in Section 4.13, Noise , upon approval of the proposed General Plan Amendment for land use designations and Zone Changes, the proposed project would be consistent with the land use and zoning designations of the project site.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Measure C: Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.	Consistent	See 3.3, <i>Sensitive Noise Areas</i> , Goals 1 and 2, Policies 3 and 4, and Measure A, above. Consistent with this measure, the proposed project is being reviewed for conformance with the policies outlined in this element and this EIR serves as compliance with this measure.
Measure F: Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB L _{dn} and interior noise levels in excess of 45 dB L _{dn} .	Consistent	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1, Policy 3 and 4, and Measure A, above.
<p>Measure G: At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:</p> <ul style="list-style-type: none"> a) Be the responsibility of the applicant. b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics. c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project. 	Consistent with implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2	Consistent with this measure, the proposed project has prepared an acoustical analysis in accordance with the requirements of Chapter 3, <i>Noise Element</i> , Measure G, of the Kern County General Plan. Recommendations of the study were incorporated to the project and as part of mitigation measures MM 4.13-1 and MM 4.13-2.
<p>Measure I: Noise analyses shall include recommended mitigation, if required, and shall:</p> <ul style="list-style-type: none"> a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions. b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10–20 years hence) 	Consistent	See 3.3, <i>Sensitive Noise Areas</i> , Measure G, above. Consistent with this measure, a noise assessment was conducted for the proposed project and is referenced in Section 4.13, Noise , of this EIR. In accordance with this measure, the noise assessment includes representative noise measurements, recommended best management practices, estimated noise levels, in terms of CNEL, and estimates of noise exposure.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
<p>conditions, with a comparison made to the adopted policies of the Noise Element.</p> <p>c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.</p> <p>d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.</p>		
Measure J: Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.	Consistent with implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2	See 3.3, <i>Sensitive Noise Areas</i> , Measure C, G, and I, above. Consistent with this measure, the recommendations and requirements imposed pursuant to the findings of the acoustical analysis would be included with project implementation, which includes implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2.

KERN COUNTY GENERAL PLAN CHAPTER 4, SAFETY ELEMENT

4.1 Introduction		
Goal 1: Minimize injuries and loss of life and reduce property damage.	Consistent	See Section 4.15, Public Services , and Section 4.20, Wildfire , of this EIR. Consistent with this goal, the project would be required to comply with adopted safety regulations, such as the Fire Code, and related policies in the General Plan.
Goal 2: Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.	Consistent	See Section 4.15, Public Services , and Section 4.20, Wildfire , of this EIR. Consistent with this goal, the project would be required to comply with adopted safety regulations, such as the Fire Code, and related policies in the General Plan.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint		
Measure C: Require detailed site studies for ground shaking characteristics, liquefaction potential, dam failure inundation, flooding potential, and fault rupture potential as background to the design process for critical facilities under County discretionary approval.	Consistent	Section 4.7, <i>Geology and Soils</i> , of this EIR, discusses potential geologic hazards, Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, discusses potential flood hazards, and Section 4.20, <i>Wildfire</i> , of this EIR discusses potential fire hazards as a result of project implementation. Consistent with this measure, all hazards have been considered as part of this analysis.
Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.	Consistent	See 4.2, <i>General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint</i> , Measure A, above.
4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure		
Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.	Consistent	Section 4.7, <i>Geology and Soils</i> , of this EIR, discusses potential geologic hazards. Consistent with this policy, the proposed project would not be located near an active earthquake fault.
Measure B: Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.	Consistent with implementation of Mitigation Measures MM 4.7-2	See 4.2, <i>General Policies and Implementation Measure</i> , Measure C and F, and 1.3, <i>Physical and Environmental Constraints</i> , above. A geotechnical study, specific to the project would be required under MM 4.7-2, as noted in Section 4.7, <i>Geology and Soils</i> , of the EIR.
Measure C: The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.	Consistent	See 4.2, <i>General Policies and Implementation Measure</i> , Measure C and F; 4.3, <i>Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure</i> , Measure B; and 1.3, <i>Physical and Environmental Constraints</i> , above.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
4.5 Landslides, Subsidence, Seiche, and Liquefaction		
Policy 3: Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.	Consistent	As discussed in Section 4.7, <i>Geology and Soils</i> , of this EIR, conditions for landslides are also not present at the site which is characterized by relatively gradual inclines across the site. Grading would be subject to compliance with the NPDES General Construction Permit requirements and the implementation of required BMPs would have the ability to minimize the potential for erosion or loss of topsoil. Adherence to the requirements of the Kern County Building Code and the California Building Code (CBC) would ensure that effects from seismic-related ground failure including liquefaction would be minimized. Shallow groundwater is not expected on the proposed project site and the site is not within an earthquake zone of required investigation for liquefaction. See Section 4.7, <i>Geology and Soils</i> , of this EIR.
Measure D: Discretionary actions will be required to address and mitigate impacts from inundation, land subsidence, landslides, high groundwater areas, liquefaction and seismic events through the CEQA process.	Consistent with implementation of Mitigation Measures MM 4.7-1 through MM 4.7-8	The proposed project maintains a low risk from inundation, land subsidence, landslides, liquefaction, and seismic events based on its location. All of the proposed project site is situated on flat ground with no hills or mountains adjacent. The project site is also not located on or near an active earthquake fault. Though the risk remains low for all of the potential hazards, Mitigation Measures MM 4.7-1 through MM 4.7-8 will be implemented to ensure that impacts remain less than significant.
4.6 Wildland and Urban Fire		
Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.	Consistent with implementation of Mitigation Measures MM 4.15-1 and MM 4.15-2	See 1.10, <i>General Provisions</i> , Goal 1 and 1.4, <i>Public Services and Facilities</i> , Policy 15 and Measure B, above. The proposed project would be consistent with this policy, and impacts on emergency services and facilities are discussed and evaluated in Section 4.15, <i>Public Services</i> , of this EIR.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.	Consistent with implementation of Mitigation Measure MM 4.15-1.	The proposed project would support this policy through the development of the micro mill, 63-acre solar array, ancillary buildings, and other project components that conform with fire code requirements. The proposed project does not include habitable structures such as residences in a fire hazard zone that would increase fire protection costs. Mitigation Measure MM 4.15-1 requires the proponent to develop a fire safety plan for use during construction and operational activities. Construction managers and personnel would be trained in fire prevention and emergency response, should they occur. See Sections 4.9, Hazards and Hazardous Materials, 4.15, Public Services, and 4.20, Wildfire , of this EIR.
Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.	Consistent with implementation of Mitigation Measures MM 4.17-1, MM 4.17-2 and MM 4.15-1	Section 4.17, Transportation of this EIR includes Mitigation Measures MM 4.17-1 and MM 4.17-2 would require the approval of a Construction Traffic Control Plan, encroachments and or other necessary permits by Caltrans and/or the Kern County Roads Department. The project proponent would develop and implement a fire safety plan for use during construction and operation with the implementation of Mitigation Measure MM 4.15-1 as discussed in Section 4.15, Public Services . See, also, Section 4.20, Wildfire .
Policy 6: All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.	Consistent with implementation of Mitigation Measure MM 4.15-1	See Section 4.15, Public Services . Consistent with this policy, the proposed project would be required to comply with the adopted Fire Code and the requirements of the Kern County Fire Department.
Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.	Consistent with implementation of Mitigation Measure MM 4.15-1	Consistent with this measure, the proposed project would implement Mitigation Measure MM 4.15-1, which would require preparation and implementation of a fire safety plan to ensure the provision of appropriate access.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
4.9 Hazardous Materials		
Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.	Consistent with implementation of Mitigation Measures MM 4.9-1 and MM 4.10-1	Impacts to hazardous waste are evaluated in Section 4.9, Hazards and Hazardous Materials , of this EIR. Mitigation Measure MM 4.9-1 requires the project operator to prepare and maintain a Hazardous Materials Business Plan (HMBP) and provide it to the California Environmental Reporting System for review and approval. Mitigation Measure MM 4.10-1 require proper containment and disposal of hazardous materials used for construction onsite.
KERN COUNTY GENERAL PLAN CHAPTER 5, ENERGY ELEMENT		
5.2 Importance of Energy to Kern County		
Policy 7: The processing of all discretionary energy project proposals shall comply with California Environmental Quality Act (CEQA) Guidelines directing that the environmental effects of a project must be taken into account as part of project consideration.	Consistent with implementation of Mitigation Measure MM 4.6-1	See Section 4.6, Energy , on the discussion of the project on energy resources in compliance with CEQA. Implementation of Mitigation Measure MM 4.6-1 would reduce the project's level of energy consumption to the greatest extent feasible. See 1.9, <i>Resource</i> , Goal 6 and Policy 16.
Policy 8: The County should work closely with local, state, and federal agencies to assure that energy projects (both discretionary and ministerial) avoid or minimize direct impacts to fish, wildlife, and botanical resources, wherever practical.	Consistent	See 1.10.5, <i>Threatened and Endangered Species</i> , Policy 27, 28, and 29, above.
Policy 10: The County should require acoustical analysis for energy project proposals that might impact sensitive and highly-sensitive uses in accordance with the Noise Element of the General Plan.	Consistent	See 3.3, <i>Sensitive Noise Areas</i> , Measure C, G, and I.

Table 4.11-2: Consistency Analysis with Kern County General Plan for Land Use

Goals and Policies	Consistency Determination	Project Consistency
5.4.5 Solar Energy Development		
Policy 3: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.	Consistent	Consistent with this policy, the proposed micro mill facility includes development of an accessory 63-acre solar array anticipated to generate up to 10 MW for the purposes of powering in the desert region of Kern County. Final review of the proposed project by the Kern County Planning and Natural Resources Department, requires consideration and approval of a Precise Development Plan as well as other discretionary actions that would ensure the proposed project would comply with all applicable goals and policies as well as ensuring that the project would adhere to all applicable local, state and federal regulations. This would ensure that the proposed project would not pose significant environmental or public health and safety hazards.
Policy 4: The County shall encourage solar development in the desert and valley regions previously disturbed, and discourage the development of energy projects on undisturbed land supporting state or federally protected plant and wildlife species.	Consistent with implementation of Mitigation Measure MM 4.4-2	Consistent with this policy, the project proposes the development of a micro mill facility, with additional site components including a 63-acre solar array on land that has been previously disturbed as agricultural land in the desert region of Kern County. However, as discussed in Section 4.4, Biological Resources , protected Western Joshua Trees are on site and of the 152 WJT to be affected by the proposed development, approximately 99 would be removed whereas the remaining 53 would be preserved in place or encroached. Nonetheless, implementation of MM 4.4-2 for a Joshua Tree Preservation Plan will comply with this Policy's intent to support state or federally protected plant and wildlife species. Final review of the proposed project by the Kern County Planning and Natural Resources Department, requires consideration and approval of a Precise Development Plan as well as other discretionary actions that ensure compliance with all policies as well as adherence to all applicable local, state and federal regulations.

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Section 4.12

Mineral Resources

4.12.1 Introduction

This section of the EIR describes the affected environment and regulatory setting for mineral resources. It also describes the impacts on mineral resources that would result from implementation of the proposed project, and mitigation measures that would reduce these impacts, if applicable. Information used in the preparation of this section includes: the California Department of Conservation California Geological Survey (CGS), California Geologic Energy Management Division (CalGEM) [Prior to January 1, 2020, CalGEM was known as the California Division of Oil, Gas, and Geothermal Resources (DOGGR)], and Kern County publications and maps as cited throughout this section.

4.12.2 Environmental Setting

This section discusses the existing conditions related to mineral resources within the region and project area, including the project site.

Regional Setting

Mineral and petroleum resources are integral to Kern County's economy; Kern County produces more oil than any other county in California. Borax, cement, and construction aggregates constitute major economic mineral resources. The Surface Mining and Reclamation Act of 1975 (SMARA) requires the State Geologist to classify land into Mineral Resource Zones (MRZs) according to its known or inferred mineral potential. In 1999, the State Geologist analyzed 2,971 square miles of land in Kern County to determine the location of mineral resource zones throughout the County. The MRZ categories are defined as follows. It should be noted that MRZ-2 is divided into MRZ-2a and MRZ-2b on the basis of both degree of knowledge and economic factors. (CGS, 1999):

- **MRZ-1:** Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2a:** Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves. Land included in MRZ-2a is of prime importance because it contains known economic mineral deposits.
- **MRZ-2b:** Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain inferred mineral resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration could result in upgrading areas classified MRZ-2b to MRZ-2a.
- **MRZ-3a:** Areas containing known mineral occurrences of undetermined economic significance. Further exploration could result in reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.

- **MRZ-3b:** Areas containing inferred mineral occurrences of undetermined economic significance. Further exploration could result in the reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.
- **MRZ-4:** Areas containing no known mineral occurrence.

Table 4.12-1: *Classified Mineral Resources within Kern County*, demonstrates the classified mineral resources within Kern County that are part of the MRZ-2 group and, therefore, have a demonstrated mineral significance (as opposed to the MRZ-3 group, which has an undetermined mineral significance). The project site is not identified as a mineral resource zone by the Department of Conservation's Division of Mines and Geology (DOC Division of Mines and Geology, 1999).

Table 4.12-1: Classified Mineral Resources within Kern County

Mineral Resource	MRZ Classification	Number of Areas	Total Acreage
Borates	MRZ-2a and 2b	2	2,564
Limestone	MRZ-2a	4	2,008
Limestone	MRZ-2b	2	157
Silica	MRZ-2a	1	119
Pozzolan (essential cement additive)	MRZ-2b	1	72
Gold	MRZ-2a	3	849
Gold	MRZ-2b	8	6,619
Dimension Stone	MRZ-2a	2	527

SOURCE: CGS, 1999.

Petroleum Resources

As mentioned above, Kern County produces more oil than any other county in California. The valley floor area of Kern County and the surrounding lower elevations of the mountain ranges contain numerous deposits of oil and gas resources, a major economic resource for the County. The proposed project is not located within a known oil production field, nor does the site have known active or abandoned wells (DOC CalGEM, 2023). The project site is not within a mineral recovery area or within a designated mineral and petroleum resource site designated by the Kern County General Plan. The project site is not located within the County's NR (Natural Resources) or PE (Petroleum Extraction) Zone Districts.

Sand and Gravel

Construction aggregates are a major economic mineral resource for Kern County (Kern County, 2009). Sand and gravel have been determined to be important resources for construction, development, and physical maintenance, from highways and bridges to swimming pools and playgrounds. The availability of sand and gravel affects construction costs, tax rates, and affordability of housing and commodities. The State of California has statutorily required the protection of sand and gravel operations. Because transportation costs are a significant portion of the cost of sand and gravel, the long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of a community to residents, business,

and industry. The major resources of sand and gravel in Kern County are in stream deposits along the eastern side of the San Joaquin Valley and in the Sierra Nevada foothills, approximately 30 miles north of the project site, and in alluvial fan deposits along the Tehachapi Mountains at the southern end of Kern County, approximately 20 miles northwest of the project site.

Borax

Borax constitutes a major economic mineral resource for Kern County (Kern County, 2009). Borax, a borate mineral (a compound that contains Boron and oxygen), was discovered and put into production in 1872 in Nevada and later, in 1881, in Death Valley. Ironically, for five years the route traveled by Pacific Coast Borax Company's famous twenty mule team trains would pass within 15 miles of a buried deposit that would produce in about six minutes the equivalent tonnage hauled by the mule team during each trip. The discovery of borates in southeastern Kern County in the Kramer District was accidental, when a water well penetrated lakebeds containing colemanite (calcium borate) in 1913. In 1927 underground mining of the minerals kernite and borax began and continued until 1957, when underground operations ceased and open-pit mining began, eventually becoming the largest open-pit mine in California (State Mine ID #91-15-0022). This mine supplies about 40 percent of the world's supply of borates. There are several other sources of borate minerals in Kern County (CGS, 1999).

Limestone

Carbonate rocks were initially quarried in 1888 as a source of lime. By 1909 the limestone resources were used for the manufacture of Portland cement during the construction of the first Los Angeles aqueduct. Limestone has been mined continuously since 1921, just northeast of Tehachapi, for the manufacture of Portland cement. The Tehachapi Plant was joined by California Portland Cement Company's Mojave Plant in 1955 and National Cement Company's Lebec Plant in 1976, making Portland cement production second only to borates in terms of economic importance to the region. Cement production is a major economic resource in the County (CGS, 1999).

Dimension Stone

Dimension stone is natural rock materials quarried for the purpose of obtaining blocks or slabs that meet specification as to size (width, length, and thickness) and shape. Color grain texture and pattern, and surface finish, durability, strength, and polish ability are important selection criteria in determining dimension stone. Deposits of marble, sandstone, schist, and other rocks in Kern County have been sources of modest tonnages of building stone which have been utilized as dimension stone, field stone, rubble, and flagstone. Most of the dimension stone (marble and flagstone) was mined before 1904; field stone and flagstone have been mined mostly since about 1952 in the area around Randsburg (CGS, 1999).

Precious Minerals (Gold and Silver)

In terms of total dollar value and number of deposits, gold is the most important metallic mineral commodity that has been mined in Kern County. The earliest mining in Kern County was in 1851 at placer gold deposits in Greenhorn Gulch, which drains into the Kern River about midway between Democrat Springs and Miracle Hot Springs. The first lode mining was in 1852, and by

1865 gold was being mined in four districts around the Kern River. Gold was first prospected in eastern Kern in the 1860s, with the two largest mines being established in the 1890s. The Yellow Aster and Golden Queen mines located in eastern Kern have yielded almost half of the total gold output of the county. The principal sources of silver in Kern County have been deposits in eastern Kern County. Although gold is the chief mineral in value, silver is predominant by a 5:1 ratio and is an important by-product of the gold ore (CGS, 1999).

Silica and Pozzolan

Pozzolan is defined as a porous variety of volcanic tuff or ash used in making hydraulic cement. Silica is a common material used to manufacture cement when it is combined with limestone, shells, and chalk (PCA, 2023). Regarding existing silica mineral resources, there is an existing quartzite body used by California Portland Cement Company in making cement. The quartzite has a drill indicated reserve of about eight million tons. An area on property controlled by Calaveras Cement Company (now known as the Lehigh Southwest Cement Company) was under evaluation as an area containing pozzolan in 1998 (California Department of Conservation Division of Mines and Geology, 1999). A Surface Mining and Reclamation Plan for the extraction of pozzolan, for an area approximately 17 miles southwest of the City of Ridgecrest, was received by the Kern County Planning and Natural Resources Department (CUP 1, Map 92); an Early Consultation was circulated in accordance with CEQA in 2013 and on December 16, 2014 the Lehigh Southwest Cement Company was approved to be designated as an engineered municipal solid waste (EMSW) facility (CEQAnet, 2015).

Local Setting

The project site is currently vacant undeveloped land located in southeastern Kern County. Existing land use in the vicinity of the project site generally includes undeveloped lands, agricultural lands, rural residential uses, and other industrial developments. County records indicate subsurface mineral rights holders located within the project site. However, the project site is not designated as a mineral recovery area by the Kern County General Plan, nor is it identified as a mineral resource zone (MRZ) by the Department of Conservation's State Mining and Geology Board. The project site is also not located within the boundaries of a specific plan, that could have additional mineral resource designations. There is one irrigation well located on the northern portion of the property, however there are no known oil, gas, or geothermal wells on the project site (Appendix J1 – Phase 1 ESA). The nearest record of well exploration is a canceled oil & gas well API #: 0403058811 that was operated by Area Energy LLC located approximately 8 miles northwest (DOC CalGEM, 2023). Additionally, there are no active mines or petroleum extraction facilities within or immediately adjacent to the project site (DOC, 2016). The nearest mine to the project site is the Pauley D.g. Mine, an open pit decomposed granite mine approximately 3.2 miles southeast (DOC, 2016). **Table 4.12-2: Mines within the Project Vicinity**, lists the mines within the vicinity of the project site and the commodity being mined.

Table 4.12-2: Mines within the Project Vicinity

Mine Title	Mine ID	Operation Type	Primary Commodity	Distance from Project Site
Pauley D.g. Mine	91-15-0079	Open Pit	Decomposed Granite	3.2 miles southwest
Soledad Mountain	91-15-0098	Open Pit, Plant or Mill, Underground	Gold (lode)	4 mile northwest
Materials Site #1	91-15-0052	Open Pit	Sand and Gravel	4.3 miles southeast
Tropico Mill (Trailing Pond)	91-15-0088	Plant or Mill	Gold (Placer)	6 miles southwest
Source: DOC, 2016.				

4.12.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

Geologic Energy Management Division

The California Department of Conservation/CalGEM is a State agency responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. CalGEM's regulatory program promotes the wise development of oil, natural gas, and geothermal resources in California through sound engineering practices, prevention of pollution, and implementation of public safety programs. To implement this regulatory program, CalGEM requires avoidance of building over or near plugged or abandoned oil and gas wells, or requires the remediation of wells to current CalGEM standards (DOC, 2019b).

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796) regulates surface mining operation to assure that adverse environmental impacts are minimized, and that mined lands are reclaimed to a usable condition. SMARA encourages the production, conservation, and protection of the state's mineral resources, recognizes that "the state's mineral resources are vital, finite, and important natural resources and the responsible protection and development of these mineral resources is vital to a sustainable California" (Public Resources Code, Section 2711), and requires the State Geologist to classify land into MRZs according to its known or inferred mineral potential. The primary goal of mineral land classification is to ensure that Local agencies use the classification information when developing land-use plans and when making land-use decisions that could preclude mining (DOC, 2021b). MRZs are defined in detail in the Regional Setting, above.

Local

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for mineral resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use, Open Space and Conservation Element

1.9. Resource

Goals

- Goal 1: To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations that will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources or diminish the other amenities that exist in the County.
- Goal 2: To protect areas of important mineral, petroleum, and agricultural resource potential for future use.
- Goal 3: To ensure that the development of resource areas minimizes effects of neighboring resource lands.
- Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

Policies

- Policy 14: Emphasize conservation and development of identified mineral deposits.
- Policy 25: Discourage incompatible land use adjacent to Map Code 8.4 Mineral and Petroleum areas.

Implementation Measures

- Measure H: Use the California Geological Survey's latest maps to locate mineral deposits until the regional and statewide importance mineral deposits map has been completed, as required by the Surface Mining and Reclamation Act.
- Measure K: Protect oilfields and mineral extraction areas through the use of appropriate implementing zone districts: A (Exclusive Agriculture), DI (Drilling Island), NR (Natural Resource), or PE (Petroleum Extraction).

4.12.4 Impacts and Mitigation Measures

Methodology

The project's potential impacts to mineral resources have been evaluated using a variety of sources, including a review of information from the California Department of Conservation, CGS, and Kern County publications and maps. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on mineral resources.

A project could have a significant adverse effect on mineral resources if it would:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Project Impacts

Impact 4.12-1: The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.

The project site is not located on lands designated as an MRZ by the State and the project site is not known to contain mineral resources. Additionally, any proposed mineral resource extraction would require a Conditional Use Permit (CUP) to be secured from Kern County. The closest land designated as Map Code 8.4 (Mineral and Petroleum – Minimum 5 Acre Parcel Size) is approximately 3 miles north of the project site (Kern County GIS, 2023). Additionally, no active mines or petroleum extraction facilities are located within or immediately adjacent to the project site (DOC, 2023). As identified in **Table 4.12-2**, the nearest past mine to the project site is the Pauley DG Mine, an open pit decomposed granite mine approximately 3.2 miles southeast (DOC, 2016). Additionally, no active mines or petroleum extraction facilities are located within or immediately adjacent to the project site.

As identified above, the DG Mine, is located approximately 3.2 miles southeast of the project site. Given this distance, the proposed project would not interfere with nearby mine sites and would not result in the loss of land designated for mineral resources. Furthermore, based on the absence of historical surface mining in the immediate area, the potential for surface mining at the project site is considered extremely low. For these reasons the project would not result in the loss of availability of a known mineral resource and the potential impact to mineral resources is less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not traverse or interfere with any lands designated as an MRZ by the State or rights-of-way that contain mineral resources. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. Use of these areas for these project elements would not directly or indirectly result in the loss of availability of known mineral resources. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant without mitigation.

Impact 4.12-2: The project would result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

As stated above, the project site does not contain any oil or gas wells, is not located on a locally important mineral resource recovery site delineated by the Kern County General Plan, or designated NR (Natural Resources), or PE (Petroleum Extraction) Zone Districts by Kern County's Zoning Ordinance. While there are nearby mineral resource recovery sites, the operation of such sites would not be impeded by the development of the proposed project. Therefore, the development of the proposed micro mill facility would not result in the loss of availability of a known locally important mineral resource recover site. Impacts would be less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. Given that the improvement areas will occur along existing transmission corridors and not within a designated mineral and petroleum resource site within the

Kern County General Plan nor within areas zoned NR (Natural Resources) or PE (Petroleum Extraction), this re-poling and reconductoring work would nonetheless be constructed in accordance with all applicable regulations. Therefore, this off-site improvement work would not preclude future mineral resource development nor result in the loss of a locally important mineral resource recovery site. Thus, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant without mitigation.

Cumulative Setting, Impacts, and Mitigation Measures

The projects considered in the cumulative analysis for this project are described in **Chapter 3, Project Description, Table 3-3: Cumulative Projects List**. The geographic scope of impacts associated with mineral resources generally encompasses the project site and a 6-mile-radius area around the project site. This scope is appropriate because of the localized nature of mineral resource impacts. Furthermore, there are no MRZs or lands designated as 8.4 Mineral and Petroleum areas by the Kern County General Plan within a one-mile-radius area around the project site. Additionally, the project is not located within the Kern County's NR (Natural Resources), or PE (Petroleum Extraction) Zone District. Implementation of Mitigation Measure 4.12-1 would require documentation with an acknowledgement and approval from the mineral rights holders non-mineral extraction related development is occurring on the property and that approval of the development does not supersede existing mineral rights. The documentation would also allow the mineral rights holders for access for limited drilling activities. Therefore, the proposed project, in conjunction with other related projects, would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. Therefore, cumulative impacts to mineral resources would be less than significant.

Off-site Improvements

As previously discussed, Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at 860 Sopp Road.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines is not anticipated to result in the cumulative loss of availability of a known mineral resource by impeding access to that resource or by conflicting with an adopted land use plan. The newly

installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconnected route, these off-site facilities would be fully maintained by SCE. Construction of new transmission structure would involve temporary ground disturbance around the new structure locations, however use of these areas for these project elements would not exacerbate the potential result in a cumulative impact on mineral resources. As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts, and these necessary improvements are small parts of that overall project. Consequently, these impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant without mitigation.

Section 4.13 Noise

4.13.1 Introduction

This section of the EIR describes the affected environment and regulatory setting for the proposed project and provides an analysis of potential impacts related to noise and ground borne vibration from project implementation. Additionally, mitigation measures to reduce potential noise and vibration impacts are identified, where necessary. The information and analysis in this section is largely based on the *Noise and Vibration Impact Study* (ESA, 2023) located in Appendix N1 and supplemental technical memorandum for the *Noise and Vibration Analysis of Off-Site Power Utilities* (ESA, 2023) dated July 6, 2023, located in Appendix N2 of this EIR.

Noise Fundamentals

An understanding of the physical characteristics of sound is useful for evaluating environmental noise. The methods and metrics used to quantify noise exposure, human response, and relative judgment of loudness are also discussed, and noise levels of common noise environments are presented.

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and interferes with or disrupts normal activities. The effects of noise on people can be grouped into four general categories:

- Subjective effects (dissatisfaction, annoyance);
- Interference effects (communication and sleep interference, learning);
- Physiological effects (startle response); and
- Physical effects (hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical (i.e., to the body itself) and physiological (i.e., to body functions) effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. The subjective responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, its appropriateness to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

Interference effects of environmental noise refer to those effects that interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, and telephone conversations, and interference with sleep. Sleep interference effects can include both awakening from sleep and arousal to a lesser state of sleep.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and amplitude. Frequency describes the sound's pitch (tone) and is measured

in cycles per second (Hertz [Hz]), while amplitude describes the sound's pressure (loudness). Because the range of sound pressures that occurs in the environment is extremely large, it is convenient to express these pressures on a logarithmic scale that compresses the wide range of pressures into a more useful range of numbers. The standard unit of sound measurement is the decibel (dB). Hz is a measure of how many times each second the crest of a sound pressure wave passes a fixed point. For example, when a drummer beats a drum, the skin of the drum vibrates a given number of times per second. If the drum vibrates 100 times per second, it generates a sound pressure wave that is oscillating at 100 Hz, and this pressure oscillation is perceived by the ear/brain as a tonal pitch of 100 Hz. Sound frequencies between 20 and 20,000 Hz are within the range of sensitivity of the healthy human ear.

Sound levels are expressed by reference to a specified national/international standard. The sound pressure level is used to describe sound pressure (loudness) and is specified at a given distance or specific receptor location. In expressing sound pressure level on a logarithmic scale, sound pressure (dB) is referenced to a value of 20 micropascals (μPa). Sound pressure level depends not only on the power of the source but also on the distance from the source to the receiver and the acoustical characteristics of the sound propagation path (absorption, reflection, etc.).

Outdoor sound levels decrease logarithmically as the distance from the source increases. This decrease is due to wave divergence, atmospheric absorption, and ground attenuation. Sound radiating from a source in a homogeneous and undisturbed manner travels in spherical waves. As the sound waves travel away from the source, the sound energy is dispersed over a greater area, decreasing the sound pressure of the wave. Spherical spreading of the sound wave from a point source reduces the noise level at a rate of 6 dB per doubling of distance.

Atmospheric absorption also influences the sound levels received by an observer. The greater the distance traveled, the greater the influence of the atmosphere and the resultant fluctuations. Atmospheric absorption becomes important at distances greater than 1,000 feet. The degree of absorption varies depending on the frequency of the sound as well as the humidity and temperature of the air. For example, atmospheric absorption is lowest (i.e., sound carries farther) at high humidity and high temperatures, and lower frequencies are less readily absorbed (i.e., sound carries farther) than higher frequencies. Over long distances, lower frequencies become dominant as the higher frequencies are more rapidly attenuated. Turbulence, gradients of wind, and other atmospheric phenomena also play a significant role in determining the degree of attenuation. For example, certain conditions, such as temperature inversions, can channel or focus the sound waves, resulting in higher noise levels than would result from simple spherical spreading.

Sound from a tuning fork contains a single frequency (a pure tone), but most sounds in the environment do not consist of a single frequency. Instead, they are a broad band of many frequencies differing in sound level. Because of the broad range of audible frequencies, methods have been developed to quantify these values into a single number representative of human hearing. The most common method used to quantify environmental sounds consists of evaluating all frequencies of a sound according to a weighting system that is reflective of human hearing characteristics. Human hearing is less sensitive at low frequencies and extremely high frequencies than at the mid-range frequencies. This process is termed "A weighting," and the resulting dB level is termed the "A-weighted" decibel (dBA).

Because A-weighting is designed to emulate the frequency response characteristics of the human ear and reflect the way people perceive sounds, it is widely used in local noise ordinances and State and federal guidelines, including those of the State of California and Kern County. Unless specifically noted, the use of A-weighting is always assumed with respect to environmental sound and community noise, even if the notation does not include the “A.”

In terms of human perception, a sound level of 0 dBA is the threshold of human hearing and is barely audible by a healthy ear under extremely quiet listening conditions. This threshold is the reference level against which the amplitude of other sounds is compared. Normal speech has a sound level of 60 dBA. Sound levels above about 120 dBA begin to be felt inside the human ear as discomfort, progressing to pain at still higher levels. Humans are much better at discerning relative sound levels than absolute sound levels. The minimum change in the sound level of individual events that an average human ear can detect is about 1 to 3 dBA. A 3 to 5 dBA change is readily perceived. An increase (or decrease) in sound level of about 10 dBA is usually perceived by the average person as a doubling (or halving) of the sound’s loudness.

Because of the logarithmic nature of the decibel, sound levels cannot be added or subtracted directly. However, some simple rules are useful in dealing with sound levels. First, if a sound’s acoustical energy is doubled, the sound level increases by 3 dBA, regardless of the initial sound level (e.g., 60 dBA + 60 dBA = 63 dBA; 80 dBA + 80 dBA = 83 dBA). However, an increase of 10 dBA is required to double the perceived loudness of a sound, and a doubling or halving of the acoustical energy (a 3 dBA difference) is at the lower limit of readily perceived change.

Although dBA may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most ambient environmental noise includes a mixture of noise from nearby and distant sources that creates an ebb and flow of sound, including some identifiable sources plus a relatively steady background noise in which no particular source is identifiable. A single descriptor, termed the equivalent sound level (L_{eq}), is used to describe sound that is constant or changing in level. L_{eq} is the energy-mean dBA during a measured time interval. It is the “equivalent” sound level produced by a given constant source equal to the acoustic energy contained in the fluctuating sound level measured during the interval. In addition to the energy-average level, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the maximum instantaneous (L_{max}) and minimum instantaneous (L_{min}) noise level indicators that represent the root-mean-square maximum and minimum noise levels measured during the monitoring interval. The L_{min} value obtained for a particular monitoring location is often called the acoustic floor for that location.

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors L_{10} , L_{50} , and L_{90} may be used, which represent the noise levels equaled or exceeded during 10 percent, 50 percent, and 90 percent of the measured time interval, respectively. Sound levels associated with L_{10} typically describe transient or short-term events, L_{50} represents the median sound level during the measurement interval, and L_{90} levels are typically used to describe background noise conditions.

The Day-Night Average Sound Level (L_{dn} or DNL) represents the average sound level for a 24-hour day and is calculated by adding a 10 dBA penalty to sound levels during the night period (10:00 p.m. to 7:00 a.m.). The L_{dn} is the descriptor of choice and used by nearly all federal, State, and local agencies throughout the United States to define acceptable land use compatibility with

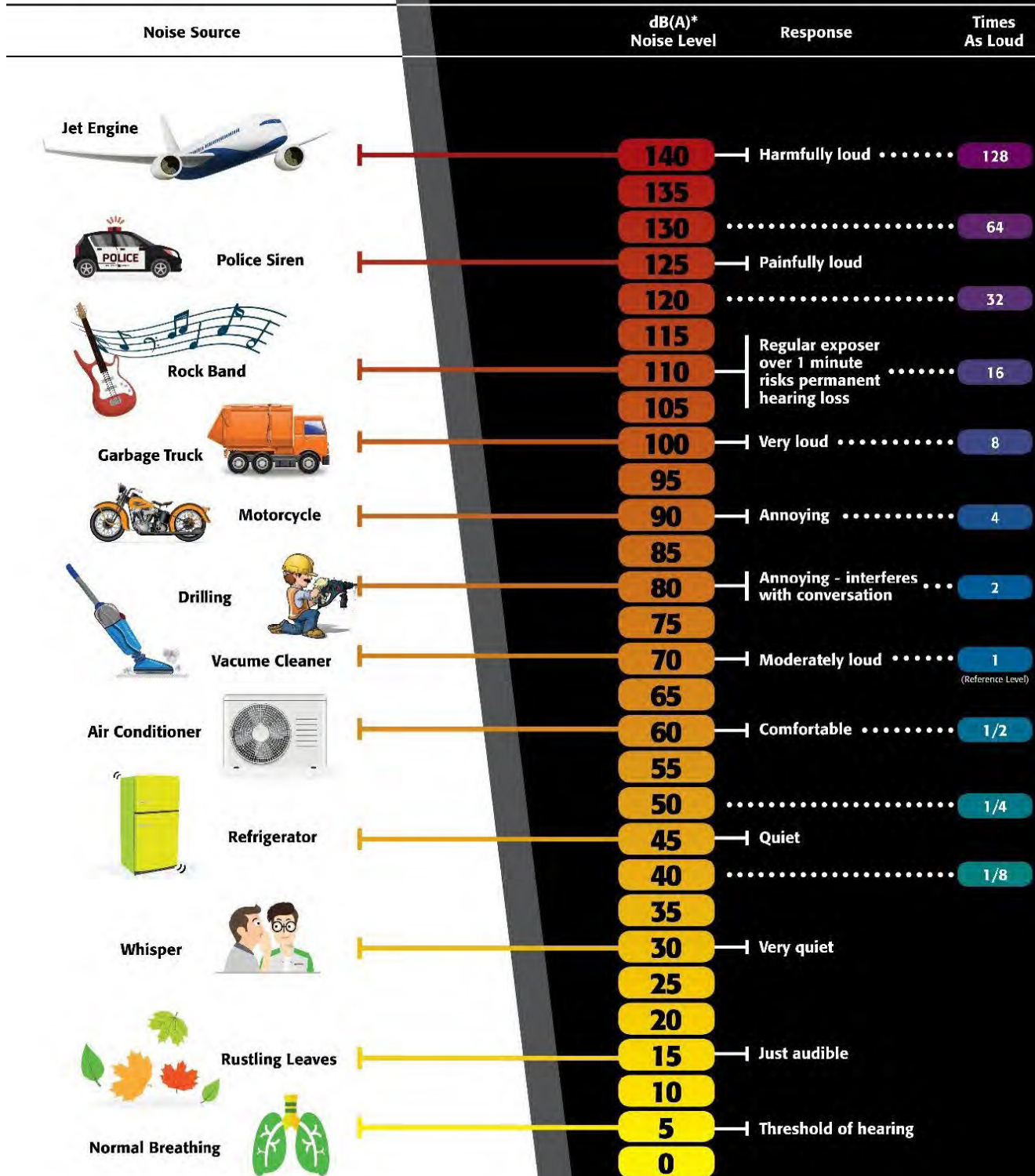
respect to noise. Within California, the Community Noise Equivalent Level (CNEL) is sometimes used. CNEL is very similar to L_{dn} , except that an additional 5 dBA penalty is applied to the evening hours (7:00 p.m. to 10:00 p.m.). Because of the time-of-day penalties associated with the L_{dn} and CNEL descriptors, the L_{dn} or CNEL dBA value for a continuously operating sound source during a 24-hour period will be numerically greater than the dBA value of the 24-hour L_{eq} . Thus, for a continuously operating noise source producing a constant noise level operating for periods of 24 hours or more, the L_{dn} will be 6 dBA higher than the 24-hour L_{eq} value.

To provide a frame of reference, common sound levels are presented in **Figure 4.13-1: Effects of Noise on People**, below, and a summary of common noise metrics is provided in **Table 4.13-1: Common Noise Metrics**.

Table 4.13-1: Common Noise Metrics

Unit of Measure		Description
dB	Decibel	Decibels, which are units for measuring the volume of sound, are measured on a logarithmic scale, representing points on a sharply rising curve. For example, 10 dB sounds are 10 times more intense than 1 dB sounds, and 20 dB sounds are 100 times more intense. A 10 dB increase in sound level is perceived by the human ear as a doubling of the loudness of the sound.
dBA	A-Weighted Decibel	A sound pressure level that has been weighted to quantitatively reduce the effect of high- and low-frequency noise. It was designed to approximate the response of the human ear to sound.
CNEL	Community Noise Equivalent Level	A metric representing the 24-hour average sound level that includes a 5 dBA penalty during relaxation hours (7:00 p.m. to 10:00 p.m.) and a 10 dBA penalty for sleeping hours (10:00 p.m. to 7:00 a.m.).
L_{dn}	Day-Night Average Noise	The 24-hour average sound level, expressed in a single decibel rating, for the period from midnight to midnight obtained after the addition of a 10 dBA penalty to sound levels for the periods between 10:00 p.m. and 7:00 a.m.
L_{eq}	Equivalent Noise Level	The average acoustic energy content of noise for a stated period of time. The L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L_{eq} may also be referred to as the average sound level.
L_{max}	Maximum Noise Level	L_{max} represents the maximum instantaneous noise level experienced during a given period of time. It reflects peak operating conditions and addresses the annoying aspects of intermittent noise.
L_{min}	Minimum Noise Level	L_{min} represents the minimum instantaneous noise level experienced during a given period of time. It reflects baseline operating conditions and is commonly referenced as the noise floor.
$L_1, L_{10}, L_{50}, L_{90}$	Percentile Noise Exceedance Levels	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period.

Common Environmental Noise Levels



* Typical A-weighted sound levels in decibels.
"A" weighting approximates the frequency response of the human ear.

Mojave Micro Mill Project

GPA No.3, Map No. 213
ZCC No. 62, Map No. 213
CUP No. 71, Map No. 213
CUP No. 72, Map No. 213
PD Plan No. 3, Map No. 213
ZV No. 24, Map No. 213
ZV No. 25, Map No. 213

Figure 4.13-1: Effects of Noise on People

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02, Sec. 27 - T10N/R12W



Kern County
Planning & Natural
Resources Department

Vibration Fundamentals

Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. The motion may be discernible outdoors, but without the effects associated with the shaking of a building, there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, the rattling of items moving on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings that are radiating sound waves. However, building damage is not a factor for normal transportation projects, except for occasional blasting and pile driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 VdB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earth-moving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with groundborne vibration and noise from these sources are usually localized to areas within approximately 100 feet of the vibration source, although there are examples of groundborne vibration causing interference out to distances greater than 200 feet. When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed, for most projects, that the roadway surface will be smooth enough that groundborne vibration from street traffic will not exceed the impact criteria; however, construction of the proposed project could result in groundborne vibration that could be perceptible and annoying. Groundborne noise is not likely to be a problem as noise arriving via the normal airborne path usually will be greater than groundborne noise.

Groundborne vibration has the potential to disturb people as well as to damage buildings. Although it is very rare for mobile source-induced groundborne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and the pile driving to cause vibration of sufficient amplitudes to damage nearby buildings. Groundborne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). RMS is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as:

$$L_v = 20 \log_{10} [V/V_{\text{ref}}]$$

where L_v is the VdB, “V” is the RMS velocity amplitude, and “Vref” is the reference velocity amplitude, or 1×10^{-6} inches per second (inch/sec) used in the United States. **Table 4.13-2: Human Response to Different Levels of Groundborne Noise and Vibration**, illustrates human response to various vibration levels, as described in the *Noise and Vibration Study* (ESA, 2023).

Factors that influence groundborne vibration and noise include the following:

- **Vibration Source:** Vehicle/equipment suspension, wheel types and condition, track/roadway surface, track support system, speed, transit structure, and depth of vibration source

- **Vibration Path:** Soil type, rock layers, soil layering, depth to water table, and frost depth
- **Vibration Receiver:** Foundation type, building construction, and acoustical absorption

Table 4.13-2: Human Response to Different Levels of Groundborne Noise and Vibration

Vibration Velocity Level (VdB)	Groundborne Noise Level (dBA)		Human Response
	Low Frequency ^a	Mid Frequency ^b	
65	25	40	Approximate threshold of perception for many humans. Low-frequency sound usually inaudible, mid-frequency sound excessive for quiet sleeping areas.
75	35	50	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying. Low-frequency noise acceptable for sleeping areas, mid-frequency noise annoying in most quiet occupied areas.
85	45	60	Vibration acceptable only if there are an infrequent number of events per day. Low-frequency noise annoying for sleeping areas, mid-frequency noise annoying even for infrequent events with institutional land uses such as schools and churches.

Source: Federal Transit Administration. Table 7-1, *Transit Noise and Vibration Impact Assessment* (2018).

Notes: VdB= vibration velocity decibels; dBA= A-weighted decibels

^a Approximate groundborne noise level when vibration spectrum peak is near 30 Hz.

^b Approximate groundborne noise level when vibration spectrum peak is near 60 Hz.

Among the factors listed above, there are significant differences in the vibration characteristics when the source is underground compared to at the ground surface. In addition, soil conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock.

Experience with groundborne vibration shows that vibration propagation is more efficient in stiff clay soils than in loose sandy soils, and shallow rock seems to concentrate the vibration energy close to the surface, resulting in groundborne vibration problems at large distance from the source. Factors such as layering of the soil and depth to water table can have significant effects on the propagation of groundborne vibration. Soft, loose, sandy soils tend to attenuate more vibration energy than hard, rocky materials. Vibration propagation through groundwater is more efficient than through sandy soils.

4.13.2 Environmental Setting

Project Location

Project Site

The project site is located on approximately 174 acres, comprised of two (2) privately owned parcels, in the southern unincorporated area of Kern County, California. The project site is approximately five miles northeast from the unincorporated community of Rosamond and approximately eight miles southeast from the unincorporated community of Mojave in unincorporated Kern County, California (refer to **Figure 3-1: Regional Vicinity Map** and **Figure**

3-2: Vicinity Map in Chapter 3, Project Description). The project site is situated at the southeast corner of the Sopp Road and Sierra Highway intersection, approximately 1.25 miles southeast of the State Route 14 (SR-14) and Backus Road exit. Regional access to the project site is provided by SR-14, whereas local access is provided by Backus Road one mile north of the project site, from Sierra Highway to the east of SR-14. The project site is bounded by the Union Pacific Railway and Sierra Highway (west), Sopp Road (north), vacant land (south) and Edwards Air Force Base (east).

The primary entrance to the project site would be located off of Sopp Road, which would lead to on-site parking stalls for visitors and employees. The proposed micro mill would be located within APN 431-010-02 whereas the incidental solar array would encompass parcel APN 431-030-02 and part of parcel 431-010-02. The entire project site is currently designated by the Kern County General Plan as 8.5 (Resource Management – min. 20 acres) and the existing zoning classification for the project site is A-1 (Limited Agriculture).

Off-Site Improvements – SCE

Southern California Edison (SCE) is the utility provider for the project site. In order to supply power to the proposed Micro Mill site, SCE would require the installation of two main components: a power line and a telecommunication line. The power line would consist of an upgrade to a portion of the Corum-Goldtown- Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection would continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. A new 66 kV power line would be erected from the corner of Sopp Road and Division Street to the proposed Mojave Micro Mill site at 860 Sopp Road. This new power line would be approximately 0.95 miles in length.

SCE estimates that the existing 66 kV line from Rosamond Substation to the corner of Sopp Road and Division Street would need to be reconducted (totaling approximately 13 miles), with all existing transmission poles requiring replacement with new poles installed for the section from the corner of Sopp Road and Division Street to the proposed Mojave Micro Mill site.

The fiber-optic (telecommunication) line would tie-in to the existing telecommunications line from approximately Tehachapi Willow Springs Road following the route of Backus Road and routing around the north side of Exit 61 of State Route 14 to the Sierra Highway. SCE estimates the new fiber optic line would be installed on 18 new poles from Backus Road/Sierra Highway to the proposed Mojave Micro Mill site and would be approximately 1 mile in length. See **Figure 3-14: Existing and Proposed Offsite Improvements** in **Chapter 3, Project Description**.

Existing Noise Environment

Some land uses are considered more sensitive to ambient noise levels than others are, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residential areas are considered to be the most sensitive type of land use to noise and industrial/commercial areas are considered to be the least sensitive.

Land uses in the region consist largely of vacant undeveloped land covered with sparse, low-lying desert vegetation. The areas to the north of the project site include a food storage facility, and

outdoor storage for a stone manufacturing facility. The Edwards Air Force Base and the fully constructed Edwards Air Force Base solar facility is located to the east of the project site. The Union Pacific railroad is located directly adjacent to and west of the project site, parallel to Sierra Highway.

The immediate project area has few nearby residences. The nearest residences are approximately 1,000 feet to the northwest; however, clusters of unincorporated residences are located further from the project site near the State Route 14 and Backus Road exit, as well as residential homes located approximately 0.80 mile (or 4,220 feet) to the north of the project site.

Project Site Ambient Noise Levels

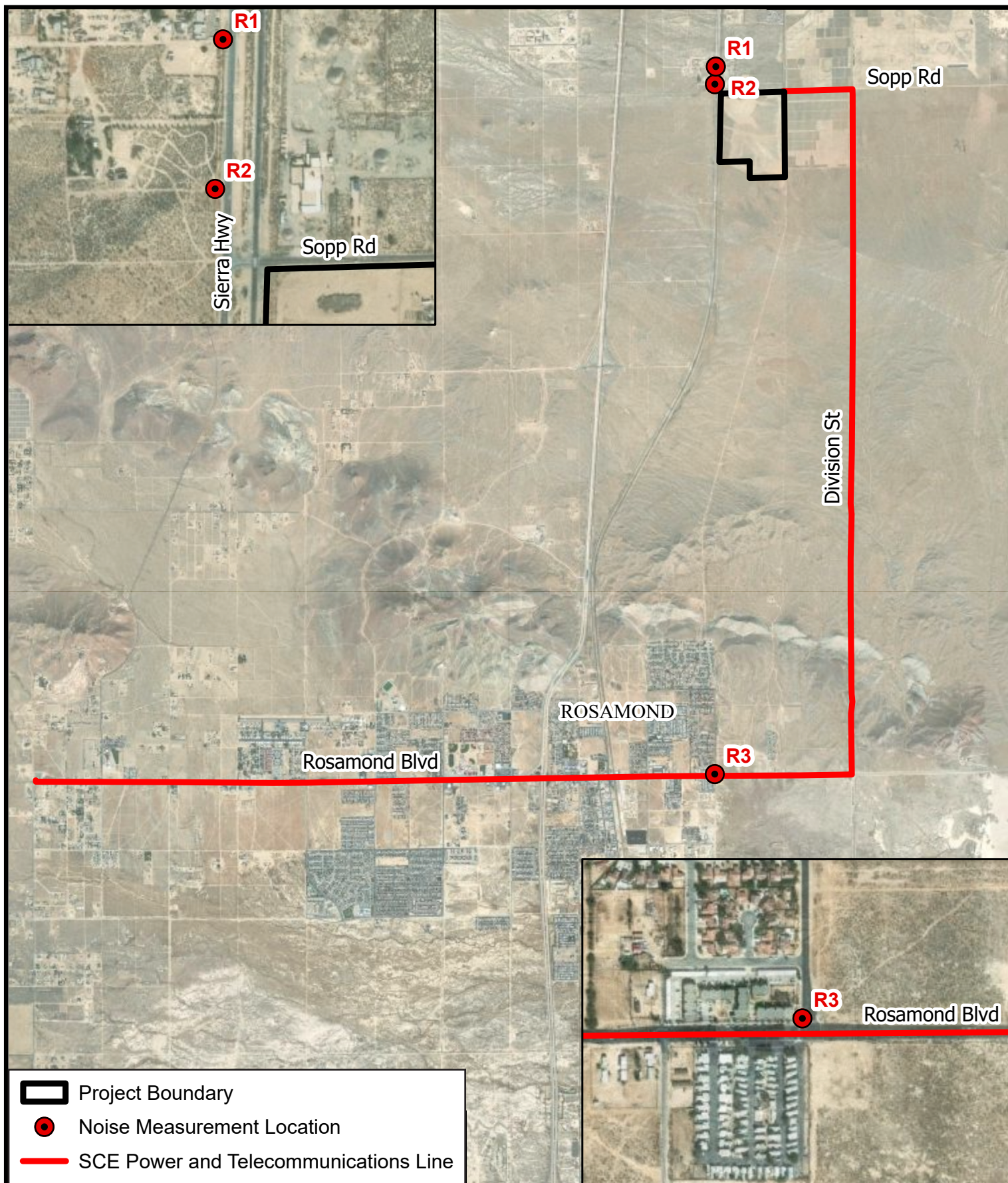
The predominant existing noise source on the project site and surrounding areas is traffic noise from Sierra Highway and other local streets.

To establish baseline noise conditions representing the nearby noise sensitive land uses in the vicinity of the project site, existing ambient noise level measurements were conducted on April 28, 2021, at R1 and R2, ambient noise levels for R3 were conducted in 2023. **Figure 4.13-2: Ambient Noise Measurement Locations** shows the locations of the noise measurements, labeled as R1, R2, and R3 as described as follows:

- **R1:** to the northwest of the Proposed Micro Mill site (north side of Fickett Avenue), at the property boundary of the residential uses located at the corner of Sierra Highway and Fickett Avenue, approximately 1,060 feet from the Proposed Micro Mill site boundary and approximately 2,800 feet from the project site;
- **R2:** to the northwest of the Proposed Micro Mill site (north of Sopp Road and south of Dobbs Road), at the property boundary of the residential uses located at the west end of Dobbs Road, approximately 1,000 feet from the Proposed Micro Mill site boundary and approximately 2,600 feet from the project site. The nearest residential structure is located approximately 1,000 feet from the project site. However, the analyses discussed later in this document conservatively uses a distance of 440 feet, which is the distance from the project site boundary to the location of the ambient noise level measurement representing location R2. The use of 440 feet in the analysis results in a conservative noise assessment.
- **R3:** to the south of the Proposed Micro Mill site, along Rosamond Boulevard, approximately 5.5 miles from the Proposed Micro Mill site boundary and approximately 60 feet from the project site. Measurement R3 was taken to supplement the noise analysis conducted for the SCE power and telecommunication lines, which would extend further south than the proposed Micro Mill site and affect sensitive receptors located along Rosamond Boulevard.

Short-term (15-minute) noise measurements were conducted at each of the measurement locations to characterize the existing noise environment in the vicinity of the project site. Measured noise levels near the project site represent typical noise levels expected in a suburban, mostly residential environment. The predominant existing noise source observed was vehicle traffic noise from the roadways surrounding the project site.

Secondary noise sources observed included general residential-related activities and intermittent aircraft flyovers. **Table 4.13-3: Summary of Short-Term Ambient Noise Measurements at the Project Site** below lists the measured ambient noise levels near the project site.



Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 4.13-2: Ambient Noise Measurement Locations

PSGM3 Holdings Corp (Pacific Steel Group)

APN: 431-010-02 & 431-030-02, Sec. 27 - T10N/R12W



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 Resources Department



Not to scale Page 4.13-10

Table 4.13-3: Summary of Short-Term Ambient Noise Measurements at the Project Site

Measurement Locations Date (Time of Day)	Noise Level (dBA L _{eq}) ^a
R1	68.9
R2	65.6
R3	53.7

^a Detailed measured noise data are included in Appendix N2. The ambient noise measurements were conducted using Larson Davis's model 820 Precision Integrated Sound Level Meter (SLM), which is a Type 1 standard instrument, as defined in the American National Standard Institute S1.4. The SLM was within its annual factory calibration, field calibrated prior to conducting measurements, and operated according to the applicable manufacturer specification. The microphone of the SLM was placed at a height of five feet above the local grade, representing an average height of the human ear.

Source: ESA, 2023.

Roadway Noise Levels

Existing roadway CNEL noise levels were calculated for roadway segments located within the study area, as defined by the Transportation Impact Assessment, and were based on vehicular turning movement data at intersections identified for the proposed project's *Traffic Impact Study* (Appendix O). Turning movements at each studied intersection were used to determine traffic volumes along 4 roadway segments within the project vicinity. The roadway segments, when compared to roadways located farther away from the project site, would experience the greatest percentage increase in traffic generated by the proposed project (i.e., as distances are increased from the project site, traffic is spread out over a greater geographic area, and its effects are reduced).

Existing roadway CNEL noise levels were calculated using the Federal Highway Administration's (FHWA's) Highway Traffic Noise Model (FHWA TNM) methodology and traffic volumes at the study intersections reported in the TIS. The TNM methodology calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. The noise levels along these roadway segments are presented in **Table 4.13-4: Existing Roadway with Proposed Project Noise Levels**. As shown in **Table 4.13-4**, the ambient noise environment of the project vicinity can be characterized by 24-hour CNEL levels attributable to existing traffic on local roadways. The calculated CNEL (at a distance of 50 feet from the roadway centerline) from actual existing traffic volumes on the analyzed roadway segments ranged from 61.3 dBA CNEL along Backus Road (between State Route 14 northbound Ramps and Sierra Highway) to 67.6 dBA CNEL along Backus Road (between State Route 14 southbound and northbound ramps). Note that the TIS did not analyze roadway segments on Rosamond Boulevard and the ambient noise measurement, converted to CNEL, at R3 is assumed to represent the traffic noise levels along Rosamond Boulevard.

Table 4.13-4: Existing Roadway with Proposed Project Noise Levels

Roadway Segment	Traffic Noise Levels (dBA CNEL)
	Existing (2022) ^a
Backus Rd between SR- 14 SB Ramp & SR- 14 NB Ramps	67.6
Backus Rd between SR-14 NB Ramps & Sierra Highway	59.8
Sierra Highway between Backus Rd & Sopp Rd	67.1
Sopp Rd between Sierra Highway & Line Butte Rd	64.3
Rosamond Boulevard ^b	54.0

Source: ESA, 2023

Decibel levels were calculated at a distance of 30 feet from the roadway centerline.

^a Traffic Study prepared for the proposed project identified 2022 traffic volumes as existing conditions.

^b The Traffic Study did not analyze roadway segments on Rosamond Boulevard and the ambient noise measurement, converted to CNEL, at R3 is assumed to represent the traffic noise levels along Rosamond Boulevard.

4.13.3 Regulatory Setting

Federal

Noise Control Act of 1972

The Noise Control Act of 1972 (42 USC 4910) establishes a national policy to promote an environment for all Americans to be free from noise that jeopardizes their health and welfare. The Act establishes a means for the coordination of federal research and activities in noise control, authorizes the establishment of federal noise emissions standards for products distributed in commerce, and provides the noise-emission and noise-reduction characteristics of such products to the public.

United States Environmental Protection Agency, Environmental Noise Levels

The United States Environmental Protection Agency (USEPA) provided guidance on environmental noise levels in Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety (USEPA, 1974), commonly referenced as the “Levels Document,” that establishes an L_{dn} of 55 dBA, as the requisite level, with an adequate margin of safety, for areas of outdoor uses, including residences and recreation areas. The Levels Document does not constitute USEPA regulations or standards, but identifies safe levels of environmental noise exposure without consideration of technical or economic feasibility for achieving these levels or other potentially relevant considerations.

Federal Energy Regulatory Commission, Noise Guidelines

Federal Energy Regulatory Commission (FERC) *Noise Guidelines on Noise Emissions from Compressor Stations, Substations, and Transmission Lines* (18 CFR 157.206(d)5), require that the noise attributable to any new compressor stations, compression added to an existing station, or any modification, upgrade, or update of an existing station must not exceed a L_{dn} of 55 dBA at any pre-existing noise-sensitive area (such as schools, hospitals, or residences). This policy was adopted based on the USEPA-identified level of significance of 55 dBA L_{dn} .

Federal Highway Administration Noise Abatement Procedures (23 CFR Part 772)

The purpose of 23 CFR Part 772 is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, supply noise abatement criteria, and establish requirements for information to be given to local officials for use in the planning and design of highways. It establishes five categories of noise-sensitive receptors and prescribes the use of the hourly L_{eq} as the criterion metric for evaluating traffic noise impacts.

Department of Housing and Urban Development, Environmental Standards

The Department of Housing and Urban Development (HUD) regulations (24 CFR Part 51) set forth the following exterior noise standards for new home construction, assisted or supported by HUD:

- 65 L_{dn} or less – Acceptable
- > 65 L_{dn} and < 75 L_{dn} – Normally unacceptable, appropriate sound attenuation measures must be provided
- > 75 L_{dn} – Unacceptable

HUD's regulations do not contain standards for interior noise levels. Rather, a goal of 45 dBA L_{dn} is set forth, and attenuation requirements are geared to achieve that goal.

Occupational Safety and Health Administration, Occupational Noise Exposure

Occupational Safety and Health Administration (OHSA), *Occupational Noise Exposure; Hearing Conservation* Amendment (Federal Register 48 [46], 9738–9785, 1983) stipulates that protection against the effects of noise exposure shall be provided for employees when sound levels exceed 90 dBA over an 8-hour exposure period. Protection shall consist of feasible administrative or engineering controls. If such controls fail to reduce sound levels to within acceptable levels, personal protective equipment shall be provided and used to reduce exposure of the employee. Additionally, a Hearing Conservation Program must be instituted by the employers whenever employee noise exposure equals or exceeds the action level of an 8-hour time-weighted average sound level of 85 dBA $L_{eq(8)}$. The Hearing Conservation Program requirements consist of periodic area and personal noise monitoring, performance and evaluation of audiograms, provision of hearing protection, annual employee training, and record keeping.

State

The State requires all municipalities to prepare and adopt a comprehensive long-range general plan. General plans must contain a noise element (California Government Code Section 65302(f) and Section 46050.1 of the Health Safety Code). The requirements for the noise element of the general plan include describing the noise environment quantitatively using a cumulative noise metric such as CNEL or DNL, establishing noise/land use compatibility criteria, and establishing programs for achieving and/or maintaining land use compatibility. Noise elements should address all major noise sources in the community, including mobile and stationary noise sources. In California, most cities and counties have also adopted noise ordinances which serve as enforcement mechanisms for controlling noise.

The California Department of Health Services has studied the correlation of noise levels and their effects on various land uses and established guidelines for evaluating the compatibility of various land uses, for the noise elements of local general plans, as a function of community noise exposure. The guidelines are the basis for most noise element land use compatibility guidelines in California.

The land use compatibility for community noise environment chart identifies the normally acceptable range for several different land uses, as shown in **Figure 4.13-3: Land Use Compatibility for Community Noise Environment**. Persons in low-density residential settings are

most sensitive to noise intrusion, with noise levels of 60 dBA CNEL and below are considered “acceptable.” For land uses such as schools, libraries, churches, hospitals, and parks, acceptable noise levels are up to 70 dBA CNEL.

CEQA Guidelines (PRC Section 21000 et seq.) requires the identification of “significant” environmental impacts and their feasible mitigation. Section XI of *CEQA Guidelines* Appendix G (CCR Title 14, Appendix G) lists some indicators of potentially significant impacts, which are included below under the heading “Thresholds of Significance.”

The State also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dBA at 15 meters. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by State and local law enforcement officials.

California Code of Regulations (CCR)

California Code of Regulations (CCR) Title 24 establishes the California Building Code (CBC). The most recent building standard adopted by the legislature that will be used throughout the state is the 2022 version, which took effect on January 1, 2023. The State of California’s noise insulation standards are codified in the CBC.¹⁹ These noise standards are for new construction in California for the purposes of interior compatibility with exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residences, schools, or hospitals, are near major transportation noises, and where such noise sources create an exterior noise level of 60 dBA CNEL, or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

Figure 4.13-3: Land Use Compatibility for Community Noise Environment

Land Use Category	Community Noise Exposure – L _{dn} or CNEL (dBA)							
	50	55	60	65	70	75	80	
Residential – Low Density Single Family, Duplex, Mobile Home	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Residential – Multi-Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging – Motel/Hotel	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditorium, Concert Hall, Amphitheaters	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Office Buildings, Business, Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements							
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.							
Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.							
Clearly Unacceptable	New construction or development generally should not be undertaken.							

Source: State of California, Governor's Office of Planning and Research, 2003.

Local

Kern County General Plan

The Noise Element of the Kern County General Plan provides goals, policies, and implementation measures applicable to noise, which, as related to the project, are provided below. The major purpose of the County's Noise Element is to establish reasonable standards for maximum noise levels desired in Kern County, and to develop an implementation program which could effectively mitigate potential noise problems and not subject residential or other sensitive noise land uses to exterior noise levels in excess of 65 dBA L_{dn} , and interior noise levels in excess of 45 dBA L_{dn} . Applicable goals, policies, and implementation measures from the County's General Plan that are relevant to the proposed project are summarized below.

Chapter 3. Noise Element

3.3 Sensitive Noise Areas

Goals

Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.

Policies

Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses,

Policy 2: Require noise level criteria applied to all categories of land uses to be consistent with the recommendations of the California Division of Occupational Safety and Health (DOSH).

Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise,

Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.

Policy 6: Ensure that new development in the vicinity of the airports will be compatible with existing and projected airport noise levels as set forth in the Airport Land Use Compatibility Plan (ALUCP).

Policy 7: Employ the best available methods of noise control.

Implementation Measures

Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.

Measure C: Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.

- Measure E: Review discretionary development plans to ensure compatibility with adopted Airport Land Use Compatibility Plans.
- Measure F: Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise-sensitive land uses to exterior noise levels in excess of 65 dB L_{dn} and interior noise levels in excess of 45 dB L_{dn} .
- Measure G: At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:
- Be the responsibility of the applicant.
 - Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
 - Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.
- Measure I: Noise analyses shall include recommended mitigation, if required, and shall:
- Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
 - Include estimated noise levels, in terms of CNEL, for existing and projected future (10–20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
 - Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
 - Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.
- Measure J: Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

Kern County Code of Ordinances

The Kern County Code of Ordinances, Chapter 8.36 (Noise Control) establishes acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive receptors. Noise-producing construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling are prohibited between the hours of 9:00 p.m. and 6:00 a.m. on weekdays, and between 9:00 p.m. and 8:00 a.m. on weekends.

1. The development services agency director or their designated representative may for good cause exempt some construction work for a limited time.
2. Emergency work is exempt from this section.

The Kern County Code states that, for noise-generating events that last a cumulative period of more than one minute (but less than 5 minutes) in any hour, the exterior noise standard of the residential uses would be 55 dBA plus 15 dBA during daytime hours (7 a.m. to 10 p.m.), or 70 dBA, and 45 dBA plus 15 dBA during the nighttime hours (10 p.m. to 7 a.m. next morning), or 60 dBA.

Kern County Airport Land Use Compatibility Plan

The Airport Land Use Compatibility Plan includes an Air Installation Compatible Use Zones (AICUZ) study that establishes standards and guidelines that protect community safety and health, promote appropriate development in the vicinity of military airfields, and protect taxpayer's investment in national defense. Presently, base personnel are updating the present AICUZ study to reflect the ongoing changes at the installation. The AICUZ indicates the location of safety zones and noise impacts associated with the flying mission.

Groundborne Vibration

There are currently no federal, State, or local regulatory standards for groundborne vibration. However, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance. Elements of the proposed project would be subject to Caltrans oversight and guidance by the agency nonetheless provides groundborne vibration criteria that are useful in establishing thresholds of impact. See vibration methodology below in **Section 4.13.4**.

4.13.4 Impacts and Mitigation Measures

Methodology

Noise impacts associated with the proposed project were assessed in this section based primarily on the *Noise and Vibration Impact Study* (Appendix N1) and the supplemental technical memorandum *Noise and Vibration Analysis of Off-Site Power Utilities* (Appendix N2). Potential significant impacts associated with the project were evaluated on a quantitative and qualitative basis through a review of existing literature and available information, and by using professional judgment in comparing the anticipated proposed project effects on noise with existing conditions. The evaluation of proposed project impacts is based on significance criteria established by Appendix G of the *CEQA Guidelines*, which the Lead Agency has determined to be appropriate criteria for this draft EIR.

Micro Mill

Construction Noise

Typical noise levels associated with construction equipment are taken from the FHWA Roadway Construction Noise Model (RCNM) (FHWA 2006). Construction equipment noise levels were used in the construction modeling which factors in the distance, acoustical usage factor, and composite

noise level from several pieces of equipment operating at the same time. Projected construction noise levels at adjacent sensitive receptors are then compared to the ambient noise measured at corresponding off-site sensitive receptors. Construction noise was calculated for both the Project Site and the Off-Site Improvements. For a detailed description of the methodology for Off-Site Improvements, refer to the *Noise and Vibration Analysis of Off-Site Power Utilities Memorandum* (Appendix N2).

Operational Noise

The noise levels generated by mobile noise sources are assessed in this study with the Federal Highway Administration (FHWA) approved traffic noise source noise modeling guidelines. For stationary sources, equipment source noise levels included in the RCNM (FHWA 2006) are used for the impact analysis. Operational noise was calculated for both the Project Site and the Off-Site Improvements. For a detailed description of the methodology for Off-Site Improvements, refer to the *Noise and Vibration Analysis of Off-Site Power Utilities Memorandum* (Appendix N2).

Vibration Noise

Federal Transit Administration and California Department of Transportation

The criteria for environmental impact from groundborne vibration are based on the maximum levels for a single event. **Table 4.13-5: FTA Construction Vibration Damage Criteria**, lists the potential vibration damage criteria associated with construction activities, as suggested in the Transit Noise and Vibration Impact Assessment (FTA, 2018).

Table 4.13-5: FTA Construction Vibration Damage Criteria

Building Category	PPV (inch/sec)	Approximate L_v^a
Reinforced-concrete, steel or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry buildings	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: Federal Transit Administration. Table 12-3, Transit Noise and Vibration Impact Assessment (2006).
 PPV=peak particle velocity; L_v= velocity in decibel; inch/sec = inches per second
^a Root-mean-square velocity in decibels (VdB) re 1 microinch per second.

FTA guidelines show that a vibration level of up to 102 VdB (equivalent to 0.5 inch/sec in RMS) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 inch/sec in RMS) (FTA, 2018). The RMS values for building damage thresholds referenced above are shown in **Table 4.13-6: Caltrans Guideline Vibration Damage Potential Threshold Criteria**, which is taken from Caltrans' Transportation and Construction Vibration Guidance Manual.

Table 4.13-6: CalTrans Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (inch/sec)	
	Transient Sources^a	Continuous/Frequent Intermittent Sources^b
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25

Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual (2013), Table 19.

PPV = peak particle velocity; inch/sec = inches per second

^a Transient sources create a single, isolated vibration event, such as blasting or drop balls.

^b Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile

Based on Table 8-3 in the FTA's Transit Noise and Vibration Impact Assessment, interpretation of vibration criteria for detailed analysis is 78 VdB for residential uses during daytime hours (FTA, 2018). During nighttime hours, the vibration criterion is 72 VdB. For office and office buildings, the FTA guidelines suggest that a vibration level of 84 VdB should be used for detailed analysis.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant noise-related adverse effect.

A project could have a significant noise-related adverse effect if it would result in:

- Generation of a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- For a project located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.

Project Impacts

Impact 4.13-1: The project would result in generation of a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.

Construction Noise

Micro Mill

Site preparation and grading activities would typically include the following construction equipment:

- dozer, grader, scraper, jack hammer, compactor, work trucks, haul/dump trucks, and water trucks.

Below-grade construction activities would typically include the following construction equipment:

- excavator, backhoe, cement truck, work trucks, haul/dump trucks, and water trucks.

Above-grade construction activities would typically include the following construction equipment:

- bucket truck or manlift, line truck, large crane, stringing rig, portable generator, work trucks, and water trucks.

Offsite traffic improvements would typically include the following construction equipment:

- dozer, grader, crane, excavator, auger drill rig, paver, roller, cement and mortar mixer, air compressor, work trucks, haul/dump trucks, and water trucks.

During construction, some phases would overlap (e.g., Below Grade, Above Grade, Paving), maximum daily construction vehicle trips would be as many as 130 trips (workers, haul trucks, etc.).

Table 4.13-7: RCNM Default Noise Emission Reference Levels and Usage Factors, lists RCNM typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

Table 4.13-7: RCNM Default Noise Emission Reference Levels and Usage Factors

Equipment Description	Spec. 721.560	Actual Measured
	L _{max} at 50 Feet (dBA, slow)	L _{max} at 50 Feet (dBA, slow)
All other equipment >5 HP	85	N/A
Backhoe	80	78
Compactor (ground)	80	83
Compressor (air)	80	78
Concrete mixer truck	85	79
Concrete saw	90	90
Crane	85	81
Dozer	85	82
Drill rig truck	84	79
Dump truck	84	76
Excavator	85	81
Frontend loader	80	79
Generator	82	81
Generator (<25 kVA, variable-message signs)	70	73
Grader	85	N/A
Jackhammer	85	89
Paver	85	77
Pumps	77	81
Roller	85	80
Scraper	85	84
Tractor	84	N/A
Welder/torch	73	74

Source: Federal Highway Administration, Highway Construction Noise Handbook (2006), Table 9.1.
 dBA = A-weighted decibels; HP = horsepower; N/A = not applicable

On-Site Construction Noise

The project site preparation phase tends to generate the highest noise levels due to the noisiest construction equipment being the earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, front loaders, compactors, scrapers, and graders.

Table 4.13-8: Predicted Construction Noise Levels at Nearby Sensitive-Receivers, lists the construction noise levels that would be associated with the proposed project projected at the nearest residences, denoted as locations R1 and R2. As shown in **Table 4.13-8**, the estimated construction noise levels associated with the individual construction phases at the closest residential (R2) property line range from 61 to 68 dBA Leq, depending upon the activities for each construction phase. At times there would be overlapping construction phases that would add noise levels from two or more construction phases together. Maximum combined construction noise level at this nearest residence would be 72.5 dBA Leq.

Table 4.13-8: Predicted Construction Noise Levels at Nearby Sensitive-Receivers

Construction Phase	Shortest Distance from Project Property Line (feet) ^a	Estimated Construction Noise Level (Leq, dBA)
<i>Sensitive Receptor R1</i>		
Site Preparation	1,060	59
Excavation & Concrete Pouring	1,060	61
Drainage/Utilities/Trenching	1,060	58
Paving	1,060	61
Building Erection	1,060	57
Electrical	1,060	56
Mechanical & Piping	1,060	60
Landscaping	1,060	57
Maximum Combined Noise Level		66.4
Ambient Noise Level		68.9
Threshold (Ambient + 5 dBA)		73.9
Exceeds Threshold?		No
<i>Sensitive Receptor R2</i>		
Site Preparation	440	66
Excavation & Concrete Pouring	440	68
Drainage/Utilities/Trenching	440	68
Paving	440	67
Building Erection	440	63
Electrical	440	61
Mechanical & Piping	440	66
Landscaping	440	64
Maximum Combined Noise Level		72.5
Ambient Noise Level		65.6

Threshold (Ambient + 5 dBA)	70.6
Exceeds Threshold?	Yes
^a The nearest residential structure is located approximately 1,000 feet from the project site. However, the analysis conservatively uses a distance of 440 feet, which is the distance from the project site boundary to the location of the ambient noise level measurement representing location R2. The use of 440 feet in the analysis results in a conservative noise assessment. SOURCE:ESA, 2023	

This range of construction noise levels would exceed the ambient-based noise threshold of (65.6 + 5) 70.6 dBA Leq measured at this nearest off-site sensitive receptor (R2). Therefore, on-site construction noise could result in a potentially significant impact. To reduce potentially significant impacts the project would implement Mitigation Measures MM 4.13-1 and MM 4.13-2. Mitigation Measure MM 4.13-1 would reduce short term construction noise by requiring equipment staging and laydown areas to be located at the furthest practical distance from nearby residential land uses, the use of noise reducing features including mufflers, baffles, and engine shrouds, limiting haul truck idling, limiting on-site vehicle speed to 15 miles per hour, and back-up beepers to be adjusted to lower noise levels. Mitigation Measure MM 4.13-2 would require further construction noise reduction measures such as temporary acoustic barriers, use of electric air compressors, mufflers, and directing stationary construction equipment to emit noise away from sensitive receptors.

In addition, construction noise is temporary and would cease to occur after completion of the project construction. The project would also be required to comply with The Kern County Noise Ordinance established acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive receptors. Noise-producing construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling are prohibited between the hours of 9:00 p.m. and 6:00 a.m. on weekdays, and between 9:00 p.m. and 8:00 a.m. on weekends. However, as provided in MM 4.13-1, construction activities at the project site may operate with no hourly restrictions. Overall, on-site construction noise generated by the project would result in a less than significant impact with the implementation of MM 4.13-1 and MM 4.13-2, and compliance with Kern County Noise Ordinance.

Off-Site Construction Noise (Traffic)

Vehicle trips attributed to project construction activities would increase average daily traffic (“ADT”) volumes along the major thoroughfares within the project vicinity. Typically, with everything else being the same, a doubling of traffic volumes increases the hourly equivalent sound level by 3 dBA (FTA 2018). The haul routes for outbound trips from the project site are assumed to travel west on Sopp Road, north on Sierra Highway, west on Backus Road, and merge either north or south onto State Route 14. The haul routes for inbound trips towards the project site generally follow the same routes as the outbound trips.

Project construction activities would generate a maximum of up to 1,030 worker trips per day, 101 vendor trips per day, and a maximum of up to 67 haul truck trips per day during overlap of the drainage/utilities/trenching, foundations/concrete pour, building erection, electrical installation, mechanical equipment installation, and process piping installation phases. The analysis assumes that 50 percent of workers¹ arrive onsite within the peak hour and that vendor and haul trips are

¹ 515 daily one-way is equal to 1,030 total workers. Half of the 515 workers would arrive at the same time i.e. 258 one-way trips would occur within the peak hour.

distributed evenly across an 8-hour workday. During peak hour construction traffic, there is assumed to be approximately 258 worker trips, 13 vendor trips, and 8 haul trips. It is anticipated that these trips would occur primarily on collector and arterial streets as well as freeways throughout the project area and would constitute a small fraction of the existing daily vehicle and truck trips that already occur on the collector and arterial streets and freeways. As shown in **Table 4.13-9: Existing Roadway with Construction Noise Levels**, noise levels resulting from project off-site construction would result in a maximum increase of 5.9 dBA Leq along Backus Road between SR-14 northbound ramps and Sierra Highway. The existing baseline plus construction traffic noise levels along the analyzed roadway segments would increase by a noise level of more than 5 dBA, which is considered to be a readily perceivable increase. Therefore, the proposed project would result in a significant impact from off-site construction traffic noise.

Table 4.13-9: Existing Roadway with Construction Noise Levels

Roadway Segment	Traffic Noise Levels (dBA CNEL)			Significant Increase?
	Existing (2022)	Existing (2022) with Construction	Increase over Existing	
Backus Rd between SR- 14 SB Ramp & State Route 14 NB Ramps	67.6	69.3	1.7	No
Backus Rd between SR- 14 NB Ramps & Sierra Highway	59.8	65.7	5.9	Yes
Sierra Highway between Backrus Rd & Sopp Rd	67.1	70.3	3.2	No
Sopp Rd between Sierra highway & Lone Butte Rd	64.3	69.2	4.9	No

SOURCE: ESA 2022

Decibel levels were calculated at a distance of 30 feet from the roadway centerline.

^a Traffic study prepared for the proposed project identified 2022 traffic volumes as existing conditions.

Offsite Improvements (Excludes SCE Offsite improvements)

Offsite improvements associated with the project would include the following:

- State Route 14 NB onramp with signalization and dedicated lanes starting around the time project construction begins;
- State Route 14 SB onramps with signalization and dedicated lanes starting in 2041 with completion by 2042;
- Sopp Road overlay improvements with construction starting around the time project constructions begins; and
- Sierra Highway lane additions (one north and one south) starting in 2041 with completion by 2042.
- Water line connection located between the proposed employee and visitor car parking area and the proposed solar fields on the western side of the property, continuing linearly due west under the railroad easement and to the edge of the Sierra Highway right-of-way, approximately 1,500 feet in length.

Table 4.13-10: Predicted Offsite Improvement Construction Noise Levels at Nearby Sensitive Receivers, lists the construction noise levels that would be associated with the proposed project's

offsite improvements projected at the nearest residences. As shown in **Table 4.13-10**, the estimated construction noise levels associated with the offsite improvements range from 52.4 dBA to 79.8 dBA.

Table 4.13-10: Predicted Offsite Improvement Construction Noise Levels at Nearby Sensitive Receivers

Construction Phase	Shortest Distance from Project Property Line (feet) ^a	Estimated Construction Noise Level (Leq, dBA)
<i>Backus Road and State Route 14 Northbound On-Ramp</i>		
Grading/Excavation	600	61.2
Trenching	600	58.8
Signal Installation	600	58.4
Paving	600	61.6
Architectural Coating	600	52.4
Maximum Combined Noise Level		61.6
Ambient Noise Level		59.8
Threshold (Ambient + 5 dBA)		64.8
Exceeds Threshold?		No
<i>Backus Road and State Route 14 Southbound On-Ramp</i>		
Grading/Excavation	375	65.0
Trenching	375	62.1
Signal Installation	375	62.0
Paving	375	64.8
Architectural Coating	375	56.5
Maximum Combined Noise Level		65.0
Ambient Noise Level		67.6
Threshold (Ambient + 5 dBA)		72.6
Exceeds Threshold?		No
<i>Sopp Road Improvements – R1</i>		
Paving	335	63.7
Architectural Coating	335	57.5
Maximum Combined noise Level		63.7
Ambient Noise Level		68.9
Threshold (Ambient + 5 dBA)		73.9
Exceeds Threshold?		No
<i>Sopp Road Improvements – R2</i>		
Paving	1,000	57.1
Architectural Coating	1,000	48.0
Maximum Combined Noise Level		57.1
Ambient Noise Level		65.6
Threshold (Ambient + 5 dBA)		70.6
Exceeds Threshold?		No
<i>Sierra Highway Road Widening – R1</i>		
Paving	50	79.5
Grading	50	79.8
Architectural Coating	50	74.0
Maximum Combined Noise Level		79.8
Ambient Noise Level		67.6

Construction Phase	Shortest Distance from Project Property Line (feet) ^a	Estimated Construction Noise Level (Leq, dBA)
Threshold (Ambient + dBA)		72.6
Exceeds Threshold?		Yes
<i>Sierra Highway Road Widening – R2</i>		
Paving	50	79.5
Grading	50	79.8
Architectural Coating	50	74.0
Maximum Combined Noise Level		79.8
Ambient Noise Level		65.6
Threshold (Ambient + 5 dBA)		70.6
Exceeds Threshold?		Yes
<i>Water Line Connection – R1</i>		
Site Preparation	1,500	57.3
Pipeline Installation	1,500	54.6
Paving	1,500	42.9
Maximum Combined Noise Level		57.3
Ambient Noise Level		68.9
Threshold (Ambient + 5 dBA)		70.6
Exceeds Threshold?		No
<i>Water Line connection – R2</i>		
Site Preparation	850	62.2
Pipeline Installation	850	59.3
Paving	850	47.0
Maximum Combined Noise Level		62.2
Ambient Noise Level		65.6
Threshold (Ambient + 5 dBA)		70.6
Exceeds Threshold?		No
^a Ambient noise measurements were not conducted along Backus Road and calculated existing traffic noise levels as presented in Table 4 were used as the existing ambient noise levels for the Backus Road and State Route 14 roadway improvements. SOURCE:ESA, 2023		

As shown in **Table 4.13-10**, offsite improvements would result in an exceedance of the noise threshold for sensitive receptors R1 and R2 during Sierra Highway road widening activities and therefore could result in a potentially significant impact. The project would include Mitigation Measures MM 4.13-1 and MM 4.13-2 which would require construction noise reduction measures to reduce potential impacts to the greatest extent feasible. However, even with implementation of MM 4.13-1 and MM 4.13-2, noise generated from offsite project improvements would result in an exceedance of the noise threshold for sensitive receptors and impacts would be significant and unavoidable for off-site construction traffic noise.

Off-Site Improvements – SCE

On-Site Construction Noise

Construction is separated into two separate phases that would occur simultaneously, including power transmission line installation and telecommunications line installation. As noted previously, in the absence of a specific construction plan for power and telecommunications construction, technical information from the Circle City Project, including construction equipment, duration, and

phasing, were used to develop construction assumptions for the power and telecommunication lines necessary to serve the Mojave Micro Mill Project.

Power transmission line installation would typically include the following equipment:

- Compressor trailer, water truck, bucket truck, backhoe/front loader, boom/crane truck, and a 3 drum sock line puller

Telecommunications line installation would typically include the following construction equipment:

- Bucket truck, medium duty splicing lab truck, and backhoe/front end loader.

As mentioned above, the two construction phases would overlap and it is assumed that equipment would be shared between phases.

Construction of the project is expected to require the use of various equipment that would be used on the project site, which in this regard would be within SCE's existing utility easements and transmission corridors within the EAFB boundaries. **Table 4.13-11: Predicted Construction Noise Levels at Nearby Sensitive-Receivers**, lists the construction noise levels that would be associated with the project projected at the nearest residences, denoted as Locations R1, R2, and R3. As shown in Table 6, the estimated construction noise levels associated with the individual construction phases at the closest Residential (R3) property line range from approximately 73.7 to 78.3 dBA L_{eq} , depending upon the activities for each construction phase. At times there would be overlapping construction phases that would add noise levels from two or more construction phases together. Maximum combined construction noise level at this nearest residence would be 79.6 dBA L_{eq} .

As stated previously, sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease by at least 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases 4.5 dBA for each doubling of distance.

Construction on the project site would expose the nearest noise-sensitive uses to noise levels reaching up to an hourly average noise level of approximately 79.6 dBA L_{eq} , the maximum level during overlapping phases. This range of construction noise levels would not exceed the FTA noise threshold of 80 dBA L_{eq} measured at any of the off-site sensitive receptors and impacts would be less than significant.

Construction noise is temporary and would cease to occur after completion of the project construction. The Kern County Noise Ordinance establishes acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive receptors. However, as specified below in MM 4.13-1, construction activities at the project site may operate with no hourly restrictions and the hours specified in the Kern County Noise Ordinance are waived.

Table 4.13-11: Predicted Construction Noise Levels at Nearby Sensitive-Receivers

Construction Phase	Shortest Distance from Project Property Line (feet)	Estimated Construction Noise Level (Leq, dBA)
R1		
Power Transmission Line	2,800	49.7
Telecommunications Line	2,800	44.8
Maximum Combined Noise Level	2,800	50.9
	Threshold (8-hour dBA Leq)	80
	Exceeds Threshold?	No
R2		
Power Transmission Line	2,600	50.3
Telecommunications Line	2,600	45.4
Maximum Combined Noise Level	2,600	51.5
	Threshold (8-hour dBA Leq)	80
	Exceeds Threshold?	No
R3		
Power Transmission Line	2,600	50.3
Telecommunications Line	2,600	45.4
Maximum Combined Noise Level	60	79.6
	Threshold (8-hour dBA Leq)	80
	Exceeds Threshold?	No
SOURCE: ESA, 2023		

Off-Site Construction Noise (Traffic)

Vehicle trips attributed to project construction activities would increase average daily traffic (“ADT”) volumes along the major thoroughfares within the project vicinity. Typically, with everything else being the same, a doubling of traffic volumes increases the hourly equivalent sound level by 3 dBA.¹¹ The haul routes for outbound trips from the project site are assumed to travel west on Sopp Road, north on Sierra Highway, west on Backus Road, and merge either north or south onto State Route 14. The haul routes for inbound trips towards the project site generally follow the same routes as the outbound trips. Trips along Rosamond Boulevard were also analyzed because power line and telecommunications line installation would occur along Rosamond Boulevard before turning north towards the project site. The Traffic Study did not analyze roadway volumes along Rosamond Boulevard. Thus, the ambient noise levels measured at R3, which reflects the predominant existing noise source from traffic on roadways, are assumed to characterize the traffic noise levels on Rosamond Boulevard. Project construction activities would generate a maximum of up to 70 worker trips per day and a maximum of up to 8 haul truck trips per day during the power line and telecommunications installation. The analysis assumes that 50 percent of workers¹² arrive onsite within the peak hour and that vendor and haul trips are distributed evenly across an 8-hour workday. During peak hour construction traffic, there is assumed to be approximately 18 worker trips and 1 haul trip. It is anticipated that these trips would occur primarily on collector and arterial streets as well as freeways throughout the project area and would constitute a small fraction of the existing daily vehicle and truck trips that already occur on the collector and arterial streets and freeways. As shown in **Table 4.13-12: Existing Roadway with Construction Noise Levels**, noise levels resulting from the power and telecommunication line offsite construction would result in a maximum increase of approximately 4.2 dBA CNEL along Rosamond Boulevard.

The existing baseline plus construction traffic noise levels along the analyzed roadway segments would not increase by a noise level of more than 5 dBA, which is considered to be a readily perceivable increase. Therefore, the power and telecommunication lines would result in a less than significant impact from off-site construction traffic noise.

Table 4.13-12: Existing Roadway with Construction Noise Levels

Roadway Segment	Traffic Noise Levels (dBA CNEL)			
	Existing (2022) ^a	Existing (2022) with Project	Increase over Existing	Significant Increase?
Backus Rd between State Route 14 SB Ramp & State Route 14 NB Ramps	67.6	67.7	0.1	No
Backus Rd between State Route 14 NB Ramps & Sierra Highway	59.8	60.6	0.8	No
Sierra Highway between Backus Rd & Sopp Rd	67.1	67.4	0.6	No
Sopp Rd between Sierra Highway & Lone Butte Rd	64.3	64.8	4.2	No
Rosamond Boulevard ^b	54.0	58.2	4.2	No

SOURCE: ESA 2023

Decibel levels were calculated at a distance of 30 feet from the roadway centerline.

a Traffic study prepared for the proposed project identified 2022 traffic volumes as existing conditions.

b The Traffic Study did not analyze roadway segments on Rosamond Boulevard and the ambient noise measurement at R3 is assumed to represent the traffic noise levels along Rosamond Boulevard

Operational Noise

Micro Mill

Operation Noise Impacts from On-Site Operations

The proposed project would include several bays in the micro mill facility, a storeroom and vehicle maintenance building, a flume treatment plant, a slag processing plant, and a water treatment plant each of which would include noise-generating equipment or activity. See Appendix N1 for a more in-depth breakdown of type of equipment each element of the project would have. The following is a list of the type of equipment that would be used in the project operation elements above that would generate relatively high noise levels.

- **Aerial Lift:** 75 dBA L_{max} at 50 feet, 20 percent usage factor
- **Cranes:** 81 dBA L_{max} at 50 feet, 16 percent usage factor
- **Off-Highway Trucks:** 76 dBA L_{max} at 50 feet, 40 percent usage factor
- **Other General Industrial Equipment:** 85 dBA L_{max} at 50 feet, 50 percent usage factor
- **Other Material Handling Equipment:** 85 dBA L_{max} at 50 feet, 50 percent usage factor
- **Rough Terrain Forklifts:** 75 dBA L_{max} at 50 feet, 40 percent usage factor
- **Skid Steer Loaders:** 78 dBA L_{max} at 50 feet, 40 percent usage factor
- **Tractors/Loaders/Backhoes:** 78 dBA L_{max} at 50 feet, 40 percent usage factor

Even if it is assumed that up to eight pieces of equipment would be in operation at the same location on the project site at the same time, and not all eight pieces of equipment would be operating at full power at the same time due to individual usage factor, the worst-case combined noise level during project operation would be $(75 + 81 + 76 + 85 + 85 + 75 + 78 + 78 =) 89.9$ dBA L_{\max} at a distance of 50 feet from the active construction area. Including the individual usage factor for each piece of the equipment operating over a period of one hour, the combined equivalent continuous noise level from these eight pieces of equipment would result in 86.2 dBA L_{eq} at a distance of 50 feet.

Existing noise sensitive uses in the project vicinity include:

- Residences to the northwest (R1) evaluated at a distance of 1,060 feet from the project, and
- Residences to the northwest (R2) evaluated at a distance of 440 feet from the project.

As stated previously, sound levels are generated from a source, and its decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. Therefore, due to noise attenuation, existing residential uses, R1 and R2, would experience noise levels that would be 26 dBA and 19 dBA, respectively, less than the combined noise level at 50 feet with the distance attenuation. Therefore, noise associated with on-site project operations would be attenuated to below 67.2 dBA L_{eq} . These estimated noise levels are lower than the ambient-based noise thresholds (73.9 dBA L_{eq} at R1 and 70.6 dBA L_{eq} at R2) at the nearest residences to the northwest of the project site. Therefore, operational noise impacts from on-site operations would be less than significant.

While the proposed project would have nighttime operations, the number of nighttime employees would be minimal and the majority of the operations would be conducted indoors. Therefore, no nighttime noise impacts are expected to the nearby sensitive receptors.

Traffic Noise Impacts on Off-Site Land Uses

To characterize the proposed project's future day/night noise environment, the noise levels attributed to future traffic volumes on local roadways were estimated using a spreadsheet model developed based on the methodologies provided in FHWA Traffic Noise Model (TNM) Technical Manual. The traffic study for the proposed project (LAV/Pinnacle Engineering, January 1, 2023), provided traffic volumes in the project vicinity.

The proposed project would generate a total of 1,761 daily trips, based on the proposed project's traffic study. The proposed project generated daily trips would contribute an additional 27 percent to the existing total average daily trips (i.e., 11,078) on State Route 14, and increase the traffic noise level 1.05 dBA. This level of noise increase that would be associated with State Route 14 would not likely be perceptible in an outdoor environment.

Existing 2022 Roadway with Proposed Project

Table 4.13-13: Existing Roadway with Proposed Project Noise Levels, lists the existing baseline and existing baseline plus project traffic noise levels modelled for the local roadways and highway in the project area. Adding the project traffic to the existing conditions would result in increases in the traffic noise levels from 2.0 to 8.3 dBA compared to the corresponding baseline traffic noise level. Among these roadway segments, only Backus Road between SB-14 northbound ramps and Sierra Highway has existing residences along the roadway segment. The existing baseline plus

project traffic noise levels along this roadway segment would increase by a noise level of more than 5 dBA, which is considered to be a readily perceivable increase. Therefore, the project would result in a significant and unavoidable traffic noise impact to off-site land uses for the Backus Rd between State Route 14 NB Ramps & Sierra highway roadway segment.

Table 4.13-13: Existing Roadway with Proposed Project Noise Levels

Roadway Segment	Traffic Noise Levels (dBA CNEL)			
	Existing (2022) ^a	Existing (2022) with Project	Increase over Existing	Significant Increase?
Backus Rd between SR-14 SB Ramp & State Route 14 NB Ramps	67.6	69.6	2.0	No
Backus Rd between SR-14 NB Ramps & Sierra Highway	59.8	68.4	8.3	Yes
Sierra Highway between Backus Rd & Sopp Rd	67.1	72.0	4.8	No
Sopp Rd between Sierra Highway & Lone Butte Rd	64.3	71.7	7.3	Yes^b

SOURCE: ESA 2022

Decibel levels were calculated at a distance of 30 feet from the roadway centerline.

a Traffic study prepared for the proposed project identified 2022 traffic volumes as existing conditions.

b Although the increase is significant, ultimately it is not an impact since there are no sensitive receptors along this segment.

Opening Year 2026 Roadway with Proposed Project²

Table 4.13-14: Year 2026 Roadway with Proposed Project Noise Levels, lists the opening year (2026) baseline and baseline plus project traffic noise levels. Adding the project traffic to the opening year conditions would result in increases in the traffic noise levels from 2.3 to 8.4 dBA compared to the corresponding baseline traffic noise level. As stated above only Backus Rd between State Route 14 NB Ramps & Sierra highway roadway segment would have residences and result in a noise level increase of more than 5 dBA. The proposed project's opening year (2026) baseline plus project traffic noise levels would result in a significant and unavoidable impact to off-site land uses for the Backus Rd between State Route 14 NB Ramps & Sierra highway roadway segment.

Table 4.13-14: Year 2026 Roadway with Proposed Project Noise Levels^a

Roadway Segment	Traffic Noise Levels (dBA CNEL)			
	Opening Year (2026)	Opening Year (2026) with Project	Increase over 2026 Baseline	Significant Increase?
Backus Rd between State Route 14 SB Ramp & State Route 14 NB Ramps	67.8	70.1	2.3	No
Backus Rd between State Route 14 NB Ramps & Sierra Highway	60.0	68.4	8.4	Yes
Sierra Highway between Backus Rd & Sopp Rd	67.3	72.0	4.7	No
Sopp Rd between Sierra Highway & Lone butte Rd	64.5	72.2	7.7	Yes^a

² At the time of the Noise & Vibration Impact Study the Project's construction and operational year were estimated to occur from 2023 to 2025.

SOURCE: ESA 2022

NOTES: Decibel levels were calculated at a distance of 30 feet from the roadway centerline.

^a At the time of the Noise & Vibration Impact Study the Project's construction and operational year were estimated to occur from 2023 to 2025.

^b Although, the increase is significant, ultimately it is not an impact since there are sensitive receptors along this segment

Overall, the proposed project would contribute to potentially significant traffic noise impacts under the existing with Project and 2026 with Project conditions. SR-14 is a national route designated for larger trucks (Appendix N1). Alternative traffic routes to and from SR-14 include Backus, Dawn, and Silver Queen Road. SR-14 to Dawn Road and to and from the proposed project is currently the only route where sensitive receptors are not located. The proposed project could decrease traffic noise impacts along Backus Road between SR-14 NB Ramps and Sierra Highway and along Sierra Highway between Backus Road and Sopp Road if roadway improvements were made to the alternative traffic route from State Route 14 at Dawn Road, south of the project site. However, currently Dawn Road from Sierra Highway to the SR-14 freeway interchange is not paved or surfaced with base material (Appendix N1). Until the County adopts a mechanism to collect fees for roadway improvements, there is no mechanism for the proposed project to contribute a fee for its fair share of the exceedance for roadway improvements to Dawn Road from Sierra Highway to the SR-14 freeway interchange. Therefore, no feasible mitigation measure is available and impacts would be significant and unavoidable in this regard.

Noise Impacts from On-Site Land Uses

The proposed micro mill facility would have customers coming to the project site. There would be noise-generating activities, such as loading/unloading, slow-moving vehicles, engine-starting before vehicles driving off, and customer conversation in the parking area.

Residences near R2, approximately 440 feet to the northwest, are the closest off-site noise-sensitive uses to the onsite parking activity and slow-moving vehicles that would be at the project site.

Loading/unloading activity generates approximately 75 dBA at a distance of 50 feet. Slow-moving vehicles generate approximately 60 to 65 dBA when passing at a distance of 15 feet. Engine start-up generate approximately 70 to 75 dBA at 15 feet. At a distance of 440 feet, the noise level would be reduced by 29 dBA and 19 dBA, when compared to the noise level at 15 feet and 50 feet, respectively.

Therefore, slow-moving vehicles would result in noise levels up to 36 dBA at the nearest residences located near R2. Engine start-up would result in noise levels up to 46 dBA at the nearest residences located near R2. Loading/unloading activity noise would be reduced to 49 dBA at 1,000 feet.

The Kern County Code states that, for noise-generating events that last a cumulative period of more than one minute (but less than 5 minutes) in any hour, the exterior noise standard for residential uses would be 55 dBA plus 15 dBA during daytime hours (7 a.m. to 10 p.m.), or 70 dBA, and 45 dBA plus 15 dBA during the nighttime hours (10 p.m. to 7 a.m. next morning), or 60 dBA. None of the stationary noise sources on the project site would result in noise levels at off-site sensitive receptors that would exceed these noise thresholds. Therefore, impacts from on-site land uses would be less than significant.

Traffic Noise Impacts on On-site Land Uses

The proposed project includes a micro mill facility on the project site and is not considered a noise-sensitive land use. No noise impacts to proposed on-site land uses would occur. Based on the U.S. EPA Levels Document, standard buildings in warm climate areas would provide a 24 dBA exterior-to-interior noise attenuation with windows and doors closed, and 12 dBA noise attenuation with windows open. Because the proposed use is not noise-sensitive, no interior noise impact would occur.

Off-Site Improvements - SCE

Operational Noise

The power and telecommunications lines represent an infrastructure project that, once constructed, would not generate any appreciable noise levels. As such long-term operation of the power and telecommunication lines would not result in an increase in ambient noise levels. During operation of the power and telecommunication lines, minimal amounts of noise could be generated from periodic inspections and maintenance and would not represent a doubling of traffic noise volumes and therefore would not result in any noticeable increase in noise levels. Impacts from the power and telecommunication lines would not result in a temporary or permanent substantial increase in noise levels and impacts would be less than significant.

Mitigation Measures

MM 4.13-1: The following measures are recommended to reduce short-term noise levels associated with project construction:

- a. Construction activities at the project site may operate with no hourly restrictions. The hours, as specified in the Kern County Noise Ordinance (Municipal Ordinance Code 8.36.020), are waived. Non-essential construction or operational noise, such as loud speakers for outdoor music, are prohibited except with written permission from the Kern County Planning and Natural Resources Department.
- b. Equipment staging and laydown areas shall be located at the furthest practical distance from nearby residential land uses. To the extent possible, staging and laydown areas should be located at least 500 feet of existing residential dwellings.
- c. Where feasible construction equipment shall be fitted with approved noise-reduction features such as mufflers, baffles and engine shrouds that are no less effective than those originally installed by the manufacturer.
- d. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing).
- e. On-site vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency).
- f. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health's safety requirements

are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.

MM 4.13-2: The following notes shall be placed on all grading and building permits issued for the project site:

Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.

During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

All equipment shall be fitted with factory equipped mufflers, and be in good working condition. Construction contracts shall specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.

Level of Significance after Mitigation

Even with implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2, operational and construction traffic noise impacts would remain significant and unavoidable to off-site land uses for the Backus Rd between State Route 14 NB Ramps & Sierra highway roadway segment. No additional mitigation measures are feasible.

Impact 4.13-2: The project would generate excessive ground borne vibration or ground borne noise levels.

Micro Mill

Construction Vibration

In addition to noise, groundborne vibration and groundborne noise would be generated by project construction. Because vibration level in root-mean-square (RMS) velocity is best for characterizing human response to building vibration and vibration level in peak particle velocity (PPV) is best used to characterize potential for damage, this construction vibration impact analysis discusses the human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (inch/sec).

It is anticipated that the greatest levels of vibration would occur during the project site preparation phase. All other phases are expected to result in lower vibration levels.

Existing vibration sensitive uses in the project vicinity include:

- Residences to the northwest: evaluated at a distance of 1,060 feet from the project (-48 VdB);

- Residences to the northwest: evaluated at a distance of 440 feet from the project (-37 VdB)³.

Bulldozers and other heavy-tracked construction equipment generate approximately 87 VdB of groundborne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment (FTA, 2018). This level of groundborne vibration exceeds the threshold of human perception, which is around 65 VdB. Although this range of groundborne vibration levels would result in potential annoyance to residential buildings adjacent to the project site, they would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside the residential buildings in the project vicinity).

Table 4.13-5, above under Section 4.13-4, *Methodology*, outlines the FTA thresholds for construction vibration damage depending on building type. **Table 4.13-15: *Vibration Source Amplitudes for Construction Equipment***, shows the PPV values at 25 feet from the construction vibration source as well as vibration levels in terms of VdB at 25 feet from the construction vibration source. The equipment included in the table are expected to be used on the project site.

Table 4.13-15: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L _v at 25 Feet	
	PPV (inch/sec)	L _v (VdB)
Vibratory Roller	0.210	94
Earth Mover	0.011	69
Excavator	0.047	81
Fork Lift	0.047	81
Wheel Loader	0.076	86
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
JackHammer	0.035	79
Small Bulldozer	0.003	58

SOURCE: Federal Transit Administration, *Transit Noise and vibration Impact Assessment* (2018), Table 12-2.
 Equipment and associated source vibration levels that are expected to be used on the project site are shown in bold.
 PPV = peak particle velocity; L_v = velocity in decibels; inch/sec = inches per second; VdB = vibration velocity decibels.

Structural Damages

Based on **Table 4.13-5**, it would take a vibration PPV level of more than 0.5 inch/sec (or 102 VdB) to potentially result in any building damage. **Table 4.13-15** above shows that none of the construction activities anticipated on the project site would result in a vibration level that would reach 0.5 inch/sec PPV (or 102 VdB) at 25 feet from each of the project construction equipment and/or activities. At a distance of 440 feet from the project, these vibration levels would be attenuated to 0.007 in/sec PPV (or 65 VdB). Other off-site buildings are farther away from the project site and would be exposed to even lower construction vibration levels. Therefore, no

³ The nearest residential structure is located approximately 1,000 feet from the project site. However, the analysis conservatively uses a distance of 440 feet, which is the distance from the project site boundary to the location of the ambient noise level measurement representing location RS. The use of 440 feet in the analysis results in a conservative assessment.

building damage would occur as a result of the project construction and impacts would be less than significant.

Human Annoyance

Table 4.13-16: Summary of Construction Equipment and Activity Vibration, lists the projected vibration levels from various construction equipment expected to be used on the project site attenuated to the locations of sensitive uses in the project vicinity. For the project construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. With the vibration attenuation through distance divergence, the vibration from project construction would be reduced by 37 VdB at the nearest residential buildings to the project site. The highest construction vibration levels at residential buildings to the project site would be 50 VdB or lower.

Table 4.13-16: Summary of Construction Equipment and Activity Vibration

Equipment/Activity	Vibration Level (VdB)			
	At 25 Feet	Distance Attenuation	Intervening Structure ^a	Maximum Vibration Level
<i>Residences to the Northwest (1,060 feet)</i>				
Large dozers, front end loaders, grader, backhoe ^b	87	48	0	39
Loaded trucks	86	48	0	38
Jackhammers, forklift	79	48	0	31
<i>Residences to the Northwest (440 feet)^c</i>				
Large dozers, front end loaders, grader, backhoe ^b	87	37	0	50
Loaded trucks	86	37	0	49
Jackhammers, forklift	79	37	0	42

SOURCE: Compiled by ESA (2021).
The FTA recommended building damage threshold is 0.2 inch/sec or approximately 94 VdB at the receiving property structure or building.
^a No intervening structure that would provide a damping effect on vibration.
^b Large bulldozer represents the construction equipment with the highest vibration potential that would be used on site. Other equipment would result in a lower vibration when compared to that of large bulldozers.
^c The nearest residential structure is located approximately 1,000 feet from the project site. However, the analysis conservatively uses a distance 440 feet, which is the distance from the project site boundary to the location of the ambient noise level measurement representing location R2

This range of vibration levels from construction equipment or activity would be below the FTA threshold of 94 VdB (or 0.2 inch/sec PPV) for building damage. No significant construction vibration impacts would occur; therefore, no mitigation would be required.

As shown in **Table 4.13-16**, all construction equipment vibration levels would not exceed the FTA's 78 VdB threshold at the nearest noise-sensitive receiver locations during daytime hours or the FTA's 84 VdB threshold for annoyance of occupants in residential buildings. Therefore, impacts would be less than significant.

Operational Vibration

The proposed project proposes the development of industrial uses that would not generate substantial ground vibration. No operational vibration impacts would occur.

Off-site Improvements – SCE

Construction Vibration

Because vibration level in RMS is best for characterizing human response to building vibration and vibration level in PPV is best used to characterize potential for damage, this construction vibration impact analysis discusses the human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (inch/sec).

It is anticipated that the greatest levels of vibration would occur during the preparation phase. All other phases are expected to result in lower vibration levels.

Existing vibration sensitive uses in the project vicinity include:

- Location R1: Residences to the northwest: evaluated at a distance of 2,800 feet from power and telecommunications line construction
- Location R2: Residences to the northwest: evaluated at a distance of 2,600 feet from power and telecommunications line construction.
- Location R3: Residences to the north and south: evaluated at a distance of 75 feet from power and telecommunications line construction.
 - Measurement R3 was taken to supplement the noise analysis conducted for the SCE power and telecommunication lines, which will extend further south than the proposed Micro Mill site and affect sensitive receptors located along Rosamond Boulevard. This location represents the closest sensitive receptor at approximately 75 feet. Because vibration impacts occur normally within the buildings, the distance to the nearest sensitive uses, for vibration impact analysis purposes, is measured between the nearest off-site sensitive use buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary).

Table 4.13-15, further shows the PPV values at 25 feet from the construction vibration source as well as vibration levels in terms of VdB at 25 feet from the construction vibration source.

Structural Damages

As indicated in Tables 3 and 4 in Appendix N2, it would take a vibration PPV level of more than 0.2 inch/sec to potentially result in any building damage. **Table 4.13-17, Summary of Construction Equipment and Activity Vibration – Structural Damage**, shows that none of the construction activities anticipated on the project site would result in a vibration level that would reach 0.2 inch/sec PPV at 25 feet from each of the project construction equipment and/or activities. At a distance of 75 feet from the project, these vibration levels would be attenuated to 0.024 in/sec PPV. Other off-site buildings are farther away from the project site and would be exposed to even lower

construction vibration levels. Therefore, no building damage would occur as a result of the project construction.

Table 4.13-17: Summary of Construction Equipment and Activity Vibration -Structural Damage

Equipment/Activity	Vibration Level (in/sec)				
	At 25 Feet	Distance Attenuation	Maximum Vibration Level at 75 Feet	Structural Damage Threshold	Exceeds Threshold?
<i>R3- Residences along Rosamond Boulevard^a</i>					
Large dozers, front end loaders, grader, backhoe ^b	0.089	0.072	0.017	0.2	No
Loaded trucks	0.076	0.061	0.015	0.2	No
Jackhammers, forklift	0.035	0.028	0.007	0.2	No
Source: ESA 2023					
^a R3 represents the nearest building, which are the residential buildings located along Rosamond Boulevard. All other off-site buildings are farther away and would be exposed to lower construction vibration levels.					
^b Large bulldozer represents the construction equipment with the highest vibration potential that would be used on site. Other equipment would result in a lower vibration when compared to that of large bulldozers.					

Human Annoyance

Vibration levels from standard construction equipment are shown in **Table 4.13-15**. Vibration propagates through soil or other ground surfaces in the vicinity of the project site is shown below:

$$\text{LvdB (D)} = \text{LvdB (25 feet)} - 30 \log (D/25)$$

A vibration level at 50 feet is 9 VdB lower than the vibration level at 25 feet. Vibration at 100 feet from the source is 18 VdB lower than the vibration level at 25 feet. Therefore, receptors at 50 feet from the construction activity may be exposed to groundborne vibration up to 78 VdB (or 0.030 inch/sec PPV or lower). Receptors at 100 feet from the source may be exposed to groundborne vibration up to 69 VdB.

Table 4.13-18: Summary of Construction Equipment and Activity Vibration – Human Annoyance, lists the projected vibration levels from various construction equipment expected to be used on the project site attenuated to the locations of sensitive uses in the project vicinity. For the project construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. With the vibration attenuation through distance divergence, the vibration from project construction would be reduced by 14 VdB at the nearest residential buildings to the project site. The highest construction vibration levels at residential buildings to the project site would be 73 VdB or lower.

Table 4.13-18: Summary of Construction Equipment and Activity Vibration – Human Annoyance

Equipment/Activity	Vibration Level (in/sec)				
	At 25 Feet	Distance Attenuation	Maximum Vibration Level at 75 Feet	Structural Damage Threshold ^a	Exceeds Threshold?
<i>R3- Residences along Rosamond Boulevard^b</i>					
Large dozers, front end loaders, grader, backhoe ^c	87	14	73	75	No
Loaded trucks	86	14	72	75	No
Jackhammers, forklift	79	14	65	75	No
Source: Compiled by ESA (2021)					
^a Based on FTA's threshold for occasional events at residential buildings. The occasional events threshold is appropriate considering the power and telecommunications line construction would move constantly as power poles are completed.					

b R3 represents the nearest sensitive receptors, which are the residences located along Rosamond Boulevard. All other receptors are farther away and would be exposed to lower construction vibration levels.

c Larger bulldozer represents the construction equipment with the highest vibration potential that would be used on site. Other equipment would result in a lower.

As shown in above in **Table 4.13-18**, all construction equipment vibration levels would not exceed the FTA's 75 VdB threshold for occasional events at the nearest noise-sensitive receiver locations and impacts would be less than significant.

Summary of Construction Vibration Impacts

Tables 4.13-15 and **4.13-18** list the maximum vibration levels that would result from the on-site construction equipment. The projected maximum construction vibration level during project construction at the nearest noise-sensitive receiver locations would not exceed the FTA's vibration standards of 0.2 in/sec for structural damage to nonengineered timber and masonry buildings or 75 VdB for occasional events for sensitive uses related to human annoyance (residences). Therefore, no significant construction vibration impacts would occur.

Operational Vibration

The power and telecommunication lines propose the development of infrastructure that would not generate substantial ground vibration. No operational vibration impacts would occur.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.13-3: The project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

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Operation Noise Impacts from On-Site Operations

As identified above under Impact 4.13-1, the worst-case combined noise level during project operation would be $(75 + 81 + 76 + 85 + 85 + 75 + 78 + 78 =) 89.9$ dBA L_{\max} at a distance of 50 feet from the active construction area. Including the individual usage factor for each piece of the equipment operating over a period of one hour, the combined equivalent continuous noise level from these eight pieces of equipment would result in 86.2 dBA L_{eq} at a distance of 50 feet.

Existing noise sensitive uses in the project vicinity include:

- Residences to the northwest (R1) evaluated at a distance of 1,060 feet from the project, and
- Residences to the northwest (R2) evaluated at a distance of 440 feet from the project.

As stated previously, sound levels are generated from a source, and its decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. Therefore, due to noise attenuation, existing residential uses, R1 and R2, would experience noise levels that would be 26 dBA and 19 dBA, respectively, less than the combined noise level at

50 feet with the distance attenuation. Therefore, noise associated with on-site project operations would be attenuated to below 67.2 dBA L_{eq} . These estimated noise levels are lower than the ambient-based noise thresholds (73.9 dBA L_{eq} at R1 and 70.6 dBA L_{eq} at R2) at the nearest residences to the northwest of the project site. Therefore, operational noise impacts from on-site operations would not exceed ambient-based noise thresholds and impacts would be less than significant.

Traffic Noise Impacts on Off-Site Land Uses

As identified above in **Table 4.13-9**, the existing baseline and existing baseline plus project traffic noise levels modelled for the local roadways and highway in the project area. Adding the project traffic to the existing conditions would result in increases in the traffic noise levels from 2.0 to 8.3 dBA compared to the corresponding baseline traffic noise level. The existing baseline plus project traffic noise levels along Backus Rd between State Route 14 NB Ramps & Sierra Highway and Sopp Rd between Sierra Highway & Lone Butte Rd roadway segments would increase by a noise level of more than 5 dBA, which is considered to be a readily perceivable increase above the ambient condition. Therefore, the project would result in a significant and unavoidable impact from operational traffic noise.

Off-Site Improvements – SCE

Operational Noise

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. Construction and ground disturbance activities within the already disturbed utility easements and corridors would be temporary, but nonetheless, SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to generation of ambient noise, and implement any existing best management practices and adopted minimization measures. Once operational, these upgraded utility structures are not anticipated to result in a substantial permanent increase in ambient noise levels.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be considered significant and unavoidable due to operational traffic noise generated by the project.

Impact 4.13-4: The project would be located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.

The proposed project is not located within an Airport Sphere of Influence (SOI) of any existing airport, per the Kern County Airport Land Use Compatibility Plan (ALUCP), with the nearest airports being the Rosamond Sky Park located approximately 5.5 miles southwest of the project site and the Mojave Air and Space Port located approximately 8 miles north of the project site. Therefore, impacts are less than significant and no mitigation would be required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

As described in Section 3.9, *Cumulative Projects*, and listed in **Table 3-3, Cumulative Projects List**, there are a total of 36 projects in the vicinity to the project site, which include other solar projects and some development projects. Due to the localized nature of noise impacts, cumulative impacts would be largely limited to areas within the general vicinity (i.e., within approximately 1,000 feet per Chapter 8.36 of Kern County Code of Ordinances (County of Kern, 2010b) of the project site.

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Construction Noise

The proposed project's construction activities, in combination with the construction of other reasonably foreseeable projects in the area could result in increased short-term construction noise levels in the project area (depending upon the specific timing of the construction of those other projects and proximity to the project site). Construction activities associated with other projects in proximity to the project site could occur at the same time as the proposed project. As noted above, despite implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2 construction noise impacts would remain significant and unavoidable.

Any future projects would be required to comply with the Kern County Code of Ordinances (Chapter– Noise Control) establishes hours of construction and limitations on construction-related noise impacts on adjacent sensitive receptors; noise producing construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, if the construction site is within 1,000 feet of an occupied residential dwelling, are prohibited between the hours of 9:00 p.m. to 6:00 a.m. on weekdays, and 9:00 p.m. to 8:00 a.m. on weekends. Such noise producing construction activities occurring outside of these acceptable construction hours is considered to be a violation of the County's noise control ordinance. However, as previously stipulated, the following exceptions are permitted: (1) The resource management director or a designated representative may for good cause exempt some construction work for a

limited time, and (2) Emergency work is exempt from this section. Construction activities associated with other projects in proximity to the project site similarly would be subject to the County's noise control ordinance. As provided in MM 4.13-1, construction activities at the project site may operate with no hourly restrictions. However, despite implementation of MM 4.13-1 and MM 4.13-2, impacts from off-site construction noise would remain significant and unavoidable. Therefore, when considered with other past, present, and reasonably foreseeable future projects, the proposed project would result in a cumulatively considerable contribution to construction noise impacts.

Cumulative construction may also result in the exposure of people to or the generation of excessive groundborne vibration. The same receptor as identified for construction noise would be the closest to be impacted by all projects with respect to construction related vibration as well. Due to these distances, and the rapid attenuation of groundborne vibration, the project and the nearest related project are not in close enough proximity to this sensitive receptor such that any sensitive receptor would be exposed to substantial groundborne vibration levels. Therefore, cumulative impact in terms of groundborne vibration would be less than significant.

Operational Noise

As detailed above under Impact 4.13-1, the operational phase of the project was found to have a significant and unavoidable project level traffic noise impact to off-site land uses along the Backus Road between SR-14 northbound ramps and Sierra Highway roadway segment.

Cumulative operational impacts associated with year 2042 plus project noise levels are outlined below in **Table 4.13-19: Year 2042 Roadway with Proposed Project Noise Level**.

Table 4.13-19: Year 2042 Roadway with Proposed Project Noise Levels

Roadway Segment	Traffic Noise Levels (dBA CNEL)			
	Cumulative Year (2042)	Cumulative Year (2042) with Project	Increase over 2042 Baseline	Significant Increase?
Backus Rd between State Route 14 SB Ramp & State Route 14 NB Ramps	69.3	70.7	1.5	No
Backus Rd between State Route 14 NB Ramps & Sierra Highway	63.0	68.8	5.8	Yes
Sierra Highway between Backus Rd & Sopp Rd	68.8	72.6	3.8	No
Sopp Rd between Sierra Highway & Lone Butte Rd	66.0	72.1	6.1	Yes^a

SOURCE: ESA 2022

NOTES: Decibel levels were calculated at a distance of 30 feet from the roadway centerline.

^a Although, the increase is significant, ultimately it is not an impact since there are no sensitive receptors along this segment.

Table 4.13-19, lists the future cumulative year (2042) baseline and baseline plus project traffic noise levels. Among these roadway segments, with a noise level increase of more than 5 dBA, only Backus Road between SR-14 northbound ramps and Sierra Highway has existing residences. The future cumulative year (2042) baseline plus project traffic noise levels along this roadway segment would increase by a noise level of more than 5 dBA, which is considered to be a readily perceivable

increase. The proposed project's future cumulative year (2042) plus project traffic noise levels would contribute a significant impact along this roadway segment.

Table 4.13-20, *Cumulative Roadway with Proposed Project Noise Levels*, lists the existing (2023) and cumulative year (2042) baseline plus project traffic noise levels.

Table 4.13-20: Cumulative Roadway with Proposed Project Noise Levels

Roadway Segment	Traffic Noise Levels (dBA CNEL)			
	Existing (2023)	2042 with Project	Increase over 2042 Baseline	Significant Increase?
Backus Rd between State Route 14 SB Ramp & State Route 14 NB Ramps	67.6	70.7	3.2	No
Backus Rd between State Route 14 NB Ramps & Sierra Highway	61.3	68.8	7.5	Yes
Sierra Highway between Backus Rd & Sopp Rd	67.1	72.6	5.5	Yes
Sopp Rd between Sierra Highway & Lone Butte Rd	64.3	72.1	7.8	Yes ^a

SOURCE: ESA 2022

NOTES: Decibel levels were calculated at a distance of 30 feet from the roadway centerline.

^a Although, the increase is significant, ultimately it is not an impact since there are no sensitive receptors along this segment

Although it is an unlikely scenario, the cumulative with Project conditions compared to the existing baseline condition would result in increases in the traffic noise levels from 3.2 to 7.8 dBA. Among these roadway segments, Backus Road between SR-14 northbound ramps and Sierra Highway and Sierra Highway between Backus Road and Sopp Road have existing residences along their corresponding segments. The cumulative year (2042) cumulative condition traffic noise levels along this roadway segment would increase by a noise level of 7.5 and 5.5 dBA which would be a readily perceivable increase. Therefore, the proposed project's contribution to future traffic noise levels would be cumulatively considerable, the cumulative impact would be significant.

Off-site Improvements – SCE

As discussed previously, the re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. Construction of new transmission equipment would involve temporary ground disturbance and resultant noise and vibration within the existing utility easements and corridors, however once these upgrade poles and circuits are fully operational, they are not expected to result in a long-term, cumulative impact on noise and vibration. These necessary improvements are small parts of that overall project and when considered with other past, present and future projects, these improvements would not be cumulatively considerable. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.13-1 and MM 4.13-2.

Level of Significance after Mitigation

Even with the implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2, cumulative impacts would be considered significant and unavoidable.

Section 4.14

Population and Housing

4.14.1 Introduction

This section of the Draft Environmental Impact Report (EIR) addresses potential impacts of the Mojave Micro Mill project (proposed project) on population, housing, and employment at the project site and provides an overview of current population estimates, projected population growth, current housing, employment trends, and the regulatory setting.

Sources of information and data provided in this section include, but are not limited to, the Kern County General Plan and Housing Element, and demographic information from the California Department of Finance (DOF), and the U.S. Census Bureau. The Census and California DOF information is source information in the Regional Growth Forecasts for Kern Council of Governments (Kern COG), Methodology and Forecasts 2020 to 2050 (December, 2019).

4.14.2 Environmental Setting

Population

According to the latest Census Data, the population in Kern County was estimated to be 909,235 persons as of April 1, 2020 (Census, 2023). The 2010 Census reported the population in Kern County to be 839,631 persons as of April 1, 2010 (Census, 2023). That is an approximately 1.0829 percent increase from 2010 to 2020. The Regional Growth Forecasts for Kern COG estimates the population in 2030 to be 1,025,700, which equates to a ten-year increase of approximately 116,465 persons, or a 1.1281 percent increase (Kern COG, 2019) from 2020 to 2030. Additionally, the Regional Growth Forecasts report estimates population in 2040 and 2050 to be approximately 1,126,000 and 1,227,200 respectively.

Existing and Projected Housing

Kern County's housing supply totaled 301,009 dwelling units in 2020 and 308,365 dwelling units in 2023. This represents an increase in housing supply of approximately 2.3 percent (7,356/ units). The residential vacancy rate, a translation of the number of unoccupied housing units on the market, is a good indicator of the balance between housing supply and demand in the community. Kern County's vacancy rate is approximately 6.5 percent as of January 1, 2023. The average number of persons per household in the County is 3.07. The DOF estimates that 112,918 dwelling units were located within the unincorporated area of Kern County as of January 1, 2023. These units represent approximately 36.6 percent of the total number of dwelling units within Kern County. The average number of persons per household on the unincorporated area of Kern County is 2.96. Approximately 10 percent of the dwelling units within the area were vacant (DOF, 2023).

Employment

As of October 2023, Kern County had a labor force of 400,300 persons according to preliminary September 2023 data (Employment Development Department [EDD] 2023a). An estimated 30,100 people (approximately 7.5 percent) of the labor force was unemployed. As of September 2023, unemployment rates are at 7.3% in Palmdale (Los Angeles County), 7.4% in Lancaster (Los Angeles County), 7.1% in Tehachapi, 7.4% in the unincorporated community of Mojave, and 8.1% in the unincorporated community of Rosamond (EDD, 2023b). Kern County's current unemployment rate is higher than California's rate (5.1 percent) and higher than the national rate (3.9 percent) for August 2023 (EDD 2023c). The predominant industries for Kern County for employment growth were not available, but information for the Bakersfield metropolitan statistical area (MSA) is. Within this area since March 2022, management of companies and enterprises, ambulatory health care services and city government have the highest degree of job growth. In 2023 the private service providing industry accounted for approximately 52 percent of Bakersfield MSA's employment as of August 2023 (EDD 2023).

4.14.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

California Housing Element Law

California state law requires each city and county to adopt a general plan for future growth containing at least seven mandatory elements, including housing. The housing element, unlike other general plan elements, is required to be updated every five to six years, and is subject to detailed statutory requirements and mandatory review by a state agency, the California Department of Housing and Community Development (HCD, 2019). Housing element law requires local governments to adequately plan to meet their existing and projected housing needs including their share of the regional housing need. The housing element must incorporate policies and identify potential sites that would accommodate the city's/county's share of the regional housing needs. The HCD estimates the relative share of California's projected population growth that would occur in each county in the state based on Department of Finance population projections and historic growth trends. The HCD provides the regional housing need to each of its cities and counties. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations. HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

The council of governments are required to assign regional housing shares to the cities and counties within their region on a similar five-year schedule. At the beginning of each cycle, HCD provides population projections to the council of governments, who then allocates shares to their cities and counties. The shares of the regional need are allocated before the end of the cycle so that the cities and counties can amend their housing elements by the deadline.

Local

Kern County General Plan

The project is located within unincorporated Kern County and is subject to the goals and policies set forth in the Kern County General Plan. The Kern County General Plan is a policy document with planned land use maps and related information designed to provide long-range guidance to County officials making decisions affecting development and the resources of the unincorporated Kern County jurisdiction, excluding the Metropolitan Bakersfield planning area. The Kern County General Plan helps to ensure that day-to-day decisions conform to long-range policies designed to protect and further the public interest related to the County's growth and development. The Kern County General Plan was approved on June 15, 2004, and most recently updated on September 22, 2009. The policies, goals, and implementation measures in the General Plan for population and housing applicable to the proposed project are provided below. As stated in Chapter 2, *Introduction*, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use, Open Space and Conservation Element

Section 1.6. Residential

Goals

Goal 7: Minimize land use conflicts with between residential and resource, commercial, or industrial land.

Policies

Policy 5: Discourage premature urban encroachment into areas of intense agriculture areas.

Policy 11: Provide for an orderly outward expansion of new urban development so that it maintains continuity of existing development, allows for the incremental expansion of infrastructure and public services, minimizes impacts in natural environmental resources, and provides high quality environment for residents and businesses.

Implementation Measures

Measure G: Discretionary project applicants shall provide documentation of adequate public infrastructure and services which include, but are not limited to:

1. Fire Protection.
2. Police protection.
3. Sewage disposal.
4. Water service including quality and quantity.
5. Documentation that water conservation measures have been considered.

Measure I: Discretionary projects located within a Moderate, High, or Extreme Fire Hazard Zone shall abide by building materials and construction requirements set forth by the Kern County Fire Department and Office of Emergency Services.

Section 1.8 Industrial

Policies

Policy 3: The land areas best suited for industrial activity by virtue of their location and other criteria will be protected from residential and other incompatible development.

Policy 8: The County shall give priority to proposed industrial developments where:

- i. Specific uses area proposed in conjunction with submittal of a concurrent precise development plan; and
- ii. Where multiple phases, tenants, or lots are proposed though the adoption of a master precise development plan in conjunction with a General Plan Amendment.

Section 1.10 General Provisions

Goals

Policy 6: The County shall ensure the fair treatment of people of all races, cultures, incomes and age groups with respect to the development, adoption, implementation and enforcement of land use and environmental programs.

Policy 7: In administering land use and environmental programs, the County shall not deny any individual or group the enjoyment of the use of land due to race, sex, color, religion, ethnicity, national origin, ancestry, lawful occupation or age.

Policy 8: The County shall ensure that new industrial uses and activities are sited to avoid or minimize significant hazards to human health and safety in a manner that avoids over concentrating such uses in proximity to schools and residents.

Implementation Measures

Measure A: The Kern Council of Governments (COG) will monitor population growth and its subsequent development effects to identify the distribution of population increases and the capabilities of governmental and public agencies to provide new development with adequate services and facilities in a fiscally acceptable manner.

Kern County General Plan, Housing Element 2015-2023

Kern COG is an association of city and county governments created to address regional transportation issues while protecting the integrity and autonomy of each jurisdiction. Its member agencies include the County and the 11 incorporated cities within Kern County. Under California Housing Element Law, Kern COG is the regional council of governments responsible for allocating the regional housing need to the County. Kern COG adopted a Regional Housing Needs Allocation Plan (RHNA) in June 2014 that establishes housing production goals for each jurisdiction within the region for the period between 2013 and 2023. Future housing needs refer to the projected amount of housing a community is required to plan for during a specified planning period. California's Housing and Community Development Department provides each regional council of

governments its share of the statewide housing need. In turn, all councils of governments are required by State law to determine the portion allocated to each jurisdiction within the region. This allocation process is known as the RHNA in the Kern COG region. The RHNA determines housing needs with a special emphasis on ensuring adequate housing for persons in the very low, low, and moderate income ranges. This assessment allows communities to anticipate growth so that they can grow in a way that enhances quality of life; improves access to jobs, transportation, and housing; and does not adversely affect the environment. Kern COG has determined the total number of units needed in the County by 2023 (the 11-year projection period) is 67,675. For Unincorporated County, the number of units is 21,583, or 31.8 percent of the County total, by 2023.

4.14.4 Impacts and Mitigation Measures

This section describes the methodology used in conducting the CEQA impact analysis for population and housing; the thresholds of significance used in assessing impacts to population and housing; and the assessment of impacts to population and housing, including relevant mitigation measures.

Methodology

The project's potential impacts to population growth associated with the proposed project were evaluated on a qualitative basis. Population, housing, and employment in the project area were evaluated by reviewing the most current data available from the U.S. Census Bureau, DOF, CA EDD, KCGP, the Kern Economic Development Strategy, and the Kern COG. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, state that a project would have a significant impacts on population and housing if it would:

- 1) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- 2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Project Impacts

Impact 4.14-1: The project would induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

The proposed project would provide a substantial amount of new jobs to the area during the construction and operational phases as is consistent with the adopted Kern County General Plan goals, plans, and policies. During the construction phase, which is expected to last approximately 24 months, it is expected that on any given peak construction day, approximately 515 construction employees will be needed. Construction workers are expected to travel to the site from various locations throughout Southern California, and the number of workers expected to relocate to the surrounding area is not expected to be substantial. If temporary housing should be necessary, it is expected that accommodations would be available in the nearby community of Rosamond, Tehachapi, and Lancaster. Therefore, the project would not directly or indirectly induce the development of any new housing or businesses.

Operation of the proposed project would require up to 440 full-time and or part-time staff. Of the 440 employees that will be needed, 417 will be hourly and salaried employees with 23 being third-party employees mostly used for on-site security and slag processing. Implementation of Mitigation Measure MM 4.15-3 encourages all project contractors of the project site to hire at least 50 percent of construction employees from local Kern County communities. The steel manufacturing operations staff will work one of the three eight-hour shifts, which will operate seven days a week while the fabrication operations employees will work one of two eight-hour shifts, Monday through Friday; administrative staff will work from 7:00 am to 5:00 pm, Monday through Friday.

Given the scope of the existing population and available housing in the area, this increase is not considered significant. Typical established local thresholds of significance for housing and population growth pursuant to the CEQA Guidelines, Section 15064.7, include effects that would induce substantial growth or concentration of a population beyond County projections, alter the location, distribution, density, or growth rate of the population beyond that projected in the General Plan Housing Element, result in a substantial increase in demand for additional housing, or create a development that significantly reduces the ability of the County to meet housing objectives set forth in the General Plan Housing Element. The effects of the project in relation to these local thresholds are minimal. Although the project would produce additional electricity through the on-site incidental solar array, the energy generated on site would not exceed overall on-site demand and as a result, not contribute to offsetting the demand for energy that is already projected based on growth in communities around California. Additional factors that would be necessary for population growth in Kern County would include access to public utilities, housing, sufficient transportation capacity, and employment opportunities. Furthermore, local governments can minimize the potential growth-inducing effects of proposed projects through regulatory authority in relation to land use. In addition, the project does not propose the extension of roads or the development of other infrastructures, such as utilities, that would indirectly induce population growth. While impacts would be less than significant, implementation of Mitigation Measure MM 4.15-3 would further reduce the impacts.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along and within existing transmission easements and corridors that have been previously disturbed at the time of original installation by SCE. Beyond the construction and installation phase, operation and maintenance of the upgraded transmission lines would continue through SCE and it is unlikely that a substantial increase in jobs that could subsequently contribute to significant population changes would result. Like the rest of the project, these aspects of the project elements would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Therefore, impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.15-3 (see **Section 4.15, *Public Services*** for full mitigation measure text).

Level of Significance

With implementation of Mitigation Measure MM 4.15-3, impacts would be less than significant.

Impact 4.14-2: The project would displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The proposed project would not displace substantial numbers of existing people or housing. Currently, the project site is undeveloped and located within an industrially dispersed area. Surrounding land uses consist of sparse residential, a solar development, and light industrial. The project site is not located near a city or community where there are a substantial number of people or housing. In fact, the nearest community is the unincorporated community of Rosamond which is approximately 5.5 miles south of the project site. Therefore the proposed project would not displace substantial numbers of existing people or housing, which would necessitate the construction of replacement housing elsewhere and this impact is considered less-than-significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along and within existing transmission easements and corridors that have been previously disturbed at the time of original installation by SCE. Although portions of the existing routes and transmission lines pass through established communities, the construction and installation phase would be temporary and not result in the displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or substantially increase other environmental impacts. Cumulative impacts for a project are considered significant if the incremental effects of the individual projects are considerable when viewed in connection with the effects of past projects, and the effects of other projects located in the vicinity of the project site. As discussed above, as no new residences would be constructed, the proposed project would not increase population. It is anticipated that a substantial amount of the required labor force in the surrounding areas would be used for project construction and the operational phase. While impacts would be less than significant, implementation of Mitigation Measure MM 4.15-3 would further reduce the impacts. The proposed project would not directly increase population or the housing stock. Because the proposed project would not directly increase population and there is a high unemployment rate, the proposed project is not anticipated to result in a direct or indirect impact on population and housing, nor is the proposed project anticipated to be growth inducing. Therefore, the proposed project, in conjunction with the current and reasonably foreseeable projects discussed in **Chapter 3, Project Description**, would not lead to population growth. The employment opportunities provided by the proposed project and other reasonably foreseeable projects would help to provide a balance with the current and projected labor force associated with future conditions. Therefore, cumulative impacts would be less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along and within existing transmission easements and corridors that have been previously disturbed at the time of original installation by SCE. Impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility structures would not contribute to cumulatively considerable impacts and comparatively, these SCE improvements are small parts of the overall project. The employment opportunities provided by the proposed project and other reasonably foreseeable projects would help to provide a balance with the current and projected labor force associated with future conditions. Given these offsite improvements would not result in a cumulatively considerable contribution to cumulative impacts, impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.15-3 (see **Section 4.15 – Public Services** for full mitigation measure).

Level of Significance

With implementation of Mitigation Measure MM 4.15-3, cumulative impacts would be further reduced to less than significant.

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Section 4.15 Public Service

4.15.1 Introduction

This section of the EIR describes the affected environment and regulatory setting pertaining to public services, which include fire and police protection. This section also addresses the potential impacts on public services that would result from implementation of the project and the mitigation measures to reduce these potential impacts. Information for this section was taken from numerous publicly available sources, including websites, databases, and service agency plans.

4.15.2 Environmental Setting

Fire Protection

The Kern County Fire Department (KCFD) provides primary fire protection services, fire prevention, emergency medical, and rescue services to more approximately 839,631 people in unincorporated areas of Kern County and nine incorporated cities (i.e., the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco). KCFD operates 47 full-time fire stations within 7 battalions and is equipped with 58 fire engines, 6 ladder trucks, 54 patrol vehicles, 30 command vehicles, 21 reserve engines and patrols, 6 dozers, 2 helicopters, 3 hazardous material response teams, and other ancillary vehicles and equipment. KCFD is staffed with 621 permanent employees, which includes 521 uniformed firefighters (KCFD, 2023b). KCFD has experienced several budget and staffing cuts in recent years but was approved for a new budget by the Kern Board of Supervisors on August 25, 2020, granting the fire department funds to continue protecting the community (23ABC News, 2020a). Additionally, KCFD was awarded 2.9 million dollars by the Federal Emergency Management Agency (FEMA) from the Assistance to Firefighters Grant for critically needed equipment (23ABC News, 2020b).

The project site is located within Battalion 1, Tehachapi, which serves the southeastern portion of Kern County and is divided by State Route 58 that runs east/west and by State Route 14 that runs north/south. Battalion 1 covers 951,600 acres of which 351,276 acres is State Responsibility Area (SRA) land area, which the California Department of Forestry and Fire Protection (CALFIRE) has a legal responsibility to provide fire protection for this SRA land area (KCFD, 2023a). The California Department of Forestry and Fire Protection (CALFIRE) publishes Fire Hazards Severity Zone Maps for the State Responsibility Areas (SRA); however, the project site is not located within a State Responsibility Area. The project site is in a Local Responsibility Area (LRA) for which the County of Kern is responsible for providing fire protection. The CalFire LRA maps show the project within a moderate Fire Severity Zone. (See **Figure 4.20-1, Fire Hazard Severity Zones for Local Responsibility Areas**, located in **Section 4.20, Wildfire**, of this EIR).

Fire Station No. 15 (Rosamond), located at 3219 35th Street West, is approximately 5.5 miles southwest of the project site and would be the primary responder to a fire or emergency at the project site. In the event of a major fire or when short-staffed, other stations would be called on to

respond, as necessary, including Fire Station No. 14 (Mojave), located at 1953 State Highway 58, Fire Station No. 12 (Tehachapi), located at 800 South Curry Street, and Fire Station No. 13 (Golden Hills), located at 21415 Reeves Street. Information on the four closest fire stations to the project site is included in **Table 4.15-1: List of Nearby Fire Stations**. The table identifies each type of facility, the name and address of the facility, and the approximate distance from the project site. In remote County areas like the project site, the average response time is approximately 21 minutes (CPSM, 2017).

Table 4.15-1: List of Nearby Fire Stations

Agency	Facility	Address	Approximate Distance from Project Site
KCFD	Station No. 15	3219 35 th Street West Rosamond, CA 93560	5.5 miles southwest of the project site
KCFD	Station No. 14	1953 State Highway 58 Mojave, CA 93501	8 miles north of the project site
KCFD	Station No. 12	800 South Curry Street Tehachapi, CA 93561	22 miles northwest of the project site
KCFD	Station No. 13	21415 Reeves Street Tehachapi, CA 93561	23 miles northwest of the project site

Kern County applies and utilizes the National Fire Code set forth by the National Fire Protection Association, the California Fire Code, the California Building Code, and the Kern County Ordinance Code to regulate fire safety.

The Kern County Fiscal Year 2023-2024 Recommended Appropriations from the Fire Department are approximately 216,183,498, which is a 19.46% increase from the fiscal year 2022-2023 adopted appropriations (Kern County, 2023). The 2023-2024 Recommended Budget continues to make funding of the Fire Department a top priority in Kern County.

Kern County has 14 mutual-aid agreements with neighboring fire suppression organizations to further strengthen the emergency services (KCFD, 2020). The KCFD has a mutual aid agreement with the Los Angeles County Fire Department (LACFD) in the event that KCFD is unable to be the primary responder to an emergency. The LACFD has 177 fire stations throughout Los Angeles County. The LACFD is divided into 22 battalions with over 4,947 personnel. The nearest LACFD fire station to the project site is Station No. 112, located at 8812 W. Ave. E-8, Lancaster, approximately 15 miles southwest of the project site (LACFD, 2022).

Emergency Services

The Kern County Emergency Medical Services Division (EMS) is the lead agency for the emergency medical services system in Kern County and is responsible for coordinating all system participants in the County, which include the public, fire departments, ambulance companies, other emergency service providers, hospitals, and Emergency Medical Technician (EMT) training programs throughout the County. The EMS includes a system of services organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to a hospital setting. EMS covers day to day emergencies, disaster medical response planning and preparation, and preventative health care. The department also provides certification

and re-certification for EMT's, paramedics, specialized nurses (MICN), and specialized dispatchers (EMD) (Kern County Public Health Services Department, 2020). The nearest hospitals are the Antelope Valley Medical Center, located at 1600 W. Avenue J in the City of Lancaster approximately 17 miles south of the project site and the Adventist Health Tehachapi Hospital, located at 1100 Magellan Drive in the City of Tehachapi approximately 22 miles northwest of the project site.

Law Enforcement Protection

Kern County Sheriff's Department

The Kern County Sheriff's Office (KCSO) provides basic law enforcement services in the unincorporated areas of the County, which includes the project area. The KCSO enforces local, State, and federal laws and is responsible for crime prevention, field patrol (ground and air), crime investigation, the apprehension of offenders, regulation of noncriminal activity, and related support services such as, patrolling off-highway vehicle recreation areas in the desert and mountainous areas of the County. Traffic and parking control functions are also provided along with some investigation of property damage reports and traffic accidents. Complete investigations are conducted for injury, fatal, intoxication-related, and hit and run accidents.

The KCSO currently employs 1,202 people, including 567 authorized deputy sheriff positions, 338 detention deputy positions, and 297 sheriff's professional support staff and serves over 890,000 people in the Kern County area (KCSO, 2022). The headquarters for the KCSO is located at 1350 Norris Road in the City of Bakersfield. The KCSO consists of 14 substations that provide patrol services (KCSO, 2022). The nearest substation that would provide service to the project site is the Rosamond Substation located approximately 5.5 miles south of the project site, at 3179 35th Street West in the unincorporated community of Rosamond. This substation provides services to approximately 20,000 residents in the southeastern most end of Kern County (KCSO, 2021c). Other substations in proximity to the project site include the Mojave Substation, Tehachapi Substation and Boron Substation. Information on the four closest substations to the project site is included in **Table 4.15-2, List of Nearby Sheriff Substations**.

Table 4.15-2: List of Nearby Sheriff Substations

Agency	Facility	Address	Approximate Distance from Project Site
KCSO	Rosamond Substation	3179 35 th Street West Rosamond, CA 93560	5 miles southwest of the project site
KCSO	Mojave Substation	1771 State Highway 58 Mojave, CA 93501	8 miles north of the project site
KCSO	Tehachapi Substation	22209 Old Town Road Tehachapi, CA 93581	25 miles northwest of the project site
KCSO	Boron Substation	26949 Cote Street Boron, CA 93516	28 miles east of the project site

The KCSO strives to respond to calls as quickly as possible. Life-threatening calls that involve a danger to someone's personal safety are given first priority. Response time is defined as the time

required to respond to a call for service, measured from the time a call is received until the time a patrol car arrives at the scene. Response times naturally vary depending on the severity of the call, available staff, and location of patrol car. Average response time for the KCSO is five minutes or less for an emergency or immediate-response incident (e.g., a crime that is in progress and/or a life-or-death situation) and 8 to 10 minutes for routine calls (e.g., a crime that has already occurred and/or an incident that is not life-threatening).

Response time to an emergency at or near the project site would vary depending on the level of demand at the substation at the time of the call. If demand is high, the response time would be longer than the average times given above. The response time for a nonemergency call could be eight minutes or more, depending on staffing and the number of other calls for service. In some areas, response may not occur at all for nonemergency calls due to funding deficiencies.

The Kern County Fiscal Year 2023-24 Recommended Budget (County of Kern, 2023) shows a \$10,839, 934, or 17%, decrease in the County's General Fund from Fiscal Year 2022-2023. The 2023-2024 Recommended Budget continues to make funding of the Sheriff's Department, District Attorney's Office, the Public Defender's Office, the Probation Department, and the Fire Department a top priority.

Off-Highway Vehicle (OHV) Enforcement Team

In 2000, the KCSO created the Off-Highway Vehicle (OHV) Enforcement Team that can be deployed to off road riding areas and adjacent communities in Kern County, as needed. The goal of the OHV Enforcement Team is to provide a safe and secure environment for the OHV community and nearby residents, and to help protect sensitive natural resources. Kern County attracts over 800,000 visitors a year to the local OHV riding areas and approximately 500,000 visitors in east Kern area. The OHV Enforcement Team patrols numerous off road riding areas in Kern County, including a popular riding area near a portion of the Pacific Crest Trail that runs through Rosamond, Mojave, and Tehachapi. The OHV Enforcement Team works closely with officers from the Bureau of Land Management (BLM), California State Parks, and other local law enforcement agencies (KCSO, 2022).

California Highway Patrol

As a major statewide law enforcement agency, the California Highway Patrol (CHP) is responsible for managing and regulating traffic for the safe, lawful, and efficient use of California highways. The CHP patrols State highways and all County roadways, enforces traffic regulations, responds to traffic accidents, and provides service and assistance to disabled vehicles. The CHP has a mutual aid agreement with KCSO.

The CHP is divided into eight divisions that provide services in areas of California (CHP, 2023a). The project site is within the jurisdiction of the Inland Division, which includes the most intensely congested roads in the nation at the intersections of Interstates 10, 15, and 215, and Highways 60, 71, 91, and 210 (CHP, 2023b). The nearest Inland Division office to the project site is located at 1313 Highway 58, in the community of Mojave, approximately 7.7 miles northeast of the western project site.

Schools/Parks/Other Public Facilities

The project site is located within the Mojave Unified School District (MUSD), which consists of California City High School, California City Middle School, Hacienda Elementary School, Mojave Junior/Senior High School, Mojave Elementary, Robert P. Ulrich Elementary School, and Mojave Adult School. Other school districts located in the vicinity include Tehachapi Unified School District (7), Mojave Unified School District (9), and Muroc Joint Unified School District (5), which include 25 other school facilities (Kern County Superintendent of Schools, 2021). The closest school to the project site is Rosamond High School, located approximately 5 miles south of the project site.

The Kern County Parks and Recreation Department manages an extensive system of large regional parks designed to serve the entire countywide population, and small neighborhood and community parks intended primarily to meet the recreational needs of nearby residents in unincorporated communities. Kern County Parks & Recreation manages 8 regional parks, 40 neighborhood parks, and 25 public buildings, supervises three golf courses and landscapes 76 county buildings (Kern County, 2022). There are no parks or trails within project site boundaries.

Other public facilities include library facilities, post office facilities, and courthouses. The Kern County Library has 24 branches and 2 mobile libraries, which serve 850,000 residents within the County, including incorporated municipalities (Kern County Library, 2020). Additionally, there are currently 37 post offices that serve the County (United States Postal Service [USPS], 2020). Furthermore, there are currently 12 facilities serving the Superior Court of California in Kern County (Superior Court of California, 2021).

The Kern County Fiscal Year 2023–2024 preliminary recommended budget shows an increase in funding for libraries and parks (County of Kern, 2023).

4.15.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

California Fire Code

The 2022 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operation. Chapter 6 (Building Services and Systems) of the Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed include emergency and standby power systems, electrical equipment, wiring

and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. Features regulated include fire protection systems, fire fighter access to the site and building, means of egress, hazardous materials storage and use and temporary heating equipment and other ignition sources.

California Department of Forestry and Fire Protection (CAL FIRE)

Under Title 14 of the California Code of Regulations (CCR), CAL FIRE has the primary responsibility for implementing wildfire planning and protection for State Responsibility Areas (SRAs). CAL FIRE develops regulations and issues fire-safe clearances for land within a fire district of the SRA. More than 31 million acres of California's privately-owned wildlands are under CAL FIRE's jurisdiction.

CAL FIRE adopted Fire Hazard Severity Zone maps for SRAs and LRAs in 2007. Fire Hazard is a way to measure the physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front. According to the Fire Hazard Severity Zones map published by CAL FIRE, the project site is not located within or near State Responsibility Areas (SRAs) or lands classified as very high fire hazard severity zones. The project site is classified as Local Responsibility Area (LRA), Moderate; thus, the potential for wildfire on the project site exists, but is not considered high (CAL FIRE, 2007).

In addition to wildland fires, CAL FIRE's planning efforts involve responding to other types of emergencies that may occur on a daily basis, including residential or commercial structure fires, automobile accidents, heart attacks, drowning victims, lost hikers, hazardous material spills on highways, train wrecks, floods, and earthquakes. Through contracts with local government, CAL FIRE provides emergency services in 36 of California's 58 counties (CAL FIRE, 2023).

Local

Construction and operation of the project would be subject to applicable policies and regulations including those contained in the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to public services. The policies, goals, and implementation measures in the Kern County General Plan related to public services that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Kern County General Plan

Chapter 1. Land Use, Conservation and Open Space Element

1.4. Public Facilities and Services

Goals

- Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.
- Goal 2: Promote an urban growth pattern in areas where adequate public service infrastructure exists or can be provided.

Policies

- Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.
- Policy 6: The County will ensure adequate fire protection to all Kern County residents.
- Policy 7: The County will ensure adequate police protection to all Kern County residents.
- Policy 8: Environmentally safe locations for the disposal of solid waste will be assured by locating sites in accordance with the criteria set forth in Appendix E of this General Plan.

Implementation Measures

- Measure B: Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.
- Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- Measure D: Involve utility providers in the land use and zoning review process.
- Measure E: Continue to establish coordinated efforts between government entities and private enterprise to identify and preserve unique scenic qualities of existing natural resources and to enhance the image of the County as a whole.

- Measure L: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.
- Measure N: Secure complete and accurate information on all hazardous wastes generated, handled, stored, treated, transported, and disposed of within or through Kern County.

1.8 Industrial

Goals

- Goal 2: Promote the future economic strength and well being of Kern County and its residents without detriment to its environmental quality.
- Goal 3: Ensure compatibility with land use designations such as residential, commercial, or other land uses that may be affected by such activities.

Policies

- Policy 1: Locations for new industrial activities shall be provided with adequate infrastructure (water, sewage disposal systems, roads, drainage, etc.) to minimize effects on County services.
- Policy 3: The land areas best suited for industrial activity by virtue of their location and other criteria will be protected from residential and other incompatible development.
- Policy 5: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.
- Policy 6: Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.
- Policy 13: Where feasible, locate future industrial activities in close proximity to railroad facilities and inter- and intra-State transportation corridors to minimize extensive travel through urban areas and to promote alternative transportation of goods.

Implementation Measures

- Measure A: Evaluation of applications for any General or Specific Plan Amendment to an industrial designation will include sufficient data for review to facilitate desirable new industrial development proposals consistent with General Plan policies, using the following criteria and guidelines:
- i. Location suitability with respect to market demand area.
 - ii. Provision of adequate access, ingress and egress facilities and services, and the mitigation of traffic impacts.
 - iii. Provision of adequate water, sewer, and other public services to be used.
 - iv. Provision of adequate on-site, nonpublic water supply and sewage disposal if no public systems are available or used.

v. Compatibility with adjacent uses (scale, noise, emissions, or other nuisances, etc.) and methods for buffering.

vi. Design, layout, and visual appearance coordinated with existing adjacent industrial uses.

vii. Overall consistency with the General Plan.

Measure G: Require a Specific Plan for industrial land projects (as defined in the Assumptions Section of the Special Treatment Areas) to identify site specific issues and implementation, such as infrastructure, circulation, compatibility, and public services and facilities.

1.10. General Provisions

Goal

Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving viable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Policies

Policy 8: The County shall ensure that new industrial uses and activities are sited to avoid or minimize significant hazards to human health and safety in a manner that avoids over concentrating such uses in proximity to schools and residents.

1.10.1. Public Services and Facilities

Policies

Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure that it generates and upon which it is dependent.

Policy 12: All methods of sewage disposal and water supply shall meet the requirements of the Kern County Environmental Health Services Department and the California Regional Water Quality Control Board. The Environmental Health Department shall periodically review and modify, as necessary, its requirements for sewage disposal and water supply, and shall comply with any new standards adopted by the State for implementation of Government Code Division 7 of the Water Code, Chapter 4.5 (Section 13290-13291.7). (Assembly Bill 885)(2000).

Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to ensure the project. Cost sharing or

other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Chapter 4. Safety Element

Goals

Goal 1: Minimize injuries and loss of life and reduce property damage.

4.6. Wildland and Urban Fire

Policies

Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.

Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.

Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.

Policy 6: All discretionary projects shall comply with the adopted fire code and the requirements of the fire department.

Implementation Measure

Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Kern County Fire Department Wildland Fire Management Plan

The KCFD Wildland Fire Management Plan adopted in 2009 assesses the wildland fire situation throughout the SRA within the County. The Plan includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan systematically assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses. The project site is located within LRA Unzoned (CAL FIRE, 2023).

Kern County Fire Department Hazards Mitigation Plan

The purpose of the KCFD Multi-Jurisdiction Hazard Mitigation Plan (MJHMP) is to guide hazard mitigation planning to better protect the people and property of the County from the effects of hazard events. The plan was also developed to ensure Kern County and participating jurisdictions' continued eligibility for certain federal disaster assistance, specifically the FEMA Hazard Mitigation Assistance (HMA) grants, including the Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), and Flood Mitigation Assistance Program (FMA). This multi-jurisdictional plan includes Kern County, and the incorporated

municipalities Arvin, Bakersfield, California City, Delano, Maricopa, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The plan also covers 37 special districts that include school, recreation and park, water, community service and other districts. The plan was formally adopted in April of 2021 and is required to be updated a minimum of every five years (KCFD, 2021a).

Kern County Fire Code

Chapter 17.32 of the Kern County Municipal Code details the Kern County Fire Code, which is an adoption of the 2022 California Fire Code and the 2021 International Fire Code with some amendments. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release and/or explosion due to handling of dangerous and hazardous materials, conditions hazardous to life or property in the occupancy and use of buildings and premises, the operation, installation, construction, and location of attendant equipment, the installation and maintenance of adequate means of egress, and providing for the issuance of permits and collection of fees therefore (Kern County, 2022).

Kern County Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan was update in April 2022 is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. Additionally, the plan provides an annual report of unit accomplishments, which, in 2022, included completion of the Kern County CWPP, the Kern County Cal VTP-PSA, the Alta Sierra Fuel Modification Project, the Kern River Valley Communities Protection Project, and conducted “Chipper Days” throughout Kern County.

According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas: Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 1 (Tehachapi) and the project site is designated as a moderate fire hazard severity zone within the Tehachapi fire plan management area (KCFD, 2020).

Fire Prevention Standard No. 503–507 Solar Panels

The Kern County Fire Department Fire Prevention Division adopted Standard No. 503–507 Solar Panels (Ground Mounted, Commercial & Residential) on March 27, 2019 and have been updated April 8, 2021. The standard is implemented in accordance with the 2016 CFC and Kern County Ordinance and is an official interpretation of the Kern County Fire Marshal’s Office. This standard uses guidelines from several sources which outline solar panel installation requirements. This standard will be associated with the proper installation of photovoltaic ground mounted and roof mounted solar systems. It will be applied indefinitely and reviewed/revised as part of the new code adoption process or as otherwise necessary. Development of the proposed project’s 63-acre incidental

solar array would mount systems for the modules on steel support posts that would be pile driven into the ground and would therefore comply with the ground mounted requirements of this fire prevention standard. Ground mounted solar panel requirements of this standard include water supply, clearance and combustibles, stationary storage battery/energy storage systems, clean agent system permits, fire extinguisher placement, and emergency vehicle access (KCFD, 2021b).

California State Legislature Active Solar Energy Exclusion

The State of California has provided reduced property taxes for the solar industry. No other industry has this type of property tax reduction outside a local government providing a specific incentive of a development project.

The California Franchise Tax Board's website outlines that the property tax incentive for the installation of an active solar energy system is in the form of a new construction exclusion (California State Board of Equalization, 2020). It is not an exemption. The installation of a qualifying solar energy system will not result in either an increase or a decrease in the assessment of the existing property. The site states:

"Generally, when something of value is physically added to real property, the addition is assessed at current market value and this value is added to the existing base year value of the real property. When an active solar energy system is installed, it is not assessed, meaning that the existing assessment will not increase."

The value of the underlying land and some improvements such as operations and maintenance buildings and battery storage are assessed, but the solar panels and majority of equipment are not. Effective June 20, 2014, the sunset date for the active solar energy system new construction exclusion was extended through the 2023-24 fiscal year. The statute is now scheduled to sunset on January 1, 2025 (CBOE, 2021).

This revenue is only the funding that would normally go to the General Fund to pay for public services and facilities that maintain quality of life for communities and residents in unincorporated Kern County. The Kern County 2022-2023 Recommended Budget details the General Fund, which funds many County operations, as totaling \$826.3 million, a decrease of \$29.2 million, or 3.4% from the 2021-2022 budget. The 2019-2020 budget was the end of a four-year fiscal emergency with a deficit of over \$40 million.

4.15.4 Impacts and Mitigation Measures

Methodology

The methodology used to evaluate potential public services impacts includes the following: (1) evaluation of existing fire and police services and personnel for the fire and law enforcement stations serving the project site; (2) determination of whether the existing fire and law enforcement services and personnel are capable of servicing the proposed project, in addition to the existing population and building stock; and (3) determining whether the proposed project's contribution to the future service population would cause fire or police station(s) to operate beyond service capacity. The determination of the significance of the proposed project on fire protection and emergency medical and police

protection services considers the level of services required by the proposed project and the ability of KCFD and KCSO to provide this level of service and maintain the regular level of service provided throughout the County, which in turn could require the construction of new or expansion of existing facilities. The methodology for this analysis included a review of published information pertaining to KCFD and KCSO. The contribution of the project through established property tax revenues was reviewed to fully document the projects contribution to all government services and facilities that provide for stability in communities and prevent decline of the communities' physical neighborhoods.

As discussed in the Notice of Preparation prepared for the proposed project, impacts to schools and parks would not occur.

During project construction, approximately 515 construction workers would be required during peak buildout. It is anticipated that most of these workers would live in the broader region and commute to the project site from surrounding communities where their children are already enrolled in school and where their contribution to local taxes, including funds for schools, is assessed locally. The proposed project would not require employees or their children to relocate to the project area. Therefore, substantial temporary increases in population that would adversely affect local school populations are not expected.

Similarly, these workers and their families would also be anticipated to use existing recreational resources, and because a substantial increase in population would not occur, there would not be a resultant substantial new demand on existing parks or recreational facilities or demand for new resources. After construction is completed, the operational phase would begin. It is anticipated that this phase would employ approximately 440 employees in total. The total number of employees would include 417 hourly and salaried employees plus 23 third-party employees for on-site security and slag processing services. It is assumed that most of these employees would come from the local urban areas such as Rosamond, Mojave, California City, Boron, Lancaster, and Tehachapi.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on public services.

A project could have a significant adverse effect on public services if it would:

- a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services:
 - i. Fire Protection
 - ii. Law Enforcement Protection
 - iii. Schools
 - iv. Parks
 - v. Other Public Facilities

Project Impacts

Impact 4.15-1: The project would result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services or police protection services.

Fire Protection

Construction

The proposed amount of construction on the project site would consist of a variety of buildings and structures that would make up the totality of the proposed operation. Specifically, this includes the Micro Mill Facility, ancillary buildings, and additional site components which would consist of eight buildings and a solar array.

A maximum of 515 workers per day would be required during construction of the proposed project. The presence of the construction workers would be temporary and anticipated to last approximately 24 months for the project construction period. Additionally, it is anticipated that most of the construction labor would come from the surrounding areas.

Fire protection requirements are based on the number of residents and workers in the KCFD primary service areas. Service demand is primarily tied to population, not building size, because emergency medical calls typically make up the majority of responses provided by the fire department. As the number of residents and workers increases, so does the number of emergency medical calls. There are no residential uses proposed as a part of the project. Therefore, no residents would occupy the project site and an increase in service demands as a result of an increase in residential uses would not occur.

Service demands as a result of personnel onsite would occur during construction of the proposed project. While the construction of the proposed project would increase the number of people on the project site, typically during construction, the increase would be temporary. In addition, fire hazards from the project construction could increase the need for response from fire for emergency services as well as fire protection. Typically, however, service demands per employee are less than service demands per resident. Thus, while the proposed project could increase calls for service above existing levels, the presence of construction workers on the site would be temporary, as the construction period for the proposed project is anticipated to last a total of approximately 24 months.

Fire hazards from the project as a large-scale construction project would increase the need for response from the KCFD for fire protection and emergency services. Although construction would be temporary and short term, fire hazards from the project would potentially increase the need for fire response or emergency services during the construction period. However, as required by Mitigation Measure MM 4.15-1, the project proponent would prepare and implement a Fire Safety Plan that would contain notification procedures and emergency fire precautions consistent with the 2022 California Fire Code and Kern County Fire Code. The Fire Safety Plan would be for use during the construction period and would include emergency fire precautions for vehicles and equipment, as well as implementing fire rules and trainings so temporary employees are equipped

to support handling fire threats. Given the temporary nature of the project's construction phase, impacts to fire protection services and facilities during project construction would be less than significant with implementation of MM 4.15-1.

Operation

Once the facility and all the ancillary buildings and additional site components have been constructed, the operational phase of the proposed project would commence. As stated previously, there would be approximately 440 full-time employees on-site. All activities would be required to comply with the fire safety plan implemented per Mitigation Measure MM 4.15-1 and would help reduce fire risks onsite. In addition, all project facilities would be designed and constructed in accordance with the 2022 California Fire Code and Kern County Fire Code such that fire hazards are reduced and/or avoided.

The project includes six buildings ranging from 475,800 square feet to 4,000 square feet that would be required to have a fire rating in conformance with County and California Building Code standards. The project facilities and on-site production processes are equipped with industry-standard fire suppressant designs where applicable. Since, at some parts of the process, water and other fire suppressants cannot be used, PSG would implement other alternate methods for firefighting that complies with the California Fire Code and approved by the Kern County Fire Department. Additionally, in accordance with Mitigation Measure MM 4.15-1, a fire safety plan would be prepared to ensure the facilities are constructed and operated in accordance with County and California Building Code standards. This would minimize potential impacts to public services and associated fire hazards.

To further reduce impacts the project would implement Mitigation Measure MM 4.15-2, which would require the proponent/operator to work with the County to determine how the use of sales and use taxes from construction of the project can be maximized to support the County. Therefore, due to the short-term and anticipated minimal calls for service and Mitigation Measures MM 4.15-1 and MM 4.15-2, the proposed project would not result in the need for new or physically altered KCFD facilities and impacts would be less than significant.

Law Enforcement Protection

Construction

As described above in **Section 4.15.2, *Environmental Setting***, the KCSO provides primary law enforcement protection services for the project site and surrounding areas. The Rosamond Substation, located approximately 5 miles to the southwest of the project site, would provide primary law enforcement services to the project site. Similar to fire protection services, the need for police protection services would increase during construction of the proposed project as well as after construction.

During construction, the proposed project may attract vandals or present other security risks. However, the project site is located in a relatively remote location surrounded by undeveloped vacant land, agricultural land, and rural residential development and is unlikely to attract attention that would make project facilities susceptible to crime. Thus, a large increase for KCSO services is not expected. However, construction activities may temporarily increase traffic volumes along State Route 14 and Sierra Highway during the approximately 24-month construction period. The

added traffic associated with workers commuting to the project site, haul routes, deliveries, and other project-related traffic would be temporary and, therefore, would not have a significant adverse effect on the KCSO protective service provision or CHP's ability to patrol the highways.

To help further reduce unauthorized access for safety and security purposes, fences would be installed around the perimeter of the proposed project area and temporary pole lighting would be used. All fencing shall comply with all applicable requirements of the Kern County Public Works Department/Building Inspection Division.

While construction of the project would increase the number of people on the project site, the increase would be temporary and, thus, would not substantially increase the service demand for law enforcement protection services in Kern County. Therefore, new or physically altered KCSO facilities would not be required to accommodate the proposed project and impacts to the CHP patrol are not anticipated. Impacts would be less than significant.

Operation

The production of rebar associated with the project does have the potential to be valuable. As a result of the value of the scrap metal and steel rebar, the potential for theft does exist. However, to deter any theft the proposed project site would consist of the following site security measures, a 6-foot high chain link fence perimeter security fence enclosing the entire developed area; security and overhead lighting for parking areas; and a security guardhouse at the new eastern perimeter road designated for truck entry. The project site would be regularly illuminated at night due to the 24-hour manufacturing schedule. The proposed guardhouse would be adjacent to truck scales and signage as indicated on the site plan. All visitors that need to enter the operational locations inside the security fence would require prior security clearance and safety training. In the aggregate, the previously mentioned security procedures and site characteristics would serve as a deterrent for any potential crime, specifically theft, and would minimize the need for surveillance and response by KCSO during project operation.

Due to the security measures implemented by the project and the limited risk within the area the project would not increase services demand for the law enforcement protection in Kern County. Therefore, new or physically altered KCSO facilities would not be required to accommodate the proposed project and impacts to the CHP patrol are not anticipated. Impacts would be less than significant.

Other Public Facilities

Construction

As stated previously, during the construction phase, it is expected that there will be 515 construction workers per day at maximum. These construction workers would likely come from an existing local and/or regional construction labor force and would not likely relocate their households as a consequence of working on the project. If temporary housing should be necessary, it is expected that accommodations would be available in the nearby hotels. Therefore, the short-term increased employment of construction workers on the project site would not result in a notable increase in the residential population and therefore the use of public facilities in the surrounding area. Therefore, project construction workers would not increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor

would project construction require the construction or expansion of recreational facilities which might have an adverse effect on the environment, nor result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Impacts during construction would be less than significant.

Operation

The proposed project operational phase would comprise of approximately 440 employees. The proposed hours of operation overall would be 24-hours a day, 7 days a week, with shifts and staff scheduling differing depending on the job. The primary reinforcing steel manufacturing operations would operate three eight-hour shifts per day with the potential to operate seven days per week. The fabrication operations would consist of two eight-hour shifts, Monday through Friday. Thirty truck drivers, on day shift and afternoon shift, would transport fabricated rebar from the site to construction projects primarily in Southern California with a small percentage of fabricated rebar being transported to the Northern California and south across the border into Mexico. Additionally, administrative office hours would be from 7:00 a.m. to 5:00 p.m.

A portion of employees are anticipated to be drawn from the local labor force and would commute to the project site. Though it is unlikely that the proposed project during the operational phase would bring in employees from outside of the region, the potential does remain, but the impacts to public services would be less than significant. If employees were hired from out of the area and had to relocate to eastern Kern County, the resulting addition of potential families to this area would not result in a substantial increase in the demand on public facilities as accommodations for housing would be available in the nearby communities including Rosamond, Mojave, Lancaster. To ensure impacts would be less than significant the project would implement Mitigation Measure MM 4.15-3, which would encourage all contractors of the project site to hire at least 50 percent of their workers from local Kern County communities.

Therefore, staff required during operation would not increase demand for public facilities such that substantial physical deterioration of such facilities would occur, nor would project construction require the construction or expansion of public facilities which might have an adverse effect on the environment. Thus, the proposed project would not result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios and impacts would be less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site at Sopp Road.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include structures or facilities requiring permanent staffing or visitors on site. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. As such, areas would be covered by the fire safety plan prepared for the project, as required by Mitigation Measure MM 4.15-1 or the appropriate adopted minimization measures as identified in the Edwards Air Force Base (EAFB) Environmental Assessment pertaining to on-base utility corridors. Demand on police protection services would not be greatly increased within the County areas, as construction would not be anticipated to attract or cause incidents such as vandalism, whereas security clearance for on-base construction work would be facilitated by EAFB encroachment managers. As the improved structures would be installed on existing SCE utility easements, impacts to service ratios, response times, or other performance objectives for fire protection services or police protection services would be less than significant.

Mitigation Measures

- MM 4.15-1:** Prior to the issuance of grading or building permits, the project proponent shall develop and implement a Fire Safety Plan for use during construction and operation. The project proponent will submit the Fire Safety Plan, along with maps of the project site and access roads, to the Kern County Fire Department for review and approval. The Fire Safety Plan will contain notification procedures and emergency fire precautions for construction and operations phases of the proposed project.
- MM 4.15-2:** The project proponent/operator shall work with the County to determine how the use of sales and use taxes from construction of the project can be maximized. This process shall include, but is not necessarily limited to, the project proponent/operator obtaining a street address within the unincorporated portion of Kern County for acquisition, purchasing and billing purposes, and registering this address with the State Board of Equalization. As an alternative to the aforementioned process, the project proponent/operator may make arrangements with Kern County for a guaranteed single payment that is equivalent to the amount of sales and use taxes that would have otherwise been received (less any sales and use taxes actually paid); with the amount of the single payment to be determined via a formula approved by Kern County. The project proponent/operator shall allow the County to use this sales tax information publicly for reporting purposes.
- MM 4.15-3:** Prior to the issuance of any building permits on the property, the project operator shall submit a letter detailing the hiring efforts prior to commencement of construction, which encourages all contractors of the project site to hire at least 50 percent of their workers from local Kern County communities. The project operator shall provide the contractors a list of training programs that provide skilled workers and shall require the contractor to advertise locally for available jobs, notifying the training programs of job availability, all in conjunction with normal hiring practices of the contractor.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.15-1 through MM 4.15-3, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or substantially increase other environmental impacts. Cumulative impacts for a project are considered significant if the incremental effects of the individual projects are considerable when viewed in connection with the effects of past projects, and the effects of other projects located in the vicinity of the project site. The cumulative impact analysis area for public services includes the service areas for each of the fire, police and other governmental offices/facilities serving the project site. For both the KCSO and the KCFD, service areas comprise unincorporated areas of Kern County. As discussed above, police and fire service impacts related to the proposed project would be less than significant.

As discussed above, police, fire, and other public service impacts related to the proposed project would be less than significant. To reduce any potential impacts, Mitigation Measures MM 4.15-1 through MM 4.15-3 would be implemented. Mitigation Measure MM 4.15-1 requires implementation of a fire safety plan during project construction and operation that would include notification procedures and emergency fire precautions to help reduce fire risks and the consequential need for fire protection services onsite. Mitigation Measure MM 4.15-2 which would require the proponent/operator to work with the County to determine how the use of sales and use taxes from construction of the project can be maximized to support public facilities in the County. Mitigation Measure MM 4.15-3 would encourage all contractors of the project site to hire at least 50 percent of their workers from local Kern County communities. Therefore, with the inclusion of the aforementioned mitigation measures impacts from the project's cumulative contribution to decline of services would be appropriately mitigated.

Additionally, other related projects would also be expected to avoid or mitigate impacts on public services, this project would comply with the goals, policies, and implementation measures of the Kern County General Plan, and cumulatively significant impacts would be less than significant. Therefore, the project's incremental effect is not cumulatively considerable when viewed in connection with the effects of other closely related past projects, the effects of other current projects, and the effects of probable future projects. The project would not create a cumulatively considerable impact related to public services with the incorporation of Mitigation Measures MM 4.15-1 through MM 4.15-3.

Off-site Improvements

As discussed previously, the re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include structures or facilities requiring permanent staffing or visitors on site. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. Construction of new transmission equipment would involve temporary ground disturbance around the new structure locations, however use of these areas for these project elements would

not exacerbate the potential result in a cumulative impact on public services. As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts, and these necessary improvements are small parts of that overall project, thus not contributing to significant population growth or a sustained increase in demand on public services. When considered with other past, present and future projects, these improvements would not be cumulatively considerable.

Mitigation Measures

Implement Mitigation Measures MM 4.15-1 through MM 4.15-3, impacts would be less than significant.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.15-1 through MM 4.15-3, cumulative impacts would be less than significant.

Section 4.16 Recreation

4.16.1 Introduction

This section of the Draft Environmental Impact Report (EIR) addresses potential impacts of the project on parks and recreation opportunities in the project's vicinity. This section also describes the environmental and regulatory settings and discusses mitigation measures to reduce impacts, where applicable.

Sources of information and data provided in this section include, but are not limited to, the Kern County General Plan (KCGP) and Housing Element, Kern County General Plan and Housing Element Annual Report (2022), and demographic information from the California Department of Finance (DOF), and the U.S. Census Bureau.

4.16.2 Environmental Setting

Local

The Kern County Parks and Recreation Department operates and maintains 35 neighborhood parks throughout the County, as well as several public buildings that also are used for recreational purposes. (Kern County Parks & Recreation Neighborhood Parks Department: Master Plan, 2022). The neighborhood parks closest to the project site are Mojave West Park located 8.93 miles northeast, Mojave East Park located 7.71 miles northeast and Rosamond Park located 4.85 miles southwest (Kern County, 2010).

Regional

The Kern County Parks and Recreation Department operates and maintains eight regional parks (Buena Vista Aquatic Recreational Area, Greenhorn Mountain Park, Leroy Jackson Park, Kern River County Park, Lake Isabella, Lake Woollomes, Metro Recreation Center, and Tehachapi Mountain Park). These parks provide more than 4,282 acres of parkland for recreational purposes.

As shown in the Kern County Parks and Recreation Department Master Plan, Tehachapi Mountain Park is the closest regional park in proximity to the project (located approximately 25 miles northwest of the project site) and would be the primary regional park proximate to the project site. The park is located within the unincorporated area of Tehachapi, eight miles southwest of the City of Tehachapi on the southern side of State Route 58, between Mojave and Bakersfield. Tehachapi Mountain Park is 490 acres and offers a variety of activities, family campsites, two group camps with cabins (Tehachapi Mountain Camp and Sierra Flats), hiking trails, nature trails, equestrian trails, and a corral. The Greenhorn Mountain Park is further out (located 59.81 miles northwest of the project site) and would be another regional park to service the project site. The park is located in Alta Sierra, 50 miles northeast of Bakersfield, midway between Glenville and Wofford Heights near Lake Isabella. Standing on a bend of the highway 155 that meets highway 99 to the west and connects with Highway 178 on the way into Bakersfield. Greenhorn mountain park is set at a high elevation to escape the heat of the valley, amongst big cedars and pines. The park offers a variety

of facilities including campgrounds, an amphitheater and a fireplace. The next closest regional park, is Kern County River Park located 53.80 miles northwest of the project site. The park is on the northeast border of the metropolitan area of Bakersfield, approximately 10 miles from Bakersfield city. Kern River County Park is 1,445 acres and has a variety of activities including picnic areas, camping sites, and a variety of aquatic activities at Lake Ming.

State

The California State Parks Service owns, maintains, and operates one State park (Red Rock Canyon), two State historic parks (Fort Tejon and Tomo-Kahni), and one State reserve (Tule Elk) in Kern County. The closest State park to the project site is Tomo-Kahni State Historic Park located approximately 22 miles northwest of the project site. All other parks are over 22 miles. In the adjacent LA county directly below the project site, there are two State parks (Antelope Valley Indian Museum and Saddleback Butte), one State historic park (Antelope Valley Indian Museum), and one State reserve (Antelope Valley California Poppy Reserve).

National Parks and Trails

The U.S. Department of Agriculture (USDA) Forest Service oversees the Pacific Crest Trail (PCT), which, at its closest point, runs 13 miles northwest of the project site. The PCT is an international hiking trail that extends from Canada to Mexico through California, Oregon, and Washington. The PCT in this area is popular for hikers and equestrians who want to experience the scenic trail and wind farms. The trail goes through various elevation changes as it passes through high and low desert, old-growth forest, and arctic-alpine country.

Two national parks and a national preserve are located in California's Central Valley and southern desert region, which are accessible from Kern County, although a significant distance away. These include Sequoia National Park, Death Valley National Park, and Mojave National Preserve.

4.16.3 Regulatory Setting

Federal

National Trails System Act of 1968

The National Trails System Act of 1968 (Public Law 90-543), was passed by Congress in 1968 to create a series of trails "to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation." The Act authorized National Scenic Trails as well as National Recreation Trails and the connecting-and-side trails. National Scenic Trails are established to provide access to "spectacular natural beauty and to allow the pursuit of healthy outdoor recreation" and "extended trails so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass." In addition, the 1968 Act also authorized creation of the PCT as a National Scenic Trail. As Congressionally established long-distance trails, each trail is administered by a federal agency, such as by the USDA Forest Service for the PCT.

Pacific Crest Trail Planning Criteria

The Pacific Crest National Scenic Trail Comprehensive Plan (USDA Forest Service 1982) and the Pacific Crest Trail Guide for Location, Design, and Management (USDA Forest Service 1971) provide guidelines and criteria for design and location of the Pacific Crest Trail (PCT). Specifically, these guidelines state that the most desirable location will avoid unattractive roads, mining areas, power and telephone lines, commercial and industrial developments, fences, and other features incompatible with the natural condition of the trail, and with its use for outdoor recreation. Where the trail encounters such developments, it should be located so as not to adversely affect, or conflict with, the purpose of the development. Natural vegetation, topography, or natural plantings shall be used, where possible, to screen objectionable features from the view of the trail user.

Local

Kern County General Plan (KCGP)

The project site is located within the KCGP. The KCGP contains policies, goals, and implementation measures that are general in nature and not specific to development such as the project. Therefore, they are not listed below, but, as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the KCGP are incorporated by reference.

Chapter 1. Land Use, Open Space, and Conservation Element

1.9 Resource

Goals

- Goal 12: Provide a balanced system of parks and recreational facilities to meet Kern County's diverse needs, and clearly define responsibility for the provision of these facilities.
- Goal 13: Provide a variety of park and recreation programs that offer safe, equitable, and balanced recreation opportunities for all residents and visitors.

Policies

- Policy 4: The provision of parks and recreational facilities of varying size, function, and location to serve County residents will be encouraged. Special attention will be directed to providing linear parks along creeks, rivers, and streambeds in urban areas.
- Policy 5: Seek to provide recreational facilities where deficiencies have been identified.

Implementation Measure

- Measure F: Continue to use the accepted California and National Design Standards for both passive and active park development to accommodate programmed and spontaneous activities. Some usable area should be held as open turf for free play and community festivals.

Measure II: The Kern County Parks and Recreation Department will evaluate the possibility of alternative funding sources for the development, rehabilitation, and operation of park and recreational facilities. These funding sources shall include the possible implementation of development fees and/or special assessment districts such as used for lighting and landscaping, under a County Service Area (CSA).

4.16.4 Impacts and Mitigation Measures

Methodology

Recreational facilities and opportunities in the area were evaluated to determine whether they would be adversely affected by the project. This evaluation included consideration of the overall number and area of parklands or other recreational facilities and proximity to the project.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist state that a project would have a significant impact on recreation if it would:

1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or,
2. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Project Impacts

Impact 4.16-1: Result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated.

The project would result in a temporary increase in population during construction as a result of the influx of construction workers. The number of construction workers needed during any given time period depends largely on the specific stage of construction, but would likely be up to 515 employees. The temporary increase in use of recreation facilities during construction that might be caused by an influx of workers would be minimal. Additionally, any construction workers who relocate to the area may use the neighborhood and regional parks in the vicinity of the project site. Given that there are several parks in the project vicinity, including Tehachapi Mountain Park, the limited addition of people to the area, and the short-term duration of construction, the potential temporary increase in use by project personnel at any one park is not anticipated to be significant or result in a detectable physical deterioration of parks. A less than significant impact would occur in this regard.

Operation of the project would require approximately 440 fulltime employees that could be a mix of Kern County and Los Angeles County residents, including employees relocating to Kern County. The resulting addition of families to this area would potentially increase the number of users at local parks. However, the creation of 440 jobs is expected to fill the need for jobs in the surrounding communities, therefore, no substantial increase in population is expected, see **Section 4.14**

Population and Housing, of this Draft EIR, for details on population impacts. Operation of the project would not result in a substantial influx of people (such as a new residential development, school, or other use that would result in large volumes of people residing or traveling to the project site) and therefore the potential increase in use by project personnel at any one neighborhood and/or regional park is not anticipated to be significant or result in a detectable physical deterioration of parks. A less than significant impact would occur in this regard.

Off-site Improvements

The reconductoring of Southern California Edison's (SCE's) existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along and within existing transmission easements and corridors that have been previously disturbed at the time of original installation by SCE. Beyond the construction and installation phase, operation and maintenance of the upgraded transmission lines would continue through SCE and it is unlikely that increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated would result. Therefore, impacts would be less than significant.

Mitigation Measures

The project would comply with the goals, policies, and implementation measures of the KCGP. No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.16-2: Include recreational facilities or require construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

There is no intended construction or expansion of recreational facilities, with the construction of the proposed project. There is not anticipated to be an increase in the use of parks or other recreational facilities. Implementation of the project would not result in substantially increased use of any area recreational facilities, and would therefore not require construction of new or expansion of any other existing recreational facilities. No impact would occur. Additionally, the nearest recreational facility is Rosamond Park, located approximately 4.85 miles southwest of the project site. Because Rosamond Park is located about 4.85 miles away from the project site, it is not anticipated that site preparation or construction activities would involve construction or expansion of Rosamond Park in any fashion. No impact would occur in this regard.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along and within existing transmission

easements and corridors that have been previously disturbed at the time of original installation by SCE. The existing transmission line and affected utility corridors do not include recreational facilities or require construction or expansion of recreational facilities that might have an adverse physical effect on the environment. No impact would occur in this regard.

Mitigation Measures

No mitigation measures are required.

Level of Significance

No impacts would occur.

Cumulative Setting, Impacts, and Mitigation Measures

The geographic scope for cumulative impacts to recreation resources includes the area within six miles of the project site. While projects in a larger area may affect some of the same recreation resources as the project, by focusing on projects within six miles of the project site, the analysis of cumulative impacts can be made on those projects that would most comparably affect the same resources as the project.

With regard to projects resulting in increased use of parks, the project's impact would be minimal due to the small number of permanent employees working on-site and the temporary nature of the larger number of workers involved in construction of the project. With the need for more jobs as shown through the high unemployment rate, ranging from 6-8 percent in the surrounding communities (see **Section 4.14 Population and Housing**), the population would not be anticipated to substantially increase, but rather a need being met from the current unemployment rates. Projects listed within the 6-mile radius typically contain new solar projects, commercial development and light industrial development. These projects are not anticipated to increase the need for recreational facilities. The approximate 515 employees needed to construct the project on its peak phase, would meet the need of jobs in the surrounding unincorporated communities, and the approximate 440 full-time employees would further serve that need, meaning population would only increase slightly, and use of recreational facilities would not increase substantially. Therefore, the project's contribution to increased park usage would be negligible and would, therefore, not combine with impacts from cumulative projects to result in a significant impact.

With regard to the construction or expansion of new parks, the project would result in little to no impact, due to no new construction of these facilities. Therefore, impacts of the project would not have the potential to combine with impacts from cumulative projects to result in a significant impact.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along and within existing transmission easements and corridors that have been previously disturbed at the time of original installation by SCE. Impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility structures would not

contribute to cumulatively considerable impacts and comparatively, these SCE improvements are small parts of the overall project. The temporary nature of construction activities would negligibly contribute to the construction or expansion of new parks, and any increases in park usage would temporary and negligible. Given these offsite improvements would not result in a cumulatively considerable contribution to cumulative impacts, impacts in this regard would be less than significant.

Mitigation Measures

The project would comply with the goals, policies, and implementation measures of the KCGP. No additional mitigation measures are proposed.

Level of Significance

Cumulative impacts would be less than significant.

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Section 4.17 Transportation and Traffic

4.17.1 Introduction

This section of the EIR describes the affected environment, regulatory setting, and project impacts for transportation. It also describes mitigation measures that would reduce these impacts, where applicable. The information and analysis in this section is largely based on the *Traffic Impact Study* (LAV//Pinnacle Engineering, Inc., January 1, 2023), which is provided in Appendix O of this EIR.

4.17.2 Environmental Setting

The proposed project is located on approximately 174 acres in the southeastern portion of Kern County, approximately 5 miles north of the unincorporated community of Rosamond. The circulation system in the vicinity of the proposed project site is made up of a combination of State and County-jurisdiction facilities. Major components of the project are discussed below and shown in Chapter 3, *Project Description*, **Figure 3-2, Site Vicinity**, of this EIR.

Regional Setting

Highways

The project site is located near two highways that would provide access to the general vicinity of the proposed project during the construction and operation phases. State Route 14 (SR 14) borders the western boundary of the project site just past the Union Pacific Railroad whereas Sierra Highway runs parallel approximately 0.75 mile west of the project site.

State Route 14 (SR 14), also known as Aerospace Highway, is a four-lane divided freeway and the only major highway that is near the proposed project site. State Route 14 runs north to south and originates near the City of Santa Clarita in Los Angeles County, to the south, and ends in the northeast portion of Kern County near the unincorporated community of Indian Wells. The highway serves a variety of incorporated and unincorporated communities in Los Angeles and Kern Counties. Some of the major communities served also include Palmdale, Lancaster, Rosamond, and Mojave. Roughly 50 miles north of Mojave, SR 14 joins US Route 395, which continues northward to the Canadian Border. State Route 14 intersects with all major east-west routes in the vicinity of the Project including SR 138, SR 58, SR 178, and will be utilized as a transport route by the Project as well as employees commuting.

Sierra Highway is a two-lane highway that runs north-south route through various high-desert communities. Sierra Highway begins on the south side of Palmdale and terminates 5 miles south of Mojave, just north of Silver Queen Mine Road. In this section, Sierra Highway functions as a frontage road for State Route 14.

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there are no Designated State Scenic Highways within Kern County (see **Section**

4.14.3, Regulatory Setting, below for more information on the State Scenic Highway Mapping System. The closest Eligible Scenic Highways are SR 58 (portion east of State Route 14), located approximately 7 miles north of the project site, and SR 14 (portion north of SR 58), located approximately 11 miles north of the project site. Prominent views along SR 14 and SR 58 add to the scenic elements in the landscape for motorists include panoramic views of the open Mojave Desert landscapes and surrounding mountains, including the Tehachapi Mountains, San Gabriel Mountains, and southeastern extent of the Sierra Nevada mountains. In addition to the State Scenic Highway Mapping System, the Kern County General Plan Circulation Element designates scenic routes and defines a scenic route as any freeway, highway, road, or other public right-of-way, which traverses an area of exceptional scenic quality and must be officially set as a Scenic Route by the Kern County Board of Supervisors or the State of California.

Local Roads

Sopp Road is a two-lane local road bounding the north side of the Project. The paved portion of Sopp Road is only ½ mile and commences at Sierra Highway and runs easterly to its terminus and intersection with Lone Butte Road. Beyond said paved limits, Sopp Road is only a “two-track” dirt road through desert lands. The Union Pacific Railroad crosses Sopp Road roughly 100 feet east of Sierra Highway. This intersection of the rail line and Sopp Road is controlled by a crossing arm and flashing signal.

Lone Butte Road is a two-lane local road that begins at its intersection with Sopp Road’s easterly terminus, running north approximately 3 miles until its northerly terminus at Reed Avenue. Although Lone Butte Road is a County-maintained road, this road is not anticipated to provide preferred access to and from the site due to the limitations in existing road conditions and maneuverability for large-truck traffic. Furthermore, the proposed private access road along the eastern boundary (see **Figures 3-9, 3-12 and 3-13 in Chapter 3, Project Description**) that would provide access for large trucks to the site is not proposed to be an extension of Lone Butte for public benefit.

Backus Road and **Dawn Road** are both two lane local roads running east-west roughly 1 mile north and 2 miles south of the project, respectively. These roads both provide access to State Route 14 via full diamond interchanges.

Other Transportation Facilities

Public Transportation

Public transportation in Kern County is provided by Kern Transit, which offers 14 fixed routes throughout the County and a dial-a-ride general public transportation service for residents in most communities. Route 100 provides a fixed route scheduled bus service between Bakersfield and Lancaster on SR 58 and SR 14, with stops in the communities of Tehachapi, Keene, Mojave, and Rosamond. Route 250 provides a fixed route scheduled bus service between California City and Lancaster on SR 14, with stops in the unincorporated communities of Mojave and Rosamond. Route 230 provides a fixed route scheduled bus service between Ridgecrest and Mojave with stops at the unincorporated community of Inyokern and California City. No public transit routes pass or stop near the project site (Kern Transit, 2023).

Non-Motorized Transportation

Bicycling is considered an effective alternative mode of transportation that can help to improve air quality, reduce the number of vehicles traveling along existing roads and highways, and reduce energy consumption. According to the Kern County Bicycle Master Plan, there are over 67 miles of existing bicycle facilities in the unincorporated portions of Kern County (Kern County, 2012). However, there are no dedicated bicycle facilities in the immediate vicinity of the project site or along the surrounding roadways.

Railways

The closest railway, the Mojave Subdivision, is operated by the Union Pacific Railroad and is adjacent to the project site (Kern COG, 2011).

Airport Facilities

Ancient Valley/Pontious Airport is the nearest private airstrip, located approximately 1.27 miles to the west of the project site. The airport is a private facility with two runways, approximately 1,900 and 1,300 feet in length. The facility receives no regular scheduled flights and is not publicly accessible (airnav.com, 2023).

Rosamond Skypark is a privately-owned and operated residential airport that is open for public use and is located about 5.5 miles southwest of the project site. This airport has a 3,600-foot asphalt runway and exclusively serves general aviation aircraft. In operation since 1953, the facility serves an average of 29 flight operations per day (skypark.org, 2023).

Mojave Air and Space Port is a public airfield located about 7 miles north of the project site. This airport has three asphalt runways (with lengths of 4,746, 7,050 and 12,500 feet) and primarily serves general aviation aircraft, with some commercial, air taxi, and military flights also using the facility. The facility was first opened in 1935 as a small, rural airfield serving the local gold and silver mining industry but evolved into a flight research center and in 2004 the facility was the first to be certified as a spaceport by the FAA (Mojave Air & Space Port, 2021a and b).

Edwards Air Force Base is a military base and airstrip located approximately 13 miles east of the project site. The base is owned and operated by the U.S. Air Force (not open to public use) and includes three runways that range in length from 8,000 feet to 12,000 feet and that are paved with concrete or asphalt. The base covers more than 301,000 acres, and also includes additional landing areas on the hard packed surface of the Rogers Dry Lake and Rosamond Dry Lake. The base also supports the U.S. space shuttle program as a backup landing site.

Local Setting

Site Access

The proposed project site can be accessed via Sopp Road from the north and Lone Butte Road from the east. As noted above, primary access to the site is anticipated to be from Sopp Road due to Lone Butte Road's limitations in existing road conditions and maneuverability for large-truck traffic.

Public Access Vacations

The proposed project is not requesting to vacate any roads or existing public access easements.

Traffic Analysis

Considering the access routes described above, the traffic impact analysis evaluated four study intersections in the vicinity of the project site, where project traffic would contribute traffic volumes and vehicle turning movements:

1. Backus Road & Sierra Highway (one-way stop controlled)
2. Sopp Road & Sierra Highway (one-way stop controlled)
3. Backus Road & State Route 14 Northbound Ramps (one-way stop controlled)
4. Backus Road & State Route 14 Southbound Ramps (one-way stop controlled)

Existing AM and PM peak hour turning movement volumes were field measured at the study intersections in August 2021. It should be noted that counts were done during the “COVID period” and were adjusted upwards by five percent to reflect pre-COVID counts. As shown in **Table 4.17-1, Existing Conditions AM and PM Peak Hour Level of Service (LOS)**, the intersections serving the project area currently operate at LOS A to LOS C during the analyzed time periods based on v/c - volume to capacity ratio, vehicle delay through an intersection, and reserve capacity of an intersection approach. It should be noted that the minimum LOS for conformance with the Kern County General Plan is LOS D.

Table 4.17-1: Existing Conditions AM and PM Peak Hour Level of Service

Study Intersection	Control Type	AM Peak Hour	PM Peak Hour
1. Backus Road & Sierra Highway	1W	LOS A	LOS A
2. Sopp Road & Sierra Highway	1W	LOS A	LOS A
3. Backus Road & State Route 14 Northbound Ramps	1W	LOS A	LOS C
4. Backus Road & State Route 14 Southbound Ramps	1W	LOS A	LOS A
Abbreviations: 1W = One Way Stop Control			
Source: LAV//Pinnacle Engineering, Inc., 2023			

4.17.3 Regulatory Setting

Federal

Federal Aviation Administration (FAA)

The FAA regulates aviation at regional, public, and private airports. The FAA regulates objects affecting navigable airspace. According to 49 Code of Federal Regulations Part 77.9, any person/organization

who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA of:

- Any construction or alteration exceeding 200 feet above ground level;
- Any construction or alteration:
 - Within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway where the longest airport runway exceeds 3,200 feet in actual length;
 - Within 10,000 feet of a public use or military airport which exceeds a 50:1 surface from any point on the runway where the longest airport runway is less than 3,200 feet in actual length; and
 - Within 5,000 feet of a public use heliport which exceeds a 25:1 surface;
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed the above standards;
- When requested by the FAA; and
- Any construction or alteration located on a public use airport or heliport regardless of height or location.

Failure to comply with the provisions of Federal Aviation Regulation Part 77 is subject to civil penalty under Section 902 of the Federal Aviation Act of 1958, as amended, and pursuant to 49 United States Code Section 46301(a).

Federal Surface Transportation Assistance Act (STAA) of 1982

The 1982 federal STAA required reasonable access to facilities for food, fuel, repairs, and rest. In 1990, federal regulations expanded truck access from one-half (1/2) mile to one (1) mile off the National Network (NN). The Code of Federal Regulations, Title 23, Section 658.19 (a) states that No State may enact or enforce any law denying reasonable access to vehicles with dimensions authorized by the STAA between the NN and facilities for food, fuel, repairs, and rest. Section (d) states that no State may enact or enforce any law denying access within one (1) road-mile from the NN except for specific safety reasons. Routes that are in the vicinity of the project site, such as SR 14, SR 58 and US Route 395 must adhere to this Act.

State

Senate Bill 375

Senate Bill (SB) 375 (codified in the Government Code and the Public Resources Code) took effect in 2008 and provides a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the greenhouse gas (GHG) reduction goals established by Assembly Bill (AB) 32. SB 375 requires metropolitan planning organizations (MPO) to incorporate a Sustainable Communities Strategy in their Regional Transportation Plans to achieve GHG emissions reduction targets by reducing vehicle miles traveled from light-duty vehicles through the development of more compact, complete, and efficient communities.

SB 375 required the California Air Resources Board (CARB) to set regional targets for reducing GHG from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each region in California governed by an MPO. Kern Council of Governments (Kern COG) is the MPO for the Kern Region as designated by the federal government, and the Regional Transportation Planning Agency (RTPA) as designated by the State of California.

Senate Bill 743

SB 743 was signed into law September 2013 and includes several changes to CEQA for projects located in areas served by transit (e.g., transit-oriented development, or TOD). Most notably with regard to transportation and traffic assessments, SB 743 changes the way that transportation impacts are analyzed under CEQA (see Public Resources Code Section 21099). SB 743 required the Governor's Office of Planning and Research to amend the CEQA Guidelines to exclude level of service (LOS) and auto delay when evaluating transportation impacts.

With implementation of SB 743, new criteria have been established to promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. The Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA (Guidelines) provided recommendations for updating the State's CEQA Guidelines in response to SB 743 and contained recommendations for a vehicle miles traveled (VMT) analysis methodology in an accompanying Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory).

The Guidelines, including the Technical Advisory, recommended use of automobile VMT per capita as the preferred CEQA transportation metric, along with the elimination of automobile delay/LOS for CEQA purposes statewide. Public Resources Code Section 21099 and CEQA Guideline Section 15064.3 reflect this change. Under Section 21099, automobile delay, as measured by LOS or similar measures of traffic congestion or vehicular capacity, is not considered a significant effect on the environment.

California Department of Transportation (Caltrans)

Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Eastern Kern County (i.e., including the project site and surrounding area) has been under the jurisdiction of Caltrans District 9 as of November 2015; prior to that time, all of Kern County was under the jurisdiction of Caltrans District 6. The Caltrans regulations below apply to potential transportation and traffic impacts of the project.

California Vehicle Code (CVC), Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Street and Highway Code, Sections 660-711, 670-695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Project Development Procedures Manual, Chapter 27. Access Control Modification. Requires Caltrans approval of proposed connections to a public road through submittal of a proposal to Caltrans (Caltrans, 2019).

Regional

Regional Transportation Plan

The most recent adopted Regional Transportation Plan (RTP) was prepared by the Kern Council of Governments (COG) and was adopted 2022. The 2022 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, State, and federal agencies. Included in the 2022 RTP is the Sustainable Communities Strategy (SCS), which is required by California's Sustainable Communities and Climate Protection Act, of Senate Bill (SB) 375. The California Air Resources Board (CARB) set a goal of Kern County reducing greenhouse gas (GHG) emissions from passenger vehicles and light-duty trucks by 9 percent per capita by 2020 and 15 percent per capita by 2035, as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA), ensuring consistency between low-income housing needs and transportation planning. Kern COG engaged in the RHNA process concurrently with the development of the 2014 RTP. This process required Kern COG to work with its member agencies to identify areas within the region that can provide sufficient housing for all economic segments of the population and ensure that the State's housing goals are met.

The intent of the SCS is to achieve the State's emissions reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County. The RTP/SCS seeks to improve economic vitality; improve air quality; improve the health of communities; improve transportation and public safety; promote the conservation of natural resources and undeveloped land; increase access to community services; increase regional and local energy independence; and increase opportunities to help shape the community's future. The RTP/SCS financial plan identifies available funding to support the region's transportation investments.

The plan includes a core revenue forecast of existing local, State, and federal sources along with funding sources that are considered to be reasonably available over the time horizon of the RTP/SCS. Funding sources include adjustments to State and federal gas tax rates based on historical trends and recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission), leveraging of local sales tax measures, local transportation impact fees, potential national freight program/freight fees, future state bonding programs, and mileage-based user fees (Kern COG, 2022).

Local

Kern County General Plan

Construction and operation of the project would be subject to policies and regulations contained within the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to transportation. The policies, goals, and implementation measures in the Kern County General Plan Circulation Element for transportation that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference. The design Level of Service (LOS) for Kern County is LOS C. The minimum LOS for conformance with the Kern County General Plan is LOS D.

Circulation Element

2.1 Introduction

Goals

- Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.
- Goal 5: Maintain a minimum [level of service] LOS D for all roads throughout the County (unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements (see Section 1.10.8).

2.3.3 Highway Plan

Goal

- Goal 5: Maintain a minimum LOS D.

Policies

- Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and midsection lines. This is because the road centerline can be determined by an existing survey.
- Policy 2: This plan requires, as a minimum, construction of local road widths in areas where the traffic model estimates little growth through and beyond 2010. Where the Kern County Planning and Natural Resources Department's growth estimates indicate more than a local road is required, expanded facilities shall be provided. The timing and scope of required facilities should be set up and implemented through the Kern County Land Division Ordinance. However, the County shall routinely protect all surveyed section lines in the Valley and Desert regions for arterial right-of-way. The County shall routinely protect all midsection lines for collector highways in

the same regions. The only possible exceptions shall be where the County adopts special studies and where Map Code 4.1 (Accepted County Plan) areas occur. In the Mountain Region where terrain does not allow construction on surveyed section and midsection lines, right-of-way width shall be the size shown on the diagram map. No surveyed section and midsection “grid” will comprehensively apply to the Mountain Region.

Policy 3: This plan’s road-width standards are listed below. These standards do not include state highway widths that would require additional right-of-way for rail transit, bike lanes, and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis.

- Expressway [Four Travel Lanes] Minimum 110-foot right-of-way;
- Arterial [Major Highway] Minimum 110-foot right-of-way;
- Collector [Secondary Highway] Minimum 90-foot right-of-way;
- Commercial-Industrial Street Minimum 60-foot right-of-way; and
- Local Street [Select Local Road] Minimum 60-foot right-of-way.

Implementation Measure

Measure A: The Planning Department shall carry out the road network policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that includes road standards related to urban and rural planning requirements. These ordinances also regulate access points. The Planning Department can help developers and property owners in identifying where planned circulation is to occur.

2.3.4 Future Growth

Goal

Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

Policies

Policy 1: Monitor traffic volumes and patterns on County arterials. Undertake special studies when monitoring shows traffic is such that additional traffic would exceed LOS D unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements (See Section 1.10.8). The purpose of the special studies is eventually to upgrade key major highways to expressway standards. Expressway standards would limit access to one-half mile spacing.

Policy 2: The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below LOS D. Utilization of the California Environmental Quality Act (CEQA) process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land

Use, Open Space, and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.

- Policy 4: As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along state routes are necessary then roads shall be built to California Department of Transportation (Caltrans) standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.
- Policy 5: When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.
- Policy 6: The County may accept a developer's road into the County's maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.

Implementation Measures

- Measure A: The County should relate traffic levels to road capacity and development levels. To accomplish this, the Kern County Roads Department and the Kern County Planning and Natural Resources Department should set up a monitoring program. The program would identify traffic volume to capacity ratios and resulting level of service. The geographic base of the program would be traffic zones set up by Kern Council of Governments.
- Measure C: Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.

2.3.10 Congestion Management Programs

State law requires that urbanized counties prepare an annual congestion management program (CMP). City and county eligibility for new gas tax subventions is contingent upon their participation in the congestion management program. To qualify for funding provided through the State Transportation Improvement Program (STIP) or the Federal Transportation Improvement Program (FTIP), the regional transportation agency must keep current a Regional Transportation Program (RTP) that contains the CMP. Also, the CMP offers local jurisdictions the opportunity to find cooperative solutions to the multi-jurisdictional problems of air pollution and traffic congestion.

The CMP has links with air quality requirements. The California Clean Air Act requires that cities and counties implement transportation control measures (TCMs) to attain, and maintain, the State air quality standard.

Goals

- Goal 1: To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.
- Goal 2: To coordinate congestion management and air quality requirements and avoid multiple and conflicting requirements.

Policies

- Policy 1: Pursuant to California Government Code 65089(a), Kern County has designated Kern Council of Governments as the County's Congestion Management Agency (CMA).
- Policy 2: The Congestion Management Agency is responsible for developing, adopting, and annually updating a Congestion Management Plan. The Plan is to be developed in consultation with, and with the cooperation of, the regional transportation agency (also Kern Council of Governments), regional transportation providers, local governments, Caltrans, and the air pollution control district.

Implementation Measures

- Measure A: Kern County Council of Governments should request the proper consultation from County of Kern to develop and update the proper congestion management program.
- Measure B: The elements within the Kern Congestion Management Program are to be implemented by each incorporated city and the County of Kern. Specifically, the land use analysis program, including the preparation and adoption of deficiency plans is required. Additionally, the adoption of trip reduction and travel demand strategies are required in the Congestion Management Program.

2.5.1 Trucks and Highways

The Kern County road network handles a high ratio of heavy truck traffic. State highways carry most of this traffic. Most of the trucks are interstate carriers. As such, interstate trucking is not under the direct control of County officials. In as much as this traffic affects County residents and taxpayers, they need actions to guarantee State highways in Kern County receive a fair share of California's transportation investment.

Goals

- Goal 1: Provide for Kern County's heavy truck transportation in the safest way possible.
- Goal 2: Reduce potential overweight trucks.
- Goal 3: Use State Highway System improvements to prevent truck traffic in neighborhoods.

Policies

- Policy 1: Caltrans should be made aware of the heavy truck activity on Kern County's roads.
- Policy 2: Start a program that monitors truck traffic operations.
- Policy 3: Promote a monitoring program of truck lane pavement condition.

2.5.4 Transportation of Hazardous Materials

Transportation-related accidents and spills of hazardous materials pose a serious threat to the traveling public and nearby sensitive land uses. Transportation of hazardous materials poses a short-term threat to public health.

Goals

- Goal 1: Reduce risk to public health from transportation of hazardous materials.

Policies

- Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan
- Policy 2: Kern County and affected cities should reduce use of County-maintained roads and city-maintained streets for transportation of hazardous materials.

Implementation Measures

- Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

Kern Council of Governments Congestion Management Program

All urbanized areas with a population larger than 200,000 residents are required to have a Congestion Management System, program, or process. The Kern Council of Governments (Kern COG) refers to its congestion management activities as the Congestion Management Program (CMP). Kern COG was designated as the Congestion Management Agency (CMA).

The CMP provides a systematic process for managing congestion and information regarding (1) transportation system performance, and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The purpose of the CMP is to ensure that a balanced transportation system is developed that relates population growth, traffic growth and land use decisions to transportation system LOS performance standards and air quality improvement. The program attempts to link land use, air quality, transportation, and advanced transportation technologies as integral and complementary parts of this region's plans and programs.

The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established LOS standards. At a minimum, all State highways and principal

arterials must be designated as part of the Congestion Management System of Highways and Roadways. Kern County has 18 designated state highways.

Kern County Airport Land Use Compatibility Plan (ALUCP)

An Airport Land Use Commission (ALUC) is required by California law in every county with an airport in its jurisdiction. Each ALUC must develop a plan for promoting and ensuring compatibility between each airport in the county and surrounding land uses, in the form of an Airport Land Use Compatibility Plan. The County of Kern adopted its Airport Land Use Compatibility Plan (ALUCP) on September 23, 1996.

Kern County's (ALUCP) establishes procedures and criteria to assist Kern County and affected incorporated cities in addressing compatibility issues between airports and surrounding land uses. Ancient Valley/Pontious Airport, a private airstrip, is located approximately 1.27 miles west of the project site. The Rosamond Skypark is located approximately 5.5 miles southwest of the project site. The Mojave Air and Space Port is located approximately 7 miles north of the project site. The project is also located approximately 13 miles east of the airstrips at Edwards Air Force Base. The project is not located within a designated Airport Land Use Compatibility zone.

Airport Land Use Compatibility Plan and R_2508 Complex

Within the ALUCP, Section 4.20 *Joint Service Restricted R-2508 Complex*, notes the R-2508 Complex was designated to minimize flight hazards to non-military aircraft by military aircraft. Access to this airspace is greatly limited to civilian aircraft and only after obtaining prior permission. The R-2508 complex also contains internal complexes and operating areas and is the hub of a network of other major airspace ranges located in the southwestern United States. The area of R-2508 covers portions of Kern, Inyo, Mono, Los Angeles, San Bernardino and Tulare Counties and reaches into part of the State of Nevada. Over 3,200 square miles of eastern Kern County are within the complex. Within the R-2508 complex are also other designated restricted airspaces known as R-2505, R-2506, and R-2515 which are the immediate and adjacent airspace to China Lake NAWS and Edwards AFB.

4.17.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential impacts to transportation have been evaluated using a variety of resources, including the Traffic Impact Study (LAV//Pinnacle Engineering, Inc., 2023) attached as Appendix O of this EIR.

Method of Analysis & Traffic Estimates

A brief step-by-step description used to describe the methodology of the Traffic Impact Study (TIS) is as follows:

1. Existing conditions of the Project and surrounding area were surveyed, including traffic volumes (counts), laneage, and intersection control. The traffic counts performed as part of the Traffic Impact Study are considered by Caltrans to be artificially low because of the impacts

of COVID on travel. Therefore, traffic counts were factored “up” to more accurately represent “pre-COVID” volumes.

2. Project-generated traffic was determined based on a very precise breakdown of employees, exact beginning and ending times of three planned work shifts, frequency of truck deliveries of scrap metal and other material, and trucking arrivals and deliveries of manufactured reinforcing bars.
3. Future Traffic Volumes were estimated for Year 2042, and a Project “Opening Day”, in this case Year 2025. Annual growth rates, derived from accepted methods are applied to existing factored traffic counts, and compounded annually, to yield future traffic volumes.
4. The estimated Project-generated traffic was added to existing and future traffic volumes, to include Year 2042 and the Year 2025 “opening day” scenario.
5. Street segments and intersections were analyzed for “Level of Service” (LOS) for the various scenarios: A) Existing conditions with No Project; B) Existing Conditions with Project traffic; C) Year 2025, or “opening day” with no Project; D) Year 2025, or “opening day” with Project traffic; E) Year 2042 with No Project; F) Year 2042 with Project traffic, and if necessary, E) Year 2042 and “opening day” with Project traffic and proposed mitigation improvements.
6. Mitigation or capacity/level of service improvements were determined for any of the above scenarios which result in an unacceptable “Level of Service” (LOS). Resultant or “after mitigation” LOS’s are determined to validate the effectiveness of proposed improvements. If improvements to the facility are funded by the RTIF, they are evaluated for adequacy under future traffic conditions. The Project’s obligation for funding of any needed mitigation improvements that are not funded by the RTIF program is also determined. When mitigation is not funded by the RTIF program, the Project’s obligation, is the ratio of Project-generated traffic to total estimated future year traffic volume.
7. **Vehicle Miles Travelled.** The total Vehicle Miles Travelled (VMT) is calculated for Project generated trips, excluding trucks transporting goods. VMT is the summation of all Project-generated trips, with said exclusions, multiplied by their respective trip length.

Note: At the time of preparation of the TIS, the Project’s construction phase was estimated based on an assumption to occur from 2023 to 2025, with the operational phase beginning immediately after.

Traffic Counts

Traffic counts were performed over the existing street network to determine existing intersection volumes, turning movements, and traffic flow patterns. As discussed in the following section, future year traffic volumes are estimated by applying annual growth rates derived from Kern COG traffic modeling, or other approved methods.

Traffic counts were performed during the morning and evening peak periods during weekdays, excluding Mondays, Fridays, holidays, and days preceding or following holidays. Weekdays, before or after holidays are not representative of normal traffic patterns.

Counts were performed during the morning peak period between 6:30 am and 8:30 am as well as the evening peak period between 4:00 pm and 6:00 pm. Often the peak period for one intersection or street is slightly different than others. The highest one-hour volumes for each intersection or street segment were used for analysis in this report, regardless of the peak periods of individual intersections or streets.

It is noted that the morning existing peak hour traffic counts yielded volumes roughly 19% lower than the evening peak hour field counts. Therefore, the evening peak hour being the worst-case scenario, was a primary focus in the analysis.

Additionally, it is noted that traffic counts performed after March of 2020 are not accepted by Caltrans for traffic impact studies. Caltrans considers traffic counts after said date not representative due to the impact of the COVID pandemic. However, Caltrans' traffic data during 2020, as a basis of comparison to the previous year, has not yet been published. Traffic counts by LAV//Pinnacle Engineering at two other locations in Kern County indicated traffic counts performed after March of 2020 were almost uniformly 4 percent less than counts performed at the identical locations in 2019. Caltrans has indicated their "findings" are similar and accepts "COVID" period counts if factored upwards by 5 percent. Therefore, in this study, traffic counts have been increased by 5 percent. Figures 2 & 3 of the Traffic Impact study (see Appendix O), show the peak hour volumes, factored upward by 5 percent, during the morning and evening peak periods. These figures also show actual turning movements, also factored as indicated.

Future Year Traffic Volumes

Future year traffic volumes are estimated by applying growth rates derived from the Kern COG computer traffic model. Kern COG is an association of city and county governments created to address regional transportation issues. Kern COG maintains a computer traffic model for Kern County, which includes monitoring of demographic trends and estimating growth in traffic for at least 20 years into the future. Growth rates extracted from the Kern COG traffic model have been readily accepted by the agencies.

Table 1 in Appendix O shows the Kern COG traffic model projections for street segments in the Project's vicinity for Years 2015 and 2042. Using these Kern COG traffic volumes, an average annual growth rate was determined for each street segment using standard "compound growth" formulas.

As shown in Table 1, the average annual growth rate was calculated to be 1.8% for local streets. This value can be considered conservative compared to the Kern County annual growth rate, which was less than 1.0% between 2010 and 2019. Therefore, the Kern COG model average annual growth rate was applied to existing traffic counts to yield future traffic volumes for Years 2025 and 2042.

Figures 6A and 6B, included in the appendices of the *Traffic Impact Study* (Appendix O), show the Year 2025 or "opening day" peak hour volumes and turning movements for intersections and roads within the Study scope. Similarly, Figures 8A and 8B, also in the appendices of the *Traffic Impact Study* (Appendix O), show the Year 2042 peak hour volumes and turning movements.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on traffic.

A project could have a significant adverse effect on transportation if it would:

- a. Conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, as follows:
 - i. Metropolitan Bakersfield General Plan LOS C, and
 - ii. Kern County General Plan LOS D
- b. Conflict or be inconsistent with *CEQA Guidelines* section 15064.3, subdivision (b);
- c. Substantially increases hazards due to a geometric design feature (such as sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and
- d. Result in inadequate emergency access.

Project Impacts

Impact 4.17-1: The project would conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, as follows: Metropolitan Bakersfield General Plan LOS C and Kern County General Plan LOS “D.”

The project is located in eastern Kern County, outside the boundaries and jurisdiction of the Metropolitan Bakersfield General Plan, and, therefore, not subject to the LOS C standard. Therefore, the analysis presented herein addresses impacts related to Kern County General Plan LOS D.

Construction

Intersection Level of Service

The LOS of the proposed project during the construction and operational phases of the project were analyzed at four separate intersections. These intersections include Backus Road and Sierra Highway, Sopp Road and Sierra Highway, Backus Road and SR 14 northbound ramps, and Backus Road and SR 14 southbound ramps. At the time of preparation of the *Traffic Impact Study* (TIS), the Project’s construction phase was estimated based on an assumption to occur from 2023 to 2025, with the operational phase beginning immediately after and lasting until 2042. **Table 4.17-2, Intersection Level of Service (LOS) – Peak Hour** below provides the intersection LOS during the peak hour for the construction period. Based on the information provided and the analysis completed in the TIS, the construction phase of the proposed project would degrade LOS to a level below the LOS set by the Kern County General Plan at one intersection while the remaining intersections would not be below LOS D. As stated previously, the construction phase is expected to last approximately 24 months..

For the Backus Road and SR 14 northbound ramps intersection, the construction phase of the project for the AM Peak Hour would not drop below LOS A even with construction phase of the project being implemented. However, during the PM Peak Hour, the LOS during the construction phase of the project would drop to LOS F. The existing LOS for this intersection is at LOS C and would drop to LOS D, without project implementation, to LOS D by 2025. When the construction phase is added to this intersection, the LOS drops to LOS F for the years 2023 and 2025. In other words, PM Peak Hour LOS at the intersection of Backus Road and SR 14 northbound ramps would

drop the LOS from LOS C in 2023 and LOS D in 2025 to LOS F for the years 2023 and 2025 (LAV/Pinnacle Engineering, Inc., 2023).

To mitigate this potential impact, Mitigation Measures MM 4.17-1 and MM 4.17-2 would be implemented. MM 4.17-1 would require, prior to the issuance of construction or building permits, the project proponent to implement measures to ensure peak hour construction worker vehicle limits are maintained during the AM and PM peak hours in order to maintain LOS D or better at the study intersections. This would include preparing and submitting a Construction Traffic Control Plan, limiting the time during the AM and PM peak periods in which constructions workers and construction vehicles are going to and from the project site. Additionally, prior to the issuance of construction or building permits, MM 4.17-2 would require the project proponent to prepare and submit a Construction Traffic Control Plan to the Kern County Public Works Department-Development Review and the Caltrans offices for District 9 for approval. By implementing these Mitigation Measures, impacts would be reduced to less than significant.

Table 4.17-2: Intersection Level of Service (LOS) – Peak Hour

Time Period	Control	Northbound			Southbound			Eastbound			Westbound			Comp LOS	Intersection Delay (sec/veh)	Peak Hour Warrant Met (Yes/No)
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
1) Backus Rd & Sierra Hwy																
Year 2023 A.M. Existing	1W	A	-	-	-	-	-	-	A	-	-	-	-	A	3.8	No
Year 2023 A.M. with Project	1W	A	-	-	-	-	-	-	A	-	-	-	-	A	8.1	No
Year 2025 A.M. Existing	1W	A	-	-	-	-	-	-	A	-	-	-	-	A	3.8	No
Year 2025 A.M. with Project	1W	A	-	-	-	-	-	-	A	-	-	-	-	A	7.6	No
Year 2042 A.M. without Project	1W	A	-	-	-	-	-	-	A	-	-	-	-	A	3.8	No
Year 2042 A.M. with Project	1W	A	-	-	-	-	-	-	A	-	-	-	-	A	7.4	No
Year 2023 P.M. Existing	1W	A	-	-	-	-	-	-	B	-	-	-	-	A	3.1	No
Year 2023 P.M. with Project	1W	A	-	-	-	-	-	-	B	-	-	-	-	A	6.7	No
Year 2025 P.M. Existing	1W	A	-	-	-	-	-	-	A	-	-	-	-	A	3.1	No
Year 2025 P.M. with Project	1W	A	-	-	-	-	-	-	B	-	-	-	-	A	6.7	No
Year 2042 P.M. without Project	1W	A	-	-	-	-	-	-	B	-	-	-	-	A	3.4	No
Year 2042 P.M. with Project	1W	A	-	-	-	-	-	-	B	-	-	-	-	A	6.9	No
2) Sopp Rd & Sierra Hwy																
Year 2023 A.M. Existing	1W	-	-	-	A	-	-	-	-	-	-	B	-	A	2.7	No
Year 2023 A.M. with Project	1W	-	-	-	A	-	-	-	-	-	-	B	-	A	6.8	No
Year 2025 A.M. Existing	1W	-	-	-	A	-	-	-	-	-	-	B	-	A	2.7	No
Year 2025 A.M. with Project	1W	-	-	-	A	-	-	-	-	-	-	C	-	A	6.8	No
Year 2042 A.M. without Project	1W	-	-	-	A	-	-	-	-	-	-	B	-	A	3.0	No
Year 2042 A.M. with Project	1W	-	-	-	A	-	-	-	-	-	-	C	-	A	7.8	No
Year 2023 P.M. Existing	1W	-	-	-	A	-	-	-	-	-	-	B	-	A	2.4	No
Year 2023 P.M. with Project	1W	-	-	-	A	-	-	-	-	-	-	C	-	A	9.1	No

Year 2025 P.M. Existing	1W	-	-	-	A	-	-	-	-	-	-	B	-	A	2.4	No
Year 2025 P.M. with Project	1W	-	-	-	A	-	-	-	-	-	-	C	-	A	9.4	No
Year 2042 P.M. without Project	1W	-	-	-	A	-	-	-	-	-	-	B	-	A	2.9	No
Year 2042 P.M. with Project	1W	-	-	-	A	-	-	-	-	-	-	E	-	C	15.3	No
3) Backus Rd & State Route 14 NB Ramps																
Year 2023 A.M. Existing	1W	A	-	A	-	-	-	A	-	-	-	-	-	A	7.3	No
Year 2023 A.M. with Project	1W	B	-	A	-	-	-	A	-	-	-	-	-	A	5.3	No
Year 2025 A.M. Existing	1W	A	-	A	-	-	-	A	-	-	-	-	-	A	7.4	No
Year 2025 A.M. with Project	1W	B	-	A	-	-	-	A	-	-	-	-	-	A	5.3	No
Year 2042 A.M. without Project	1W	B	-	A	-	-	-	A	-	-	-	-	-	A	7.7	No
Year 2042 A.M. with Project	1W	B	-	A	-	-	-	A	-	-	-	-	-	A	5.9	No
Year 2023 P.M. Existing	1W	D	-	A	-	-	-	A	-	-	-	-	-	C	20.0	No
Year 2023 P.M. with Project	1W	F	-	A	-	-	-	A	-	-	-	-	-	F	155.8	Yes
Year 2025 P.M. Existing	1W	D	-	A	-	-	-	A	-	-	-	-	-	D	25.2	No
Year 2025 P.M. with Project	1W	F	-	A	-	-	-	A	-	-	-	-	-	F	328.8	Yes
Year 2042 P.M. without Project	1W	F	-	A	-	-	-	A	-	-	-	-	-	F	472.7	No
Year 2042 P.M. with Project	1W	F	-	B	-	-	-	A	-	-	-	-	-	F	1017.8	Yes
Year 2042 P.M. with Project Mitigated ¹	S	-	D	C	-	-	-	-	B	-	-	B	B	C	28.3	N/A
4) Backus Rd & State Route 14 SB Ramps																
Year 2023 A.M. Existing	1W	-	-	-	B	-	A	-	-	-	A	-	-	A	0.8	No
Year 2023 A.M. with Project	1W	-	-	-	B	-	A	-	-	-	A	-	-	A	3.9	No
Year 2025 A.M. Existing	1W	-	-	-	B	-	A	-	-	-	A	-	-	A	0.8	No
Year 2025 A.M. with Project	1W	-	-	-	B	-	A	-	-	-	A	-	-	A	3.8	No
Year 2042 A.M. without Project	1W	-	-	-	B	-	A	-	-	-	A	-	-	A	2.3	No
Year 2042 A.M. with Project	1W	-	-	-	B	-	A	-	-	-	A	-	-	A	3.5	No
Year 2023 P.M. Existing	1W	-	-	-	C	-	B	-	-	-	A	-	-	A	2.1	No

Year 2023 P.M. with Project	1W	-	-	-	E	-	B	-	-	-	A	-	-	A	6.4	No
Year 2025 P.M. Existing	1W	-	-	-	C	-	B	-	-	-	A	-	-	A	2.2	No
Year 2025 P.M. with Project	1W	-	-	-	F	-	B	-	-	-	A	-	-	A	9.7	No
Year 2042 P.M. without Project	1W	-	-	-	E	-	C	-	-	-	A	-	-	A	3.6	Yes
Year 2042 P.M. with Project	1W	-	-	-	F	-	C	-	-	-	B	-	-	F	51.2	Yes
Year 2042 P.M. with Project Mitigated ²	S	-	-	-	-	E	E	-	A	-	-	B	-	B	14.4	N/A

Abbreviations: S = Signalized; 1W = One Way Stop Control; 4W = All Way Stop; R = Roundabout

Notes: 1) Backus Rd & State Route 14 NB Ramps 2042 PM Mitigation includes the addition of a signal at the specified intersection, and the addition of a designated right turning lane onto NB On-ramp as well as the addition of designated left, thru, and right turning lanes for NB off-Ramp. 2) Backus Rd & State Route 14 SB Ramps 2042 PM Mitigation includes the addition of a signal at the specified intersection.

Source

Street Segment Level of Service

Along with the previously mentioned intersections, four separate street segments were analyzed during the AM and PM traffic level peaks. The four street segments include Backus Road in between SR 14 southbound ramps and SR 14 northbound ramps, Backus Road in between SR 14 northbound ramps and Sierra Highway, Sierra Highway in between Backus Road and Sopp Road, and Sopp Road in between Sierra Highway and Lone Butte Road. These segments were analyzed because they represent the segments that are part of the local route that will be traveled to access the project site.

As shown in **Table 4.17-3**, *Street Segment Level of Service for the AM Peak Hour* and **Table 4.17-4**, *Street Segment Level of Service for PM Peak Hour Each*, street segment is expected to experience some degradation of the LOS during the AM and PM Peak Hours. However, none of the four segments analyzed will experience a drop in LOS below LOS C during the AM or PM Peak Hours with LOS D being the minimum standard set by the Kern County General Plan. Therefore, impacts regarding the street segment LOS would be less than significant.

Table 4.17-3: Street Segment Level of Service for AM Peak Hour

		Year 2023 Existing A.M. Volumes (Figure 2)		Year 2023 A.M. Plus Project Traffic (Figure 5A)		Year 2025 A.M. Without Project Traffic (Figure 6A)		Year 2025 A.M. Plus Project Traffic (Figure 7A)		Year 2042 A.M. Without Project Traffic (Figure 8A)		Year 2042 A.M. Plus Project Traffic (Figure 9A)	
Limits	Existing Laneage – Both Directions	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)
1) Backus Rd													
State Route 14 SB Ramps/State Route 14 NB Ramps													
2	47/120	A	150/154	B	49/126	A	152/190	B	69/177	B	172/211	B	
2) Backus Rd													
State Route 14 NB Ramps/Sierra Hwy													
2	21/33	A	219/99	B	22/34	A	220/100	B	31/48	A	229/114	B	
3) Sierra Hwy													
Backus Rd/Sopp Rd													
2	68/67	A	269/134	C	71/71	A	272/138	C	100/99	A	301/166	C	
4) Sopp Rd													
Sierra Hwy/Lone Butte Rd													
2	94/71	A	308/141	C	98/75	A	312/145	C	138/105	B	352/175	C	
Source: LAV//Pinnacle Engineering, Inc., 2023													

Table 4.17-4: Street Segment Level of Service for PM Peak Hour

		Year 2023 Existing P.M. Volumes (Figure 2)		Year 2023 P.M. Plus Project Traffic (Figure 5A)		Year 2025 P.M. Without Project Traffic (Figure 6A)		Year 2025 P.M. Plus Project Traffic (Figure 7A)		Year 2042 P.M. Without Project Traffic (Figure 8A)		Year 2042 P.M. Plus Project Traffic (Figure 9A)		Year 2023 P.M. Plus Project Plus Mitigation	
Limits	Existing Laneage – Both Directions	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)	PH Vol (vph) (wb/eb) or (sb/nb)	Level of Service (LOS)
1) Backus Rd															
State Route 14 SB Ramps/ State Route 14 NB Ramps	2	162/581	B	258/698	C	171/610	B	267/777	C	239/855	C	335/972	C	N/A	N/A
2) Backus Rd															
State Route 14 NB Ramps/ Sierra Hwy	2	101/75	A	262/260	C	106/79	A	267/374	B	149/111	B	310/296	C	N/A	N/A
3) Sierra Hwy															
Backus Rd/Sop p Rd	2	209/94	B	374/287	C	219/99	B	384/292	C	308/138	C	473/331	D	473/331	A
4) Sopp Rd															
Sierra Hwy/L one Butte Rd	2	32/77	A	208/291	B	34/81	A	210/295	B	47/113	A	223/327	B	N/A	N/A
Note: 1) Mitigation includes the addition of a lane in both directions for the street segment between Sopp Rd & Backus Rd															
Source: LAV//Pinnacle Engineering, Inc., 2023															

Freeway Ramp Junction Levels of Service

Given the location of the proposed project, its proximity to SR 14 means that most of the project traffic will use SR 14 as the main route to access the proposed project site. As a result, the on and off ramps originating on Backus Road (ramp segments) and to and from SR 14 were analyzed in the *TIS* for its LOS during the construction phase during the AM and PM Peak Hours. Based on the results of the *TIS*, as shown in **Table 4.17-5, Freeway Ramp Junction Levels of Service – AM Volumes**, only one of the ramp segments experienced a degradation in LOS. Each ramp segment analyzed for the LOS during the AM period of the construction phase remained consistent with the existing pre-Project LOS.

Table 4.17-5: Freeway Ramp Junction Levels of Service – AM Volumes

Item	Ramp Segment	Junction Type	Analysis Scenario	A.M. Volumes		
				PH Vol (vph)	Density (pc/mi/ln)	Level of Service (LOS)
1)	Backus Rd & State Route 14 SB On-Ramp	Merge	2023	161	11.4	B
			2023 + Project	193	11.6	B
			2025	169	11.7	B
			2025 + Project	201	12	B
			2042	237	16.5	B
			2042 + Project	269	16.7	B
2)	Backus Rd & State Route 14 SB Off-Ramp	Diverge	2023	12	10.1	B
			2023 + Project	107	10.1	B
			2025	12	10.4	B
			2025 + Project	107	10.4	B
			2042	17	14.6	B
			2042 + Project	112	14.6	B
3)	Backus Rd & State Route 14 NB On-Ramp	Merge	2023	23	9.3	A
			2023 + Project	55	9.6	A
			2025	24	9.6	A
			2025 + Project	56	9.8	A
			2042	34	13.4	B
			2042 + Project	66	13.7	B
4)	Backus Rd & State Route 14 NB Off-Ramp	Diverge	2023	108	11.1	B
			2023 + Project	203	11.1	B
			2025	113	11.4	B
			2025 + Project	208	11.4	B
			2042	159	16	B
			2042 + Project	254	16	B

Notes: 1) For Item #1 and #4 for Table 4.17-13 the freeway volume is 1071 vph for Year 2023, 1103 vph for Year 2025, and 1575 vph for Year 2042. 2) For item #2 and #3 for Table 4.17-13 the freeway volume is 969 vph for Year 2023, 998 vph for Year 2025, and 1425 vph for Year 2042.

Source: Caltrans' 2019 Traffic Volumes on California State Highways; LAV/Pinnacle Engineering, Inc., 2023

However, as shown in **Table 4.17-6, Freeway Ramp Junction Levels of Service – PM Volumes**, it is assumed that the baseline PM Volume LOS for 2025 at the Backus Road and SR 14 northbound on-ramp ramp segment would have an LOS A. With implementation of the construction phase of the project, the LOS would drop from LOS A to LOS B. Despite this drop in LOS, the ramp segment would not drop below the LOS standard set by the Kern County General Plan. Additionally, none of the remaining ramp segments would drop below the baseline LOS for 2023 and 2025, which

ranges between LOS A and LOS B, with the implementation of the construction phase. Therefore, impacts regarding the freeway ramp junction level of service would be less than significant.

Table 4.17-6: Freeway Ramp Junction Levels of Service – PM Volumes

Item	Ramp Segment	Junction Type	Analysis Scenario	P.M. Volumes		
				PH Vol (vph)	Density (pc/mi/ln)	Level of Service (LOS)
1)	Backus Rd & State Route 14 SB On-Ramp	Merge	2023	361	13	B
			2023 + Project	434	13.6	B
			2025	379	13.5	B
			2025 + Project	502	14.5	B
			2042	531	18.9	B
			2042 + Project	604	19.5	B
2)	Backus Rd & State Route 14 SB Off-Ramp	Diverge	2023	109	10.1	B
			2023 + Project	181	10.1	B
			2025	115	10.4	B
			2025 + Project	187	10.4	B
			2042	160	14.6	B
			2042 + Project	232	14.6	B
3)	Backus Rd & State Route 14 NB On-Ramp	Merge	2023	43	9.5	A
			2023 + Project	111	10	A
			2025	46	9.8	A
			2025 + Project	174	10.8	B
			2042	64	13.7	B
			2042 + Project	132	14.3	B
4)	Backus Rd & State Route 14 NB Off-Ramp	Diverge	2023	539	11.1	B
			2023 + Project	604	11.1	B
			2025	566	11.4	B
			2025 + Project	631	11.4	B
			2042	793	16	B
			2042 + Project	858	16	B

Notes: 1) For Item #1 and #4 for Table 4.17-14 the freeway volume is 1071 vph for Year 2023, 1103 vph for Year 2025, and 1575 vph for Year 2042. 2) For item #2 and #3 for Table 4.17-14 the freeway volume is 969 vph for Year 2023, 998 vph for Year 2025, and 1425 vph for Year 2042.

Source: Caltrans' 2019 Traffic Volumes on California State Highways; LAV//Pinnacle Engineering, Inc., 2023

Traffic Signal Warrant Analysis

Non-signalized intersections within the project vicinity were analyzed for satisfaction of the Peak Hour Volume Warrant, for the construction and operational phases, as described in Section 9 of the *Caltrans Traffic Manual* and the *Manual of Uniform Traffic Control Devices*. The *Manual of Uniform Traffic Control Devices* (MUTCD) prescribes “tests” which are conducted to determine the need for installation of a traffic signal. These “tests” are referred to as “warrants.” The MUTCD list minimum signal “warrants,” which have been adopted by the California Department of

Transportation and most California agencies, including the City of Bakersfield and the County of Kern. These “warrants” consist of evaluation of various criteria that have been determined as critical for the installation of a signal. As shown in **Table 4.17-7, *Peak Hour Signal Warrant Analysis***, only one of the non-signalized intersections analyzed satisfied Peak Hour Warrant during the construction phase: Backus Road and SR 14 northbound ramps, PM peak. The remaining non-signalized intersections did not satisfy the Peak Hour Signal Warrant.

Table 4.17-7: Peak Hour Signal Warrant Analysis

No.	Existing Non-Signalized Intersection	Year 2023 Existing Volumes			Year 2023 Existing Volumes Plus Project			Year 2025 Volumes		
		Highest Minor Approach Volume (vph)	Total Major Approach Volume (vph)	Peak Hour Warrant Satisfied	Highest Minor Approach Volume (vph)	Total Major Approach Volume (vph)	Peak Hour Warrant Satisfied	Highest Minor Approach Volume (vph)	Total Major Approach Volume (vph)	Peak Hour Warrant Satisfied
1)	Backus Rd and State Route 14 SB Ramps AM	12	262	No	107	304	No	12	725	No
	Backus Rd and State Route 14 SB Ramps PM	109	921	No	181	1,062	No	115	968	No
2)	Backus Rd and State Route 14 NB Ramps AM	108	50	No	203	219	No	113	53	No
	Backus Rd and State Route 14 NB Ramps PM	539	186	No	604	467	Yes	566	196	No
3)	Backus Rd and Sierra Hwy AM	21	78	No	219	148	No	22	81	No
	Backus Rd and Sierra Hwy PM	85	224	No	246	421	No	89	235	No
4)	Sopp Rd and Sierra Hwy AM	71	212	No	141	426	No	75	222	No
	Sopp Rd and Sierra Hwy PM	77	288	No	291	464	No	81	303	No
5)	Backus Rd and State Route 14 SB Ramps AM	107	317	No	17	386	No	112	428	No
	Backus Rd and State Route 14 SB Ramps PM	187	1,159	No	160	1,355	Yes	232	1,496	Yes
6)	Backus Rd and State Route 14 NB Ramps AM	208	222	No	159	74	No	254	243	No
	Backus Rd and State Route 14 NB Ramps PM	631	587	Yes	793	275	No	858	556	Yes
7)	Backus Rd and Sierra Hwy AM	220	151	No	31	114	No	229	184	No

	Backus Rd and Sierra Hwy PM	250	432	No	125	329	No	286	526	No
8)	Sopp Rd and Sierra Hwy AM	145	436	No	105	312	No	175	526	No
	Sopp Rd and Sierra Hwy PM	295	479	No	113	423	No	327	599	No

Source: LAV//Pinnacle Engineering, Inc., 2023

Operation

The year 2042 is the final year of the analysis for the operational phase and the operational traffic is compared to the construction phase (2023-2025) and years 2023 and 2025, without the project and includes AM and PM Peak Hours. This comparison is illustrated in the previously provided **Table 4.17-1** through **Table 4.17-6**.

Intersection Level of Service

Much like the construction phase, the LOS was analyzed for four separate intersections near the proposed project site and was illustrated in **Table 4.17-2**, above. For all four intersections, the LOS did not change during the AM Peak Hour.

However, for the intersection at Sopp Road and Sierra Highway, the change in LOS from the years 2023 and 2025 would drop from LOS A to LOS C during the PM Peak Hour. Though a drop in LOS would occur, the LOS would remain above the Kern County standard LOS of LOS D. The reduction of LOS at the intersection at Backus Road and SR 14 northbound ramps even before Year 2042 with the project implemented would be below the established County standard. Specifically, the LOS from Year 2023 with the project implemented would be LOS F with the LOS from Year 2025 remaining at LOS F which would remain the same in Year 2042. However, with the previously mentioned mitigation measures implemented, LOS would stand at LOS C in Year 2042 with the project.

Level of Service would also drop for the intersection at Backus Road and SR 14 southbound ramps in Year 2042. Prior to Year 2042, the LOS, with the project implemented, would be at LOS A for both Year 2023 and Year 2025. However, with project being implemented in Year 2042, the LOS would drop to LOS F. With mitigation measures implemented, including MM 4.17-3 requiring installation of a traffic signal and road widening at the SR 14 northbound at Backus Road intersection by “opening day” and a traffic signal at southbound ramp and Backus Road intersections by 2042, the LOS would then be adjusted to LOS B, which is above the LOS standard of LOS D. Therefore, impacts would be less than significant.

Street Segment Level of Service

As stated in the construction phase analysis, above, four separate street segments were evaluated for their LOS with the implementation of the project during the AM and PM Peak Hours. Additionally, the analysis was illustrated in **Table 4.17-3** and **Table 4.17-4**. For the AM Peak Hour for all four street segments, once the construction phase for the project commenced in 2023 then finished in 2025, the LOS did not differ from Year 2042 with the project still operating. In fact, the LOS stayed in a consistent range from LOS B to LOS C, never dipping below the LOS standard of LOS D. Though the AM Peak Hour never dropped below the standard LOS, the PM Peak Hour contains some variation.

At the start of the construction phase of the project in Year 2023, the LOS range consists of LOS B to LOS C and remains the same in Year 2025 with the operational phase commencing. However, in Year 2042, only three of the four street segments remain within the LOS B and LOS C range. In particular, the street segment at Sierra Highway in between Backus Road and Sopp Road drops to LOS D. Yet, with implementation of Mitigation Measure MM 4.17-3 requiring the noted segment

of Sierra Highway in between Backus Road and Sopp Road requiring the installation of one lane in each direction by year 2042, the LOS for this segment of Sierra Highway Road would be LOS A, well above the LOS minimum standard of LOS D. Therefore, impacts would be less than significant.

Freeway Ramp Junction Levels of Service

Much like in the construction phase, four separate freeway ramp junction levels of service were analyzed during the AM and PM Peak Hours. This analysis is illustrated in **Table 4.17-5** and **Table 4.17-6**. For all of the freeway ramp junctions that were analyzed for the AM and PM Peak Hours in Year 2042 with the project implemented, none drop below an LOS of LOS B, which above the standard LOS of LOS D as found in the Kern County General Plan. Therefore, impacts would be less than significant.

Traffic Signal Warrant Analysis

Much like the construction phase, four separate no-signalized intersections at the AM and PM Peak Hours during the operational phase of Year 2042 were analyzed which includes project implementation. The information used for the analysis can be seen in **Table 4.17-7**, above. Only two of the no-signalized intersections for either the AM or PM Peak Hours satisfy the Peak Hour Warrant. These include the intersections at Backus Road and SR 14 southbound ramps (PM) and Backus Road and SR 14 northbound ramps (PM).

Though the proposed project traffic would result in a degradation of the LOS below the standard LOS of LOS D as set in the Kern County General Plan, Mitigation Measures MM 4.17-1 through MM 4.17-3 would be implemented. With the implementation of these mitigation measures, the impacts would be less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include structures or facilities requiring permanent staffing or visitors on site. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. As such, temporary construction activities would adhere to all federal and state regulations related to construction along active roadways, best practices that are already established by SCE, the applicable mitigation measures discussed in this EIR, as well as the appropriate adopted minimization measures as identified in the Edwards Air Force Base (EAFB) Environmental Assessment pertaining to on-base

utility corridors. As the improved structures would be installed on existing SCE utility easements, impacts to level of service be less than significant.

Mitigation Measures

MM 4.17-1: Prior to the issuance of construction or building permits for each Facility, the project proponent/operator shall implement measures to ensure peak hour construction worker vehicle limits are maintained during the AM and PM peak hours in order to maintain LOS D or better at the study intersections. These measures may include, but are not limited to the following:

- a. The Construction Traffic Control Plan (see MM 4.17-2, below) shall outline the methods used to count worker vehicle traffic arriving and departing from the project site during peak AM and PM hours, methods used to control the number of trips during these hours, and documentation of reasonable coordination efforts with other projects in the area to avoid impacts to study intersections.
- b. The project proponent/operator shall limit construction worker vehicle trips to and from the site to the extent possible during the AM and PM peak periods (i.e., 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.).
- c. If monitoring indicates that either AM or PM peak hour construction trips may exceed the peak hour construction worker vehicle limits, the project proponent/operator shall implement measures to reduce peak hour passenger vehicle trips. These measures could include:
 1. Scheduling construction worker shifts so that a majority of the workers arrive and depart the project site outside the AM and PM peak periods.
 2. Staggering construction worker shifts so that construction worker vehicle trips are distributed over a broader period (i.e., construction workers arrive in staggered shifts starting from 6:00 a.m. and depart in staggered shifts starting from 2:00 p.m.).
 3. Instituting incentives and providing options for construction workers to carpool and/or vanpool to and from the project site.
- d. Should applicant be able to demonstrate LOS will not fall below LOS C, then the Traffic Control Plan will not be necessary.

MM 4.17-2: Prior to the issuance of construction or building permits, the project proponent/operator shall:

- a. Prepare and submit a Construction Traffic Control Plan to Kern County Public Works Department-Development Review and the California Department of Transportation offices for District 9, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic

Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following issues:

1. Timing of deliveries of heavy equipment and building materials. To the extent feasible, restrict deliveries and vendor vehicle arrivals and departures during either the AM and PM peak periods;
 2. Directing construction traffic with flaggers along the Rosamond Corridor;
 3. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;
 4. Ensuring access for emergency vehicles to the project sites;
 5. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections;
 6. Maintaining access to adjacent property;
 7. Specifying both construction-related vehicle travel and oversize load haul routes and avoiding residential neighborhoods to the maximum extent feasible; and;
 8. Consult with the County to develop coordinated plans that would address construction-related vehicle routing and detours adjacent to the construction area for the duration of construction overlap with neighboring projects. Key coordination meetings would be held jointly between project proponents and contractors of other projects for which the County determines impacts could overlap.
- b. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Kern County Planning and Natural Resources Department, the Kern County Public Works Department-Development Review, and California Department of Transportation.
- c. Enter into a secured agreement with Kern County to ensure that any County roads that are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Kern County.
- d. Submit documentation that identifies the roads to be used during construction. The project proponent/operator shall be responsible for repairing any damage to non-County maintained roads that may result from construction activities. The project proponent/operator shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Kern County Public Work Department-Development Review and the Kern County Planning and Natural Resources Department.

- e. Within 30 days of completion of construction, the project proponent/operator shall submit a post-construction video log and inspection report to the County. This information shall be submitted in electronic/digital format. The County, in consultation with the project proponent/operator's engineer, shall determine the extent of remediation required, if any.

MM 4.17-3: To improve traffic during operation of the project, the following traffic improvements shall be implemented; costs shall be funded entirely by the project proponent and at no cost to either the County of Kern or the California Department of Transportation (CalTrans):

- a. State Route 14 northbound ramps and the Backus Road Intersections: Installation of a traffic signal and expansion of the intersection to provide one dedicated lane for the westbound right turn on the ramp, and one dedicated lane for each turning movement at the northbound ramp termini at the buildout year of opening day.
- b. State Route 14 Southbound Ramps and the Backus Road Intersections: Installation of a traffic signal by 2042. By the year 2042, the project proponent shall coordinate with both the Kern County Public Works Department and CalTrans to revisit and recalculate the cost for this mitigation. A new pavement analysis shall also be completed to calculate the required Traffic Index and cross section.
- c. Segment of Sierra Highway between Backus Road and Sopp Road: By the year 2042, the addition of one lane in each direction shall be installed. The project proponent shall coordinate with both the Kern County Public Works Department and CalTrans to revisit and recalculate the cost for this mitigation.
- d. At a minimum, the project proponent shall place a 0.15-foot depth asphalt concrete overlay over the eastbound lane of Sopp Road. To avoid a fault along the roadway centerline, cold plane a 3-to-4-foot width to a depth of 0.12-feet north of the Sopp Road centerline. The overlay will extend north of the centerline repaving the cold-planned limits and providing a transition to the full overlay depth placed on the eastbound lane. After the overlay, restriping of centerline will be necessary as well as shoulder-backing on the south side.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.17-1 through MM 4.17-3, impacts would be less than significant for the project.

Impact 4.17-2: The project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

CEQA Guidelines section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the *CEQA Guidelines* criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas and shifts the focus from driver delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses. Vehicle miles

traveled, or VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person.

Impacts due to construction activities would be temporary and would not result in any meaningful long-term or permanent change in VMT. Therefore, the evaluation of VMT is focused on project operation. Senate Bill 743 states that VMT associated with the movement of goods does not need to be analyzed or mitigated in the determination of transportation impacts. Therefore, project VMT will only apply to “automobiles,” which refers to on-road passenger vehicles, specifically cars and light trucks. Therefore, only employee commutes were analyzed for VMT. The calculation of VMT of any project, simply put, is the number of project-generated trips multiplied by the travel length of each trip. Obviously, there is no completely precise method for determining VMT for any project prior to development and occupancy; however, the best available data must be used for estimating both project-generated trips and trip length.

Average regional daily VMT in Kern County is 13,561,210 miles in urbanized areas and 11,811,200 miles in rural areas. Average trip length for Kern County, as of 2020, is 9.75 miles. The average daily VMT for employees is 28,134 miles, representing an average trip length of 32 miles. Under existing conditions, and future conditions in the absence of the proposed project, trucking VMT is 17,028,846. The truck VMT for the proposed project has been calculated as 10,013,775 miles, which is a 7,015,071-mile decrease compared to existing or future conditions without the project (LAV/Pinnacle, 2023). The analysis also estimated annual employee Vehicle Miles Traveled and truck Vehicle Miles Traveled at 28,134 miles and 27,435 miles, respectively. This analysis, and the analysis below, can be seen in **Table 4.17-8, PSG Employee and Truck Vehicle Miles Traveled** and **Table 4.17-9, Forecast of Truck VMT without Steel Mill**, below.

Table 4.17-8: PSG Employee and Truck Vehicle Miles Traveled

1)	(Trip Type) Employee Commutes	Daily PSG Employee Trips	Average Length (mi)	Daily Vehicle Miles Traveled (BxC)	Annual Vehicle Miles Traveled
	Bakersfield	132	72	9,504	3,468,960
	Tehachapi	87	32	2,784	1,016,160
	Mojave	174	7	1,218	444,570
	Outlying Kern County	87	36	3,132	1,143,180
	Lancaster	218	24	5,232	1,909,680
	Palmdale	174	36	6,264	2,286,360
	Total	872	32	28,134	10,268,910
2)	(Primary Truck Trips) Arriving From	Daily PSG Truck Trips	Average Length (mi)	Daily Vehicle Miles Traveled (BxC)	Annual Vehicle Miles Traveled
	Bakersfield	60	72	4,320	1,576,800
	LA County	32	96	3,072	1,121,280
	Mojave	9	7	63	22,995
3)	(Primary Truck Trips) Departing to	Daily PSG Truck Trips	Average Length (mi)	Daily Vehicle Miles Traveled (BxC)	Annual Vehicle Miles Traveled

Northern California	32	344	11,008	4,017,920
Southern California	32	196	6,272	2,289,280
Mexico	12	225	2,700	985,500
Total	177	155	27,435	10,013,775
Source: LAV//Pinnacle Engineering, Inc., 2023				

Table 4.17-9: Forecast of Truck VMT without Steel Mill

	Location	Primary Truck Trips Annually				
		Plymouth, UT (774 Miles)	Seattle, WA (1,189 Miles)	McMinnville, OR (944 Miles)	Kingman, AZ (314 Miles)	TOTAL
2022 Forecast	LA County	2,031	1,463	114	325	3,933
	San Francisco	1,094	788	61	175	2,118
	Total	3,125	2,250	175	500	6,050
	One Way Miles Traveled	2,418,750	2,675,250	165,200	157,000	5,416,200
	Roundtrip Miles Traveled	4,837,500	5,350,500	330,400	314,000	10,832,400
				Project Truck VMT:		10,013,775
				Difference:		818,625
	Location	Primary Truck Trips Annually				
		Plymouth, UT (774 Miles)	Seattle, WA (1,189 Miles)	McMinnville, OR (944 Miles)	Kingman, AZ (314 Miles)	TOTAL
2025 Forecast	LA County	3,123	2,249	304	500	6,175
	San Francisco	1,682	1,211	163	269	3,325
	Total	4,805	3,459	467	769	9,500
	One Way Miles Traveled	3,718,935	4,113,316	440,777	241,395	8,514,423
	Roundtrip Miles Traveled	7,437,869	8,226,632	881,554	482,791	17,028,846
				Project Truck VMT:		10,013,775
				Difference:		7,015,071
Source: LAV//Pinnacle Engineering, Inc., 2023						

The goal of recent legislation in California is the reduction of greenhouse gas emission, which is achieved in part by reduction in VMT. Although a thorough analysis of greenhouse gas emission is beyond the scope of the *TIS* a memorandum by Ramboll US Corporation (as referenced in Appendix O), concluded that the absence of the project in California would result in additional GHG emission due to the additional travel distance to transport scrap metal out of the state for milling and manufacturing, and transport of reinforcing bars back into California markets. In the absence of the project all steel materials would be trucked into California from the following locations:

- Seattle, Washington (~1,189 miles one way)
- Plymouth, Utah (~774 miles one way)

- McMinnville, Oregon (~944 miles one way)
- Mesa, Arizona (~411 miles one way)

Based on these values, project implementation would reduce trucking distances traveled by more than 7 million miles annually. Given trucks can emit as much as 8 times the greenhouse gases per mile than automobiles, the project will significantly reduce these emissions, meeting the intent of California Senate Bills 32 and 743. Therefore, the impacts would be less than significant.

Off-site Improvements

As described previously, off-site improvements specific to the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. After the temporary ground disturbance and construction activities conclude, there would be no new operational work force required to operate the new transmission lines outside of SCE's typical workforce dedicated to maintenance operations of such facilities. Inspections and maintenance of this line are expected to occur simultaneously with existing transmission line inspections and maintenance that already occur and would therefore not add operational traffic. No impacts would occur from the upgraded SCE transmission structures standing alone.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.17-3: The project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

During construction, the project would require the delivery of heavy construction equipment and PV solar components using area roadways, some of which may require transport by oversize vehicles. Heavy equipment associated with these components would not be hauled to/from the site daily, but rather would be hauled in and out on an as-needed basis. Nevertheless, the use of oversize vehicles during construction can create a hazard to the public by limiting motorist views on roadways and by the obstruction of space, which is considered a potentially significant impact. However, the project would be required under existing regulations to obtain California Highway Patrol escorts, as well as coordinate the timing of transport, in oversize load permits from Caltrans and Kern County, as appropriate. Thus, potential impacts would be less than significant.

The proposed project would not include a design feature or utilize vehicles with incompatible uses that would create a hazard on the roadways surrounding the project site. Chain-link security fencing

would be installed around the perimeter of the facilities and other areas requiring controlled access, prior to commencement of construction, in order to restrict public access during construction and operations. Additionally, the proposed project would not include the development of sharp curves, dangerous intersections or other hazardous design features. The proposed project would be set back from the roadways as required by Kern County Zoning Ordinance.

While impacts would be less than significant, Mitigation Measure MM 4.17-2 would require that all oversized vehicles used on public roadways during construction obtain required permits and obtain approval of a Construction Traffic Control Plan, as well as identify anticipated construction delivery times and vehicle travel routes in advance to minimize construction traffic during AM and PM peak hours. This would ensure that construction-related oversize vehicle loads are in compliance with applicable California Vehicle Code sections and California Street and Highway Codes applicable to licensing, size, weight, load, and roadway encroachment of construction vehicles. Therefore, with the implementation of Mitigation Measure MM 4.17-2, impacts would be less than significant.

Off-site Improvements

As described previously, off-site improvements specific to the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. Construction and operational traffic for SCE upgrade work would be mostly focused within an existing transmission corridor that includes access from established and dedicated roads, with negligible impact to nearby public roads. After the temporary ground disturbance and construction activities conclude, there would be no new operational work force required to operate the new transmission lines outside of SCE's typical workforce dedicated to maintenance operations of such facilities. Inspections and maintenance of this line are expected to occur simultaneously with existing transmission line inspections and maintenance that already occur and would therefore not add operational traffic. As these new poles and circuits would be installed on replaced SCE structures and construction traffic would be mostly limited to existing easements and corridors, there would be no increase in hazards due to a geometric design feature. Impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.17-2.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.17-2, impacts would be less than significant for the project.

Impact 4.17-4: the project would result in inadequate emergency access.

The project site is located in eastern Kern County in an industrially dispersed area. Primary access to the proposed project site is from Sopp Road, north of the project site, with a proposed additional access off of Lone Butte Road, east of the project site. In addition, the project site will include internal access roads that will connect to both access points. The project has been designed and access points have been located to enable adequate egress and ingress to the site in the event of an emergency. Therefore, the development of the proposed project would not physically interfere with emergency vehicle access or personnel evacuation from the site.

The proposed project would not require closures of public roads during either construction or operation and would not inhibit access by emergency vehicles in this regard. For these reasons construction and operation would have a less-than-significant impact on emergency access. Additionally, with implementation of Mitigation Measures MM 4.17-1 and MM 4.17-2, which would require the preparation of a Construction Traffic Control Plan that considers access for emergency vehicles to the project site, the potential to impact emergency access to the project to a less than significant level.

Off-site Improvements

As described previously, off-site improvements specific to the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE.

Construction and operational traffic for SCE upgrade work would be mostly focused within an existing transmission corridor that includes access from established and dedicated roads, with negligible impact to nearby public roads. After the temporary ground disturbance and construction activities conclude, there would be no new operational work force required to operate the new transmission lines outside of SCE's typical workforce dedicated to maintenance operations of such facilities. Inspections and maintenance of this line are expected to occur simultaneously with existing transmission line inspections and maintenance that already occur and would therefore not add operational traffic. As these new poles and circuits would be installed on replaced SCE structures and construction traffic would be mostly limited to existing easements and corridors, modification or obstruction of existing roadways is not anticipated. Nonetheless, SCE would adhere to all federal and state regulations related to emergency response, as well as implement best practices already established by SCE to avoid potential hazards, the applicable mitigation measures discussed in this EIR, and any of the appropriate adopted minimization measures as identified in the Edwards Air Force Base (EAFB) Environmental Assessment for on-base utility corridors. Impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.17-1 and MM 4.17-2.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.17-1 and MM 4.17-2 impacts would be less than significant for the project.

Cumulative Setting, Impacts, and Mitigation Measures

As shown in **Table 3-3**, *Cumulative Project List*, there are 36 separate projects within a six-mile radius. The make-up of these projects includes a variety of projects and also includes seven solar projects and projects with a solar component; none of the cumulative projects includes a proposed manufacturing project. The size and scope of already existing development are increased by the proposed project, which will result in cumulative impacts to transportation when considered together with the project. It was determined that project traffic generated by cumulative projects located further than six miles from the project site would not have a noticeable effect on traffic conditions at study intersections or roadway segments, and therefore vehicle trips that would be generated by those projects were not considered in the cumulative traffic analysis for the proposed project.

The potential for cumulative construction impacts exists where there are multiple projects proposed in an area that have overlapping construction schedules that could affect similar resources. The analysis of 2023-2025 traffic conditions in Impact 4.17-1 includes project construction traffic in combination with traffic that would be generated by cumulative projects. During the construction phase at the PM Peak Hour, the LOS at the intersection of Backus Road and SR 14 northbound ramps would drop from a LOS A to an LOS F. However, with the implementation of Mitigation Measures 4.17-1 and 4.17-2 impacts would be considered less than significant.

For the operational phase, which was analyzed up until 2042, LOS would drop below the minimum standard of LOS D. Specifically, two intersections during the operational phase would drop below the minimum standard LOS: Backus Road and SR 14 northbound ramps and Backus Road and SR 14 southbound ramps. Both intersections would fall to LOS F by 2042, but with the implementation of Mitigation Measures MM 4.17-1 and MM 4.17-2, as well as MM 4.17-3 requiring installation of a traffic signal and road widening at the SR 14 northbound at Backus Road intersection by “opening day” and a traffic signal at southbound ramp and Backus Road intersections by 2042, the LOS would then be adjusted to LOS B, which is above the LOS standard of LOS D. MM 4.17-3 would also require the segment of Sierra Highway in between Backus Road and Sopp Road benefit from the installation of one lane in each direction by year 2042, resulting in the LOS for this segment of Sierra Highway Road be improved to LOS A, well above the LOS minimum standard of LOS D. As such, impacts would be considered less than significant.

Cumulatively, impacts during the construction and operational phases of the proposed project, with the implementation of Mitigation Measures MM 4.17-1 through MM 4.17-3, would be less than significant. Therefore, cumulative impacts would be considered less than significant.

Off-site Improvements

As discussed previously, the re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include structures or facilities requiring permanent staffing or visitors on site. The newly installed poles and circuits are needed to support the proposed project's

overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. Construction of new transmission equipment would involve temporary ground disturbance around the new structure locations, however use of these areas for these project elements would not exacerbate the potential result in a cumulative impact on traffic and levels of service. As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts with mitigation incorporated, and these necessary improvements are small parts of that overall project, thus not contributing to cumulative significant transportation impacts. When considered with other past, present and future projects, these improvements would not be cumulatively considerable.

Mitigation Measures

Implement Mitigation Measure MM 4.17-1 through MM 4.17-3.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.17-1 through MM 4.17-3, cumulative impacts would be less than significant for the project.

Section 4.18 Tribal Cultural Resources

4.18.1 Introduction

This section provides an assessment of potential impacts related to tribal cultural resources that could result from implementation of the proposed project. The analysis in this section is based on the results of the *Cultural Resources Assessment Report* (ESA, 2022) located in Appendix F, which details the results of a cultural resources records search and field survey for the project. Analysis in this section is also based on results of the *Paleontological Resources Assessment Report* (ESA, 2022) located in Appendix I. Due to the confidential nature of the location of tribal cultural resources, information regarding location of cultural resources has been redacted from the report and is not included in the appendix. This section is also based on the Native American consultation conducted by the County for purposes of compliance with Senate Bill 18 (SB 18) and CEQA requirements prompted by Assembly Bill 52 (AB 52).

4.18.2 Environmental Setting

Refer to **Section 4.5, *Cultural Resources***, of this EIR for discussion of the cultural resources including additional analysis of the tribal cultural resources environmental setting.

Natural Setting

The Project area lies within the Western Mojave Desert, specifically the Antelope Valley. The Antelope Valley occurs within the Mojave Desert geomorphic province (CGS 2002). The Mojave Desert province is characterized primarily by a broad interior region of isolated mountain ranges separated by expanses of desert plains. The Mojave Desert province is wedged between the Garlock Fault and the San Andreas Fault, which have uplifted the surrounding mountains relatively rapidly, isolating the Mojave Desert from the Pacific Coast and creating the interior drainage basins of the western Mojave Desert, such as the Antelope Valley. The west end of the Antelope Valley is defined by the Tehachapi and San Gabriel Mountains, forming the v-shaped basin of the western Mojave Desert.

The Antelope Valley floor is mantled in thick deposits of Quaternary alluvial and lacustral (lakebed) sediments that have filled the West Antelope, East Antelope and Kramer structural basins. The alluvial sediments are subdivided into two units: older (Pleistocene) Quaternary sediments, and younger (Holocene) alluvial surface deposits. These alluvial sediments are derived from nearby granitic mountains and have been deposited on the valley floor over the course of thousands of years.

Prehistoric Setting

The prehistory of the Mojave Desert is generally described in terms of cultural “complexes.” A complex is a specific archaeological manifestation of a general mode of life, characterized by

distinct technologies, artifact types, economic systems, trade and burial practices, and other aspects of culture. Complexes are typically associated with particular chronological periods. The prehistory of the Mojave is generally divided into the following time-periods/complexes: Paleo-Indian, Lake Mojave Complex, Pinto Complex, Gypsum Complex, Rose Springs Complex, and Late Prehistoric.

Paleo-Indian (10,000-8,000 B.C.)

The Paleo-Indian period is represented in the Mojave primarily by large, fluted Clovis projectile points. This limited evidence suggests that early human occupants of the Mojave probably lived in small, mobile groups in temporary camps in the vicinity of permanent water sources. In the vicinity of the project area, a fragment of a fluted Clovis point was recorded on the southern slopes of the Tehachapi Mountains. In addition, the earliest occupation of CA KER-2821/H, also known as the Bean Springs complex, an extensive archaeological site near Willow Springs, has been radiocarbon dated to 9,020-9,430 RCYBP (radiocarbon years before present) (ESA, 2022).

Lake Mojave Complex (8,000-6,000 B.C.)

In terms of material culture, the Lake Mojave Complex is typified by stone tools such as stemmed Lake Mojave and Silver Lake projectile points, bifaces, steep-edged unifaces, crescents, and some ground stone implements (ESA, 2022). Lake Mojave groups were organized in relatively small, mobile groups and practiced a forager-like subsistence strategy. Some trade with coastal groups was practiced, as evidenced by the presence of shell beads. Lake Mojave sites have been found primarily around Fort Irwin, Lake Mojave, China Lake, Rosamond Lake, and Twentynine Palms.

The Pinto Complex (6,000-3,000 B.C.)

Archaeological deposits ascribed to the Pinto Complex suggest that Pinto settlement patterns consisted of seasonal occupation by small, semi-sedentary groups that were dependent upon a combination of big and small-game hunting and collection strategies, which could include the exploitation of resources associated with streams or other water sources. Typically, sites of this period, which are far more geographically widespread than the Lake Mojave complex sites, are found along lakeshores and streams or springs, some of which are now dry. Material culture representative of this period in California prehistory includes roughly formed projectile points, “heavy-keeled” scrapers, choppers, and a greater prevalence of flat millstones and manos, indicating more intensive use and processing of plant resources. At the end of the middle Holocene, around 3,000 B.C., environmental conditions became much drier and hotter, and few sites in the Mojave date to the period between 3000 and 2000 B.C., suggesting that the area’s population may have decreased during this period of unfavorable climate (ESA, 2022).

Gypsum Complex (c. 2,000 B.C.-A.D. 200)

Many archaeological sites of this period are small and surficial, probably indicative of temporary occupation. It is during this time, however, that more archaeological evidence suggestive of inter-tribal trade appears, particularly between the desert and the coast. At a site at Lovejoy Springs (CA-LAN-192), which has a prominent Gypsum component, a group inhumation with at least nine individuals was uncovered, including a child buried with more than 3,000 Olivella shell beads from the southern Californian coast. The artifact assemblage associated with this period also includes an

increased number of millingstones and manos, and it is believed that it was during this period that the pestle and mortar were introduced. These technological developments may point to the increased consumption of seeds and mesquite. Other artifacts associated with the Gypsum Complex include Humboldt Concave Base, Gypsum Cave, Elko Eared, and Elko Corner-notched projectile points (ESA, 2022).

Rose Springs Complex (c. A.D. 200-1,200)

The general cultural pattern for this period is a continuation of that of the preceding Gypsum Complex. Rose Springs archaeological sites are more numerous than sites dating to previous periods and contain more well-developed middens, indicating an increase in population and a more permanent settlement pattern. In addition, the archaeological record attests to established trade routes between desert and coastal populations, evidenced by shell beads and steatite, as well as an introduction of Anasazi influence from the eastern Great Plains as seen in the appearance of turquoise and pottery. Material culture related to this complex includes obsidian artifacts, Rose Spring and Eastgate projectile points, millingstones, manos, mortars and pestles, slate pendants, and incised stones. These projectile points, which are smaller than those in preceding periods, are thought to reflect the adoption of the bow and arrow.

The prevalent use of obsidian is a defining feature of the Rose Springs period. Obsidian from the Coso volcanic field, approximately 70 miles north of Mojave, was imported in near-finished form for use in making lithic tools. The importing of obsidian seems to have dropped sharply at the end of the Rose Springs period, possibly associated with the Medieval Climatic Anomaly, a period of climate change between A.D. 800 to 1350, and the concurrent migration of Numic-speaking populations out of southeastern California and into the Great Basin.

Several periods of drought affected the Mojave in the Rose Springs period, associated with the Medieval Climatic Anomaly, and subsequent Late Prehistoric Period. Drops in the lake levels at Mono Lake attest to dry periods in A.D. 900–1100 and A.D. 1200–1350.

Several major Rose Springs villages or site complexes exist in the vicinity of the project area. A complex of 15 sites exists near Rosamond Lake, many of which are characterized solely by evidence of lithic reduction. Some of these sites have been dated to the Rose Springs Complex. A number of sites have been identified along the shores of Koehn Lake, including one site that retains evidence of a pit-house (ESA, 2022).

The Late Prehistoric Period (A.D. 1,200-European Contact)

Following periods of drought during the Rose Springs Period, wetter conditions returned between A.D. 1350 and 1600, associated with a climatic event known as the Little Ice Age.

By the Late Prehistoric Period, an extensive network of established trade routes wound their way through the desert, routing goods to populations throughout the Mojave region. It is also believed that these trade routes encouraged or were the motivating factors for the development of an “increasingly complex socioeconomic and sociopolitical organization” among Protohistoric peoples in southern California. Housepit village sites are prevalent during this period, as are the presence of Desert Side-notched and Cottonwood projectile points, brownware and buffware ceramics, steatite shaft straighteners, painted millingstones, and, to a lesser degree, coastal shell

beads. Beginning around A.D. 1300, however, a decline in trade occurred and well-established village sites were abandoned (ESA, 2022).

Ethnographic Setting

At the time of European contact, numerous groups occupied the area in and surrounding the Antelope Valley. The southeastern portion of the valley, around the Mojave River, was inhabited by the Serrano, who call themselves Maara'yam. The Desert Serrano have sometimes also been referred to as the Vanyume. The territory of the Tataviam centered on the southwestern extent of the Antelope Valley, the Santa Clara River drainage, and possibly the Sierra Pelonas and the Palmdale area. The Kitanemuk inhabited the southern Tehachapi Mountains and the northern and central portion of the Antelope Valley. To the north, the Kawaiisu occupied the southern Sierra Nevada and the northern Tehachapi Mountains, and may have also inhabited part of the western Mojave Desert. Finally, during the historic period, there is some evidence for the occupation of the Western Mojave by the Chemehuevi (ESA, 2022).

The Serrano and Kitanemuk, the two groups that have the most well-documented association with the project area, are described in more detail below.

Serrano

The Serrano occupied territories that ranged from low or moderately low desert to the mountain regions of the Transverse and Peninsular ranges. Serrano territory included the Antelope Valley in the west, extended to Twenty-Nine Palms in the east, beyond the San Bernardino Mountains to Yucaipa Valley in the south, and north across the western Mojave Desert, along the Mojave River. According to Kroeber (1925) Serrano territory may have extended at least 20 miles to the west of Mount San Antonio.

The Serrano were organized into clans, with the clan being the largest autonomous political entity. They lived in small villages where extended families lived in circular, dome-shaped structures (called Kiič) made of willow frames covered with tule thatching. Each clan had one or more principal villages in addition to numerous smaller villages associated with the principal village.

Villages located at higher elevations were placed near canyons that received substantial precipitation or were adjacent to streams and springs. Villages situated at lower elevations were also located close to springs (which were considered sacred places for the Serrano), or in proximity to the termini of alluvial fans where the high-water table provided abundant mesquite and shallow wells could be dug.

The Serrano subsistence strategy relied upon hunting and gathering, and occasionally fishing. Villages divided into smaller, mobile gathering groups during certain seasons to gather seasonally available foods. The division of labor was split between women gathering and men hunting and fishing. Mountain sheep, deer, rabbits, acorns, grass seeds, piñon nuts, bulbs, yucca roots, cacti fruit, berries, and mesquite were some of the more common resources utilized (ESA, 2022).

Despite early European and Spanish contact in 1771, the Serrano remained relatively autonomous until the period between 1819 and 1834 when most of the western Serrano were removed and placed into missions (ESA, 2022).

Kitanemuk

The Kitanemuk occupied a territory that extended from the Tehachapi Mountains into the western end of the Antelope Valley. While most of their recorded villages were located in the Tehachapi Mountains, their settlement pattern is poorly understood. Some scholars posit that the Antelope Valley's desert floor was used only on a seasonal basis, while others point to archaeological evidence of permanent occupation of the desert floor during the Late Prehistoric Period.

Like other Takic-speaking groups, such as the Serrano, Kitanemuk society had a patrilineal organization. Families grouped together into villages, which were headed by a team of "administrative elite" composed of a chief, messengers, and shamans. Kitanemuk subsistence was similar to their neighbors the Tataviam. Primary vegetable food sources included acorns, juniper berries, seeds, and yucca buds. Small game such as antelope and deer supplemented these foods (ESA, 2022).

Historic Setting

The first Europeans known to have visited the Mojave were Pedro Fages in 1772, and Juan Bautista de Anza and Father Francisco Garcés in 1774. In 1775, Father Garcés separated from de Anza and crossed the Mojave along the ancient Mojave Trail from Needles west to the San Gabriel Mission. Garcés may have crossed the playa of Rogers Dry Lake in the Antelope Valley in 1776 (ESA, 2022).

The Spanish missions that dotted the California coast never spread inland to the Mojave, and the desert remained relatively unexplored and unsettled by Europeans for much of the next century. The Romero-Estudillo Expedition of 1823-24 was an attempt by the Spanish to establish a secure route between the California Coast and Tucson; however, despite two attempts, the expedition never managed to make it as far as the Colorado River (ESA, 2022).

The first recorded American visitors to the Mojave were the party of Jedediah Smith, who crossed the Mojave along the Mojave Trail in 1826. Ewing Young and Kit Carson followed his route in the 1820s and 1830s. Kit Carson, who had participated in Jedediah Smith's 1828 expedition, later was the guide for John C. Fremont in 1844. This expedition was one of the first to document the Antelope Valley in detail.

In 1862, the Homestead Act was passed, allowing settlement of public lands and requiring only residence, improvement, and cultivation of the land. Although settlement had been encouraged by the Homestead Act of 1862 and the Desert Land Act of 1877, which permitted disposal of 640-acre tracts of arid public lands at \$1.25 per acre to homesteaders if they proved reclamation of the land by irrigation, the Antelope Valley did not see much growth until after the coming of the railroad. In 1876, the Southern Pacific Railroad line (now the Union Pacific Railroad) that ran south from the San Joaquin Valley was connected to the line from Los Angeles, running through the Fremont and Antelope Valleys. Stops along this line were located at Cantil and Cinco, north of the project area, and Mojave, south of the project area. In 1884, this line joined the Atchison, Topeka, & Santa Fe line that ran east through Needles (ESA, 2022).

In the 1880s, a number of groups established colonies in the Antelope Valley, including the Quakers, German Lutherans, and Utopian Socialists. However, fluctuating water levels and years

of severe drought brought a quick end to many of these colonies. By 1930, over 80 settlements had been established in the region, most along railroad lines. The town of Rosamond was established approximately 5 miles south of the project area in 1877 along the Southern Pacific line and named for the daughter of a Southern Pacific executive (ESA, 2022).

Agriculture and ranching were the primary economic focus of homesteaders in the Antelope Valley. During the initial wave of settlement in the 1880 and 1890s, dry-farming methods proved fairly successful. However, this was in large part because these were unusually wet years. A severe drought between 1894 and 1904 brought an end to most agricultural enterprises. After the drought, irrigation was used with some success, particularly for the cultivation of alfalfa, which became the valley's primary crop (ESA, 2022). However, the lack of reliable water prevented agriculture from becoming a major industry.

In the arid environment of the high desert, water sources were always a factor in the success of agriculture. Farms were generally located near dependable sources of water such as rivers or springs. Some farmers, however, used wells for irrigation or located their farms near dry lake beds, which periodically flooded during the wet season (ESA, 2022).

Existing Tribal Cultural Resources

As stated in the *Cultural Resources Assessment Report* for the project (Appendix F), a Sacred Lands File (SLF) search through the NAHC, which was requested on March 15, 2021 and was completed on April 7, 2021, did not identify sacred sites or tribal cultural resources in the project vicinity. Similarly, a SLF request was submitted by the County to the NAHC on October 21, 2021 as part of the Native American SB 18 and AB 52 consultation discussed below. The NAHC responded to the County on December 3, 2021 and the result of the SLF check was negative.

Native American SB 18 and AB 52 Consultation

As part of the County's government-to-government responsibilities pursuant to AB 52, on December 10, 2021, the County sent consultation notification letters via certified mail to three California Native American tribal contacts on the County's Master List for AB 52 consultation. Similarly, as part of the County's government-to-government consultation responsibilities pursuant to SB 18, also on December 10, 2021, the County sent outreach letters via certified mail to 11 California Native American tribal contacts. Results of the outreach are shown in **Table 4.18-1: AB 52 and SB 18 Native American Consultation**. To date, two response has been received, one from Quechan Tribe of the Fort Yuma Reservation with no comment on the project and the other from Ryan Nordness, Cultural Resource Analyst for the San Manuel Band of Mission Indians (SMBMI), on January 7, 2022. The correspondence between Kern County and SMBMI is summarized below following table.

Table 4.18-1: AB 52 and SB 18 Native American Consultation

Contact	Tribe	Legal Requirement	Date of Letter	Response
Darrell Mike, Tribal Chairman	Twenty-Nine Palms Band of Mission Indians	AB 52	December 10, 2021	No response
Colin Rambo, CRM Tech	Tejon Indian Tribe	AB 52 and SB 18	December 10, 2021	No response
Jessica Mauck, Cultural Resources Analyst	San Manuel Band of Mission Indians	AB 52 and SB18	December 10, 2021	Ryan Nordness, cultural resources analyst for San Manuel Band of Mission Indians responded on January 7, 2022.
Donna Yocum, Chairperson	San Fernando Band of Mission Indians	SB18	December 10, 2021	No response
Danelle Gutierrez, Tribal Historic Preservation Officer	Big Pine Paiute Tribe of the Owens Valley	SB 18	December 10, 2021	No response
Sally Manning, Environmental Director	Big Pine Paiute Tribe of the Owens Valley	SB 18	December 10, 2021	No response
James Rambeau, Chairperson	Big Pine Paiute Tribe of the Owens Valley	SB18	December 10, 2021	No response
Julio Quair, Chairperson	Chumash Council of Bakersfield	SB 18	December 10, 2021	No response
Jill McCormick, Historic Preservation Officer	Quechan Tribe of the Fort Yuma Reservation	SB18	December 10, 2021	Responded with no comment on the project
Robert Robinson, Chairperson	Kern Valley Indian Community	SB18	December 10, 2021	No response
Delia Dominguez, Chairperson	Kitanemuk and Yowlumne Tejon Indians	SB 18	December 10, 2021	No response
Octavio Escobedo III, Chairperson	Tejon Indian Tribe	SB18	December 10, 2021	No response

In an email dated January 7, 2022, Ryan Nordness, Cultural Resource Analyst for the SMBMI, replied to the County's AB 52 consultation notifications stating the project would be located within Serrano ancestral territory, however that due to the nature of the project and the location, the SMBMI did not have concerns with implementation. Additionally, the SMBMI recommended cultural mitigation language as well as tribal cultural mitigation language that included steps to be taken for the unanticipated discovery of cultural resources and/or tribal cultural resources. This included; the SMBMI Cultural Resources Department being contacted to determine significance and treatment, a Monitoring and Treatment Plan being developed, in coordination with the SMBMI, which would include a qualified archaeological monitor and a SMBMI elected monitor, if the resource cannot be avoided, all documents archaeological/cultural documents be shared with SMBMI, and if human remains are encountered work within 100 feet would cease and the County Coroner would be contacted.

4.18.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

Native American Heritage Commission

Public Resources Code (PRC) Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerry “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent (NOI) to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the *CEQA Guidelines*, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 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 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 (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND for a project with a significant impact on an identified tribal cultural resource (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Senate Bill 18

Senate Bill 18 (SB 18) (Statutes of 2004, Chapter 905), which went into effect January 1, 2005, requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to "provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places" (Governor's Office of Planning and Research, 2005).

The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to general plan or specific plan processes proposed on or after March 1, 2005.

According to the *Tribal Consultation Guidelines: Supplement to General Plan Guidelines* (Governor's Office of Planning and Research, 2005), the following are the contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive

- notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
 - Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).
 - In accordance with SB 18 and the California Tribal Consultation guidelines, the appropriate native groups were consulted with respect to the project's potential impacts on Native American places, features, and objects.

California Native American Graves Protection and Repatriation Act (NAGPRA) of 2001

Codified in the California Health and Safety Code Sections 8010-8030, the California Native American Graves Protection and Repatriation Act is consistent with the federal NAGPRA. Intended to "provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect," Cal NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants, Section 8025 established a Repatriation Oversight Commission to oversee this process. The Cal NAGPRA also provides a process for non-federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

California Health and Safety Code, Sections 7050 7053

California Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease, and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Local

Construction and operation of the micro mill, 63-acre solar array, ancillary buildings, and other project components would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to tribal cultural resources. There are no policies, goals, and implementation measures in the Kern County General Plan related to tribal cultural resources that are applicable to the project. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for cultural resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use, Open Space and Conservation Element

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

Policy 25: The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.

Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.

Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.

Measure O: On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

4.18.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential impacts to tribal cultural resources have been evaluated using a variety of resources, including *the Cultural Resources Assessment* (ESA, 2022), the *Paleontological Resources Assessment Report* (ESA, 2022) an SLF search conducted by the NAHC and SB 18 and AB 52 notification letters which were sent to Native American groups and individuals to solicit information regarding the presence of tribal cultural resources. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on tribal cultural resources.

A project would have a significant impact on tribal cultural resources if it would:

- 1) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
 - b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Project Impacts

Impact 4.18-1a: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

Searches of the Sacred Lands File (SLF) were requested by both the project proponent and the County to the California Native American Heritage Commission (NAHC) on March 15, 2021 and October 21, 2021, respectively. Both searches were completed on April 7, 2021 and December 3, 2021, respectively. The conclusion of the requested searches yielded no known Native American cultural resources within the project area or its vicinity.

A records search was conducted on March 29, 2021 at the California Historical Resources Information System (CHRIS) Southern San Joaquin Valley Information Center (SSJVIC) which indicated that 105 cultural resources have been previously recorded within a 0.5-mile radius of the project area including 6 prehistoric archaeological sites, 29 historic-period archaeological sites, 3 historic-period built resources, 10 prehistoric isolates, and 57 historic-period isolates. Of these 105 previously recorded resources, 23 are located in the vicinity of the project area. Of the 23 cultural resources, 10 were relocated, and the remaining 13 were found to have been destroyed. The study also found three newly recorded resources, which were found to be not eligible for listing in the California Register and therefore do not qualify as historical resources. Nor do these resources qualify as unique archaeological resources under Public Resources Code 21803.2(g).

However, analysis from the *Cultural Resources Assessment Report*, states that the project area does have a high to moderate sensitivity from the presence of subsurface archeological resources. Therefore, the project does have the potential to impact previously unknown and buried historical resources during project-related excavation. In the event that unknown archaeological resources that qualify as historical resources are discovered during project construction, significant impacts could occur. Mitigation Measures MM 4.5-1 through MM 4.5-4 (see **Section 4.5, *Cultural Resources***, for full mitigation measures) would require cultural resources sensitivity training for construction workers, implementation of avoidance measures should prehistoric archaeological resources or sites be inadvertently located, archaeological monitoring during construction, and appropriate treatment of unearthed human remains. Implementation of these measures would reduce impacts to unknown resources to less than significant.

Off-site Improvements

As discussed above, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. Potential impacts to historic resources within these areas would be minimal. The construction and operation of the SCE upgraded structures and materials are not anticipated to result in impacts on cultural resources. SCE measures would be implemented, which include compliance with all applicable state and federal laws and regulations during construction and operation, including those regulations that relate to tribal cultural resources. As such, impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-4, see **Section 4.5 *Cultural Resources***.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.5-1 through MM 4.5-4 impacts would be less than significant.

Impact 4.18-1b: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

As identified above the SLF search of the NAHC Sacred Land database was found to be negative. Additionally, as noted above, SMBMI identified the proposed project being located within Serrano ancestral territory as part of the AB 52 and SB 18 consultation process. The SMBMI also noted that due to the nature of the project and the location, they did not have concerns with project implementation. The SMBMI did recommend mitigation language to ensure impacts to unknown

resources would be less than significant. To ensure this mitigation measures MM 4.5-1 through MM 4.5-5 (see **Section 4.5, Cultural Resources**, for full mitigation measures) would be implemented. MM 4.5-1 would require the project proponent retain a qualified lead archaeologist to monitor all initial ground-disturbing activities, MM 4.5-2 would require cultural resources sensitivity training, MM 4.5-3 would outline steps if a paleontological resource is found, MM 4.5-4 would require a Cultural Resources Treatment Plan if a resource cannot be avoided, and MM 4.5-5 outlines steps if human remains are uncovered during project construction. Therefore, with the implementation of MM 4.5-1 through MM 4.5-5 impacts to tribal cultural resources would be less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. Temporary ground disturbance would be needed along the utility rights-of-way and corridors where SCE transmission lines currently exist and, more specifically, at installation sites of new poles. While the majority of the improvement areas are flat and would require minimal to no ground disturbance, it is understood that some ground disturbance will be required, establishing temporary pull/splice sites, temporary landing zones, temporary guard structures, crossing structure temporary work areas, replacement structure temporary work areas, and underground temporary work areas. Therefore, there is the potential for ground disturbance to impact previously unknown archeological resources, which would represent a potential significant impact. However, implementation of SCE's existing maintenance and operation protocols, as well as adopted minimization measures for utility corridors within Edwards Air Force Base, any potential impacts would be reduced to less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-5, see **Section 4.5 Cultural Resources**.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.5-1 through MM 4.5-5, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

An analysis of cumulative impacts takes into consideration the entirety of impacts that the project discussed in **Chapter 3, Project Description**, of this EIR, would have on tribal cultural resources. The geographic area of analysis for tribal cultural resources includes the western Antelope Valley. This geographic scope of analysis is appropriate because the resources within this area are expected to be similar to those that occur on the project area because of their proximity, their similarities in environments and landforms, and their location within the same Native American tribal territories. This is a large enough area to encompass any effects of the project on tribal cultural resources that may combine with similar effects caused by other projects and provides a reasonable context wherein cumulative actions could affect tribal cultural resources.

Numerous discretionary projects are proposed throughout the Antelope Valley. Cumulative impacts to tribal cultural resources in the Antelope Valley could occur if other related projects, in

conjunction with the proposed project, had or would have impacts on cultural resources that, when considered together, would be significant.

Potential impacts of the project to tribal cultural resources, in combination with other projects in the area, could contribute to a cumulatively significant impact due to the overall loss of resources unique to the region. As discussed above there were no known or identified tribal cultural resources on the project site. With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5, no tribal cultural resources are anticipated to be impacted as a result of project implementation. Specifically, MM 4.5-1 would require, prior to ground disturbance, or the issuance of grading or building permits, the project proponent shall retain a qualified lead archaeologist to carry out all mitigation measures related to archaeological resources and monitor all initial ground-disturbing activities and excavations. MM 4.5-2 would require, prior to the start of any ground-disturbing activities, that a qualified archaeologist conduct cultural resources sensitivity training for all construction personnel. MM 4.5-3 requires that a qualified paleontologist be obtained to evaluate the significance of any resource(s) found and recommend appropriate treatment measures. MM 4.5-4 requires that prior to the issuance of grading or building permits, the project proponent implement certain measure to protect any historical resources. And MM 4.5-5 requires that if human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the California Environmental Quality Act Guidelines. Therefore, with the implementation of Mitigation Measure MM 4.5-1 through MM 4.5-5, cumulative impacts would be considered less than significant.

Off-site Improvements

Southern California Edison (SCE) is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include any occupied structures and all would be constructed in accordance with all applicable regulatory standards, including building codes and earthquake safe designs. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconducted route, these off-site facilities would be fully maintained by SCE. Construction of new transmission structure would involve temporary ground disturbance around the new structure locations. Because moderate site grading and fill would occur during construction activities, there is a potential for impacts to tribal cultural resources or impacts to prehistoric resources that may lie beneath these areas. SCE will comply with all applicable state and federal laws and regulations related to tribal cultural resources during construction and operation, and will implement standard protocols within their right-of-way as previously adopted for both County land as well as utility corridors within

Edwards Air Force Base (see Appendix F). As noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts, and these necessary improvements are small parts of that overall project. Consequently, these impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-5, see **Section 4.5, *Cultural Resources***.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.5-1 through MM 4.5-5, cumulative impacts would be less than significant.

Section 4.19 Utilities and Service Systems

4.19.1 Introduction

This section of the EIR describes the affected environment and regulatory setting of the Mojave Micro Mill Project (project) pertaining to demand for utilities (water supply, stormwater, electricity, natural gas, telecommunications, and solid waste disposal). This section describes existing infrastructure and levels of service and evaluates whether any improvements would be necessary to accommodate the project. The information and analysis in this section is based on the project-specific *Preliminary Hydrology Study – Mojave Micro Mill* (Michael Baker International, 2023) included in Appendix K, the project water service eligibility letter (AVEK, 2023) in Appendix M and *Mojave Micro Mill - Water Supply Assessment (ESA, 2023)* in Appendix L of this EIR, respectively.

4.19.2 Environmental Setting

Water Supply

There are typically three sources of water supply for development: (1) natural sources; (2) manmade sources; and (3) reclamation. Natural sources include rivers, lakes, streams, and groundwater stored in aquifers. Manmade sources include runoff water that is treated and stored in reservoirs and other catchment structures. Reclaimed water is wastewater that has been conveyed to a treatment plant and then treated to a sufficient degree that it may be used for certain uses, such as irrigation and watering landscape. However, reclaimed water is not potable (drinkable) and must be conveyed in a separate system to ensure that there is no possibility of direct human consumption.

The project is located on approximately 174 acres of privately owned land located in the western extent of the Mojave Desert. The project is located approximately 5 miles northeast of the unincorporated community of Rosamond, California and approximately 8 miles southeast from the unincorporated community of Mojave, California. The Mojave Public Utilities District (MPUD) is the local water retailer nearest to the project site. However, the project site is located approximately four miles from MPUD's district boundaries, and therefore MPUD does not have the ability or the infrastructure to serve the proposed project within the desired proposed project timeline.

Accordingly, the project site would be served by the Antelope Valley-East Kern Water Agency (AVEK), a wholesale supplier of State Water Project water to the greater Antelope Valley region. AVEK's service area encompasses nearly 2,400 square miles in northern Los Angeles and eastern Kern Counties as well as a small portion of Ventura County. AVEK currently provides water to 27 retail water agencies, water companies, and agricultural customers (AVEK 2021). The proposed project is located within Division 2 of AVEK's service area and was determined to be eligible to receive imported water supply through connection to a potable water line as indicated in the project will serve letter (AVEK, 2023).

AVEK's primary water supplies are sourced from both surface water and groundwater and include State Water Project (SWP) water, Non-SWP water, Antelope Valley Groundwater Production Rights, Antelope Valley Groundwater Basin Imported Water Return Flows, and Banked Groundwater (referred to as herein as recovered imported water). AVEK is the 3rd largest State Water Contractor with an entitlement of 144,844-acre feet (AF), and supplied a demand of approximately 61,500 acre feet per year (AFY) in 2020.

The Antelope Valley-East Kern Water Agency (AVEK) water main is located on the eastern side of Sierra Highway, approximately 200' feet from the boundary of the project site. For operations, a new water line would be installed from the project site, underneath the railroad, connecting to the 360-inch main AVEK line via an existing 10-inch turnout that is currently capped with a blind flange. For construction, water will be trucked to the project site and the project proponent will also use the existing water well at the plant. Two trucks per day were assumed during the construction phase.

Antelope Valley Groundwater Basin

The Antelope Valley Groundwater Basin ("the Basin") is located in the western Mojave Desert, covering 1,580 square miles in Los Angeles, Kern, and San Bernardino counties and AVEK's groundwater wells are located within the Basin. The Basin is a large, topographically closed alluvial basin with an estimated total storage capacity of about 68 to 70 million acre-feet. It consists of two primary aquifers: the upper unconfined aquifer ("principal aquifer"), which is the main source of groundwater for the area, and a lower aquifer that is considered to be confined. (DWR Basin Number 6-44) (DWR 2004; AVEK 2021).

Prior to 1972, groundwater provided more than 90 percent of the total water supply in the Antelope Valley. Since 1972, it is estimated that between 50 percent to 90 percent of the area's water supplies are from groundwater stored within the Basin. Groundwater pumping peaked in the 1950s, and then declined as greater pumping lifts and increasing energy costs made the use of groundwater in the area less economical for agricultural uses. Groundwater levels in some areas have declined significantly since the early 1900s due to over pumping. According to the US Geological Service (USGS), groundwater levels declined more than 200 feet in some parts of the Basin, resulting in increased pumping lifts, reduced well efficiency, and land subsidence of more than six feet in some areas (AVEK 2021).

Antelope Valley Groundwater Basin Adjudication Judgement

The Basin was adjudicated in 2015 after 15 years of complex proceedings among more than 4,000 parties, including public water suppliers, landowners, small pumpers and non-pumping property owners, and the federal and state governments. The Antelope Valley Area of Adjudication covers approximately 1,390 square miles, or 90 percent of the groundwater basin. The adjudication defined the boundaries of the basin, considered hydraulic connection throughout the basin, established the safe yield, and quantified groundwater production (Antelope Valley Watermaster 2022; Todd Groundwater 2020).

The Antelope Valley Groundwater Basin Adjudication Judgment ("Judgment") documented overdraft conditions, established water rights among groundwater producers, and ordered a ramp down of production to meet the native basin safe yield (AVEK 2021). Following the adjudication,

the Antelope Valley Watermaster was formed to implement the Judgment. The Watermaster is charged with administering the adjudicated water rights and managing the groundwater resources within the adjudicated portion of the Antelope Valley. There are seven potential production categories identified in the Judgment: production rights, ramp down production, imported water return flows, carryover water, stored water, other rights to produce groundwater, and additional production (AVEK 2021). The Production right and imported water return flows are the primary water supply sources for AVEK.

Wastewater

The Kern Sanitation Authority provides maintenance and wastewater service for Kern County; however, the unincorporated parts of the Antelope Valley (including the project site) that do not have a sewer line connection utilize septic systems to treat household, commercial, and industrial wastewater. Septic system treatment first separates sludge from wastewater effluent in the septic tank, then allows liquid effluent to percolate in spreading grounds to be filtered by the soil. Septic tanks are emptied regularly by private County-certified waste haulers. Runoff wastewater from agricultural operations is allowed to infiltrate as agricultural return flows into the ground and does not require treatment. The project would include restroom facilities inside the various buildings on-site for the full-time employees plus a separate trucker restroom facility in the front of the proposed project site, just west of the proposed guard shack. Septic systems would be emptied as part of regular ongoing project-related maintenance.

Stormwater Drainage

The proposed project site is located in a remote region with no existing or stormwater infrastructure and would not tie into any stormwater infrastructure. The project is in the South Lahontan Hydrologic Region, and specifically within the Gloster Subbasin of the Antelope Valley Hydrologic Unit. The total drainage area for the entire basin is approximately 4,700 acres with an elevation change of 2,400 feet. The Gloster Subbasin is a closed basin inside of the Antelope Valley; therefore, there is no connection to the ocean and any precipitation or surface water is transferred via ephemeral streams to existing playas.

Solid Waste

Solid waste generally refers to garbage, refuse, sludge, and other discarded solid materials that come from residential, industrial, and commercial activities. Construction, demolition, and inert wastes are also classified as solid waste. Such wastes include nonhazardous building materials such as asphalt, concrete, brick, drywall, fencing, metal, packing materials, pallets, pipe, and wood. The general waste classifications used for California waste management units, facilities, and disposal sites are outlined below. Nonhazardous solid waste consists of organic and nonorganic solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded waste, provided that such wastes do not contain hazardous materials or soluble pollutants in concentrations that would exceed applicable water quality objectives or cause a degradation of waters of the State.

California State law regulates the types of waste that can be disposed of at the different classes of landfills. Class I landfills may accept hazardous and nonhazardous wastes. Class II landfills may accept designated and nonhazardous wastes, and Class III landfills may accept nonhazardous wastes.

Landfills

The Kern County Public Works Department operates seven landfills throughout the County. Landfills are located in Bakersfield, Boron, Mojave-Rosamond, Ridgecrest, Shafter-Wasco, Taft, and Tehachapi. The project site does not currently generate any solid waste. The closest operational landfill to the project site is the Mojave-Rosamond located approximately 3.9 miles to the north. This Class III landfill accepts wastes from agricultural, construction and demolition, green materials, industrial, and mixed municipal (CalRecycle, 2023).

Kern County is responsible for meeting the California Integrated Waste Management Act of 1989 (AB 939). AB 939 required cities and counties to reduce the amount of solid waste being sent to landfills by 50 percent by January 1, 2000. It also required cities and counties to prepare solid waste planning documents. These documents include the Source Reduction and Recycling Element (SRRE), the Hazardous Waste Element (HHWE), and the Nondisposal Facility Element (NDFE). All three of these documents, as well as the Integrated Waste Management Plan, approved February 1998, and amended in 2015, by the California Integrated Waste Management Board, have been approved for Kern County. The Kern County Integrated Waste Management Plan is the long-range planning document for landfill facilities (Integrated Waste Management Plan, 2015).

Construction and demolition (C&D) waste is generally heavy, inert material. This material creates significant problems when disposed of in landfills. Because C&D waste is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that generate C&D waste should emphasize deconstruction and diversion planning rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction project, which allows maximum use of the deconstructed materials for recycling in other construction projects and sends a minimum amount of the deconstruction material to landfills.

The Waste Operations Division of the Kern County Public Works Department administers or sponsors the following recycling programs, which contribute toward meeting State-mandated solid waste diversion goals:

- Recycling programs at landfills to recycle or divert a wide variety of products, such as wood waste, cathode ray tubes, tires, inert materials, appliances, etc.;
- Drop-off recycling centers for household recyclables. The County and City operated drop-off recycling centers, which are located in the unincorporated metropolitan area and the city, may be used by both County and city residents;
- Financial assistance for operation of the City of Bakersfield Green Waste Facility;
- The Kern County Special Waste Facility for the disposal of household hazardous waste. Services are provided to all Kern County residents;

- Semi-annual “bulky waste” collection events, which are held in the Bakersfield area and available to both County and city residents (co-sponsor);
- Christmas tree recycling campaign (participates jointly with the City of Bakersfield);
- Telephone book recycling program (co-sponsors with Community Clean Sweep);
- Community Clean Sweep summer workshops called “Trash to Treasure,” which educate children about recycling and other Kern County Waste Management Department programs (sponsor);
- An innovative elementary school program called the “Clean Kids Hit the Road Puppet Show” (operates in collaboration with Community Clean Sweep); and
- Recycling trailers for churches, schools, and nonprofit organizations.

Electric Power, Natural Gas, and Telecommunications

The proposed project site is located in the area served by Southern California Edison (SCE) for electric power. Though a 63-acre solar array and accompanying substation is being proposed to be built on-site, the proposed project will need additional energy to power the remaining portions of the facility. The nearest existing SCE substation to the proposed project site is approximately 6.9 miles south, in the unincorporated community of Rosamond. Southern California Gas (SoCalGas) is the natural gas provider in this area of Kern County. No known natural gas pipelines or telecommunication lines exist at the project site.

4.19.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

California Energy Commission

The California Energy Commission (CEC) is the state’s primary energy policy and planning agency and regulates the provision of natural gas and electricity within California. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the state response to energy emergencies.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912,

the legislature passed the Public Utilities Act, expanding the Railroad Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Railroad Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

California Department of Resources and Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle) is the state agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. CalRecycle administers and provides oversight for all of California's State-managed non-hazardous waste handling and recycling program. CalRecycle provides training and ongoing support for local enforcement agencies that regulate and inspect California's active and closed solid waste landfills (CalRecycle, 2019).

The Integrated Waste Management Act of 1989 (PRC 40050 et seq. or AB 939, codified in PRC 40000), administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

State Water Resources Control Board and Regional Water Quality Control Board

The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs). The SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans), which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The project site is within the jurisdiction of the Lahontan RWQCB.

California Department of Water Resources

The DWR is responsible for protecting, conserving, developing, and managing much of California's water supply. These duties include: preventing and responding to floods, droughts, and catastrophic events; informing and educating the public on water issues; developing scientific solutions; restoring habitats; planning for future water needs, climate change impacts, and flood protection; constructing and maintaining facilities; generating power; ensuring public safety; and providing recreational opportunities.

California Water Code Section 13260

California Water Code Section 13260 requires any person who discharges waste, other than into a community sewer system, or proposes to discharge waste that could affect the quality of waters of

the State to submit a report of waste discharge to the applicable Regional Water Quality Control Board (RWQCB). Any actions of the projects that would be applicable under California Water Code Section 13260 would be reported to the Lahontan RWQCB. However, the proposed project is not expected to discharge waste into the local sewer system, and therefore is not required to prepare and submit the described report.

Senate Bills 610 and 221

Senate Bill (SB) 610 and SB 221, passed in 2001, are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. SB 610 requires a city or county that determines that a project, as defined, is subject to CEQA to identify any public water system that may supply water for the project and to request those public water systems to prepare a specified water assessment. The project is subject to CEQA and is considered a project requiring preparation of a water supply assessment because it is a proposed industrial facility occupying more than 40 acres of land.

If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during normal, single and multiple dry years, presented in five-year increments for a 20-year projection. In accordance with these measures, a WSA is required for a proposed industrial, manufacturing, or processing plant that would house more than 1,000 persons; occupy more than 40 acres of land; or have more than 650,000 square feet of floor area (California Water Code, Section 10912).

California Integrated Solid Waste Management Act of 1989 or Assembly Bill 939

Pursuant to the California Integrated Solid Waste Management Act of 1989 (Public Resources Code [PRC] Section 40050, et seq.) or Assembly Bill (AB) 939, all cities in California are required to reduce the amount of solid waste disposed in landfills. AB 939 required a reduction of 25 percent by 1995 and 50 percent by 2000. Contracts that include work that will generate solid waste, including construction and demolition debris, have been targeted for participation in source- reduction, reuse, and recycling programs.

As described above, C&D waste is heavy, inert material that creates significant problems when disposed of in landfills. Because C&D waste is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that generate C&D waste should emphasize deconstruction and diversion planning rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction project, which allows maximum use of the deconstructed materials for recycling in other construction projects and sends a minimum amount of the deconstruction material to landfills.

Waste should be diverted from disposal in landfills (particularly Class III landfills) and maximize source reduction, reuse, and recycling of construction and demolition debris. AB 939 also required

cities and counties to prepare solid waste planning documents (e.g., the Source Reduction and Recycling Element, the Household Hazardous Waste Element, and the Non-disposal Facility Element). All three of these documents, as well as the Integrated Waste Management Plan, approved February 1998 by the California Integrated Waste Management Board (now California Department of Resources Recycling and Recovery or CalRecycle), have been approved for Kern County. The Kern County Integrated Waste Management Plan is the long-range planning document for landfill facilities.

California Green Building Code

As part of compliance with the state of California Green Building Code Requirements (known as CALGreen) that took effect beginning January 2011, Kern County implemented the following construction waste diversion requirements:

- Submittal of a Construction Waste Management Plan prior to project construction for approval by the Kern County Building Department.
- Recycling and/or reuse of a minimum 50 percent of construction & demolition waste; and
- Recycling or reuse of 100 percent of tree stumps, rocks and associated vegetation and soils resulting from land clearing. Assembly Bill 341

Since the passage of AB 939, diversion rates in California have been reduced to approximately 65 percent, the statewide recycling rate is approximately 50 percent, and the beverage container recycling rate is approximately 80 percent. In 2011, the State passed AB 341, which established a policy goal that a minimum of 75 percent of solid waste must be reduced, recycled, or composted by the year 2020. The State provided the following strategies to achieve that 75 percent goal:

1. Moving organics out of the landfill;
2. Expanding the recycling/manufacturing infrastructure;
3. Exploring new approaches for state and local funding of sustainable waste management programs;
4. Promoting state procurement of post-consumer recycled content products; and
5. Promoting extended producer responsibility.

To achieve these strategies, the State recommended legislative and regulatory changes including mandatory organics recycling, solid waste facility inspections, and revising packaging. With regard to construction and demolition, the State recommended an expansion of California Green Building Code standards that incentivize green building practices and increase diversion of recoverable construction and demolition materials. Current standards require 65 percent waste diversion on construction and some renovation projects. The State also recommends promotion of the recovery of construction and demolition materials suitable for reuse, compost or anaerobic digestion before residual wastes are considered for energy recovery.

California Solid Waste Reuse and Recycling Access Act of 1991 or Senate Bill 1327

The California Solid Waste Reuse and Recycling Access Act of 1991 (PRC Chapter 18) identified a lack of adequate areas for collecting and loading recyclable materials, resulting in a significant impediment to diverting solid waste. This act requires state and local agencies to address access to solid waste for source reduction, recycling, and composting activities. Each local agency must adopt an ordinance related to adequate areas for collecting and loading recyclable materials for development projects.

Local

Construction and operation of the proposed project would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Kern County Zoning Ordinance, and Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to utilities and service systems. The policies and implementation measures in the Kern County General Plan related to utilities and service systems that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but, as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Antelope Valley Watermaster

In accordance with the 2015 adjudication of the Antelope Valley Groundwater Basin establishing a safe yield and decreased respective water rights among groundwater producers, the Antelope Valley Watermaster Board and Advisory Committee were formed in 2016 (Antelope Valley Watermaster, 2018). The Antelope Valley Watermaster is responsible for administering adjudicated water rights within the Antelope Valley, including approving new production wells, collecting and reviewing groundwater production reporting forms, and producing annual reports summarizing overall groundwater production and replenishment in the Antelope Valley Groundwater Basin.

Kern County Integrated Waste Management Plan

The Kern County Public Works Department (KCPWD) is required by the State to plan and implement waste management activities and programs in the County unincorporated area to assure compliance with AB 939 and subsequent State mandates. The Kern County Integrated Waste Management Plan (IWMP) includes a Reduction and Recycling Element, Household Hazardous Waste Element, and Non-disposal Facility Element. The Plan was approved February 1998 by the California Integrated Waste Management Board (now California Department of Resources Recycling and Recovery or CalRecycle). The Kern County IWMP is the long-range planning document for landfill facilities.

Kern County Public Works Department Recycling Programs

The Waste Operations Division of the Kern County Public Works Department administers or sponsors the following recycling programs, which contribute toward meeting State-mandated solid waste diversion goals to achieve 75 percent recycling, composting, or source reduction of solid waste by 2020:

- Recycling programs at landfills to recycle or divert a wide variety of products, such as wood waste, cathode ray tubes, tires, inert materials, appliances, etc.;
- Drop-off recycling centers for household recyclables. The County- and the City-operated drop-off recycling centers, which are located in the unincorporated metropolitan area and the city, may be used by both County and city residents;
- Financial assistance for operation of the City of Bakersfield Green Waste Facility;
- The Kern County Special Waste Facility for the disposal of household hazardous waste. Services are provided to all Kern County residents;
- Semi-annual “bulky waste” collection events, which are held in the Bakersfield area and available to both County and city residents (co-sponsor);
- Christmas tree recycling campaign (participates jointly with the City of Bakersfield);
- Telephone book recycling program (co-sponsors with Community Clean Sweep);
- Community Clean Sweep summer workshops called “Trash to Treasure,” which educate children about recycling and other Kern County Waste Management Department programs (sponsor);
- An innovative elementary school program called the “Clean Kids Hit the Road Puppet Show” (operates in collaboration with Community Clean Sweep); and
- Recycling trailers for churches, schools, and nonprofit organizations.

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for utilities and service systems applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

1.4 Public Facilities and Services

Goals

- Goal 1: Kern County residents and businesses should receive adequate and cost-effective public services and facilities. The County will compare new urban development

proposals and land use changes to the required public services and facilities needed for the proposed project.

- Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.
- Goal 6: Provide a healthful and sanitary means of collecting, treating, and disposing of sewage and refuse for the residents and industries of Kern County.
- Goal 9: Serve the needs of industry and Kern County residents in a way that does not degrade the water supply and the environment and protect public health and safety by avoiding surface and subsurface nuisances resulting from the disposal of hazardous wastes, irrespective of the geographic origin of the waste.
- Goal 10: Ensure landfill capacity for Kern County residents and industries.

Policies

- Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- Policy 2: The efficient and cost-effective delivery of public services and facilities will be promoted by designating areas for urban development which occur within or adjacent to areas with adequate public service and facility capacity.
- a. Ensure that water quality standards are met for existing users and future development
 - b. Ensure that adequate storage, treatment, and transmission facilities are constructed concurrently with planned growth.
 - c. Ensure the maintenance and repair of existing water systems.
 - d. Encourage the utilization of wastewater treatment facilities which provide for the reuse of wastewater.
 - e. Encourage the consolidation or elimination of small water systems.
 - f. Encourage the conversion of private sewer systems (septic tanks) to public systems.
 - g. Ensure that adequate collection, treatment, and disposal facilities are constructed concurrently with planned growth.
 - h. Ensure that appropriate funding mechanisms are in place to fund the needed improvements which result from development and subsequent growth.
- Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.
- Policy 13: The County shall ensure landfill capacity for the residents and industry of Kern County.

Implementation Measures

- Measure B: Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the time of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.
- Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- Measure D: Involve utility providers in the land use and zoning review process.

1.9 Resources**Goals**

- Goal 4: Encourage safe and orderly energy development within the County, including research and demonstration projects, and to become actively involved in the decision and actions of other agencies as they affect energy development in Kern County.
- Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

Policies

- Policy 1: Appropriate resource uses of all types will be encouraged as desirable and consistent interim use in undeveloped portions of the County regardless of General Plan designation.
- Policy 16: The County will encourage development of alternative energy sources by tailoring its Zoning and Subdivision Ordinances and building standards to reflect Alternative Energy Guidelines published by the California State Energy Commission.
- Policy 19: Work with other agencies to define regulatory responsibility concerning energy related issues.

1.10 General Provisions**1.10.1 Public Services and Facilities****Policies**

- Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act

(CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

- Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Implementation Measures

- Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.

4.19.4 Impacts and Mitigation Measures

Methodology

Potential impacts to utilities and service systems associated with construction and operation of the project have been evaluated using a variety of resources, including online sources and published documents, as well as the project-specific information and analysis based on the *Preliminary Hydrology Study – Mojave Micro Mill* (Michael Baker International, 2023)) in Appendix K, the project water service eligibility letter (AVEK, 2023) in Appendix M and *Mojave Micro Mill - Water Supply Assessment (ESA, 2023)*, included in Appendix L of this EIR, respectively. Using these resources and professional judgment, impacts were analyzed according to significance criteria established in Appendix G of the *CEQA Guidelines*, described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect on utilities and service systems.

A project could have a significant adverse effect on utilities and service systems if it would:

- a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;

- b. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
- c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition the provider's existing commitments;
- d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals; or
- e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Project Impacts

Impact 4.19-1: The project would require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Construction

Water

The construction phase of the proposed project is expected to last approximately 24 months. Water will be used for such construction activities as dust suppression, soil compaction, excavation, grading activities, equipment cleaning, vehicle wash downs, washout basins, and re-compaction of backfill materials, concrete pouring and related activities. Construction activities for the proposed project would occur on approximately 3.25 million sf (75 acres). Based on projects of similar size and duration, a conservative estimate of construction water use for the micro mill facility, ancillary buildings and additional site components could be up to 50 gallons per day per 1000 square-foot (gpd/1000 sf). Based on these assumptions of construction water use at the project site, water use during construction is assumed to be 32,679 gallons per day (gpd), or approximately 37 acre-feet per year (AFY). Water use over the two-year construction period would be up to approximately 22 million-gallons (MG) or 69 acre-feet (AF).

Construction water demand would be met using water supplies from the existing well on the project site and with water that would be trucked to the project site. This analysis assumes that an average of two trucks per day would deliver water to the project site during the construction phase. Construction of the project would not require connections to water lines or facilities in the project area. Impacts would be less than significant.

Wastewater Treatment

Construction of the project would generate a minimal volume of wastewater. During construction activity, wastewater contained within portable toilet facilities and portable hand washing facilities would be disposed of at an approved offsite disposal site. The Kern County Public Health Services Department/Environmental Health Services Division is responsible for monitoring the use of portable toilet facilities, and the project proponent would be required to provide documentation of

a portable toilet pumping contract. No offsite sewage or disposal connections to a municipal sewer system exist or are proposed for construction wastewater demand. Therefore, construction of the project would not require or result in the relocation or construction of new or expanded off-site wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant and mitigation is not required.

Stormwater Drainage

As discussed in **Section 4.10, *Hydrology and Water Quality***, of this EIR, the project site is located in a remote region with no existing or planned stormwater infrastructure. The existing condition of the project site is that it is undeveloped (no impervious area) with minor grading of unpaved dirt paths. The topography slopes to the east at an approximate slope of 0.5%. Ground cover is desert chaparral with fair cover. Hydrologically, the site is bounded by Sierra Highway to the west and Sopp Road to the north. Some off-site water flow appears to reach the project area from the southeast. The drainage area is divided into four sub-areas with each flowing through the project area and discharging offsite independently; there is no confluence of flows. The existing project area and pattern and runoff characteristics would be altered by project activities during earth disturbance work such as grading, excavation, and equipment installation during construction. There are no existing stormwater drainage facilities within the project site, and the project would not affect existing stormwater drainage systems during construction and relocation or expansion of existing stormwater drainage facilities would not occur or be required. For areas within the project site and prior to the issuance of a grading permit, Mitigation Measure MM 4.10-2 requires the project proponent/operator shall complete a hydrologic study and final drainage plan designed to evaluate and minimize potential increases in runoff from the project site.

The project would be required to adhere to Kern County Public Works Department storm water requirements, which include measures to address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. Additionally, as discussed in **Section 4.10, *Hydrology and Water Quality***, the project would implement Mitigation Measures MM 4.10-1 and MM 4.10-2 which require preparation of a site-specific Storm Water Pollution Prevention Plan (SWPPP) and hydrologic study/final drainage plan to address construction and operations stormwater discharge, respectively.

All improvements during construction would be made within areas of the project site that are already disturbed or proposed for disturbance and included in the analysis in this EIR. Thus, construction of the project would not exceed the capacity of or require the relocation of any existing storm water drainage systems. The proposed project would not result in the relocation or construction of new or expanded stormwater drainage facilities with the potential to cause significant environmental effects. Impacts would be further reduced with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2.

Electric Power

During construction of the proposed project, electricity would be consumed, on a limited basis, to power lighting, electric equipment, and supply and convey water for dust control. Electricity would be supplied to the project site by SCE and would be obtained from the existing electrical lines that connect to the project site. Thus, the construction of the new or expanded energy infrastructure

would not cause significant environmental effects. Impacts would be less than significant.

Natural Gas

The proposed project would not use natural gas during the construction phase. Therefore, construction of the project would not require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

Telecommunications

No existing telecommunication facilities are located on-site. During construction, cellular or satellite communication technology may be used for both internet and telephone systems. According to SCADACORE, a website that tracks cell tower locations, there appear to be two within the immediate vicinity of the project site (SCADACORE, 2023). Also, an average cell phone tower allows about 30 simultaneous users for voice calls and about 60 users for 4G data (SureCall, 2023). It is unlikely that during the construction phase that all on-site construction workers will make voice calls and use 4G data at the same time. Additionally, any use of the telecommunications facilities will be temporary during the construction phase. Therefore, construction of the project would not require or result in the relocation or construction of new or expanded telecommunication facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

Operation

Water

Operational water demands would be met through connections to AVEK's portable water lines. As noted above, the project site is located within AVEK's service area and AVEK has provided a "water eligibility letter" indicating there is adequate capacity and willingness to provide water for the project (AVEK, 2023). The nearest AVEK water main is located on the eastern side of Sierra Highway, approximately 200' feet from the boundary of the Project Site. For operations, a new water line would be installed from the Project Site, underneath the railroad, connecting to the 36" main AVEK line via an existing 10" turnout that is currently capped with a blind flange. All facilities of the water system shall be designed and constructed to comply with Kern County Development Standards and approved by the Kern County Public Works Department in accordance with the implementation of Mitigation Measure MM 4.19-1. The proposed project would include connections to the AVEK's potable water line adjacent to APN 431-010-02 and 431-030-02. Connection to AVEK's water lines would require construction of on-site utility infrastructure, but would not necessitate relocation or expansion of existing AVEK water facilities. All improvements during would be made within areas of the project site that are already disturbed or proposed for disturbance and included in the analysis in this EIR. All on-site water lines would be constructed in compliance with applicable County and Agency standards.

According to the analysis completed in the *Mojave Micro Mill: Water Supply Assessment* technical study, AVEK, as the water supplier, has sufficient water supplies available to serve the proposed project over a 20-year planning horizon. Even during dry years, AVEK groundwater banks would be available to meet demand over multiple dry years. Thus, AVEK has sufficient water supplies to meet existing demands combined with the proposed project demands and cumulative demands in

2025, in 2035, and to the 2045 planning horizon as seen in AVEK's draft 2020 Urban Water Management Plan (Appendix L). Therefore, operation of the project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

Wastewater

Wastewater generated at the project site, would come from the operational systems as well as the on-site bathroom facilities. The project is proposing to install an on-site septic system that would consist of a septic tank and drainfield that will be located on the northwest portion of the project site and serve the project's wastewater needs. Specifically, it will be located north of the on-site water treatment plant, south of the northwest portion of the solar array, and east of the office building and locker room. In addition, a connection for disposal of water and sewage would be provided by the Antelope Valley-East Kern Water Agency. With the implementation of Mitigation Measure MM 4.19-2, any new wastewater package plant facility shall be constructed according to State specifications, with coordination of Kern County Public Works and Kern County Environmental Health Services Departments and shall be operated in such a way as to not contaminate the underlying unconfined aquifer. Thus, operation of the project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

Stormwater Drainage

As discussed in **Section 4.10, Hydrology and Water Quality**, of this EIR, the project site is located in a remote region with no existing or planned stormwater infrastructure. There are no existing stormwater drainage systems on the project site.

During the operational phase, the overall site will include approximately 50% of impervious area. Drainage sub-area delineations and flowpaths were preserved from the existing condition, although as the stormwater drainage design progresses, these parameters will be updated. Two detention basins are included in the proposed project site plan. Additionally, the *Preliminary Hydrology Study: Mojave Micro Mill*, offers some recommendations to limit stormwater runoff which can be found the technical study attached to this EIR (Appendix K).

In addition to the recommendations, Mitigation Measure MM 4.10-2 would include creating a hydrologic study and final drainage plan that would detail engineering design measures to manage stormwater flows and reduce potential increases in stormwater runoff to off-site areas. Although there are no existing adjacent stormwater facilities the project would tie into, the potential increase in runoff to off-site areas and other downstream receiving waters, would be addressed with the construction of detention basins, retention basins, erosion control, or other drainage facilities. All onsite facilities proposed as part of the project would occur within the project footprint and in areas proposed to be disturbed. All designed facilities would be in accordance with the guidelines from the Kern County Development Standards Division 4 Standards for Drainage, including Chapter III, Retention Basin Design. No off-site connections to municipal stormwater facilities exist or are proposed; thus, impacts would be less than significant.

Electric Power

During operation, the proposed project would include approximately 10-megawatt, 63 acres of ground-mounted solar panels, which is intended to generate electricity for on-site use. Additional energy sourced from SCE would be provided via connections to existing electric lines in the project area.

A majority of the machines and electricity used on the project site will use alternating current (AC) power provided by SCE. AC power at 66 kilovolts (KV) from SCE would be distributed to the various buildings various substations installed on the project site. There are several power control rooms (PCRs) located around the project site that would receive power from the main substation and transform that power to usable voltage for the specific area the PCR is located. PCR's consist of transformer, motor control centers and programmable logic controllers for the operation of the facility equipment.

The proposed project would also include approximately 63 acres dedicated to ground-mounted solar panels. The proposed 63-acre solar array is intended to generate 10-megawatt hours (MWh), or 25,550 MWh a year, of electricity for on-site use to power the Electric Arc Furnace (EAF) and the Ladle Metallurgy Station (LMS). The generated electrical energy would help to reduce and/or offset electricity on the state-wide utility grid. Additional energy sourced from SCE would be required to power the remaining portions of the facility. A substation would be installed on the project site to support the ground-mounted solar panels. All improvements would be made within areas of the project site that are already disturbed or proposed for disturbance and included in the analysis in this EIR.

In 2021, SCE had an annual electric sale to customers of approximately 82,048,000 MWh. The proposed project represents approximately 0.3 percent of the SCE network sales for 2021. As a result of the proposed project's power consumption being a fraction of the overall electricity usage, the project would not require or result in the relocation or construction of electric power facilities to accommodate the minimal increase in demand, with exception to off-site improvements to existing SCE transmission lines as discussed further below. Impacts would be less than significant.

Natural Gas

The project will not use natural gas during the operation phase.. Therefore, operation of the project would not require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects. There would be no impact.

Telecommunications

Telecommunication equipment including underground and overhead telephone, fiber optics and wireless communications infrastructure such as cellular, satellite, or microwave towers would be required to enable operation of the proposed project. There will be two fiber lines connected to the plant. One fiber optic cable will be installed by SCE who will be the electricity provider for the project site and it would tie into the existing telecommunications line from approximately Tehachapi Willow Springs Road following the route of Backus Road and routing around the north side of Exit 61 of State Route 14 (SR-14) to Sierra Highway. The other fiber optic cable will be for PSG business and industrial use, and it will be connected from an existing AT&T fiber at Sopp

road. Though the project would result in new and expanded telecommunication facilities, given that the telecommunications line would follow along previously disturbed lands, the construction or relocation of telecommunication equipment would not cause significant environmental effects. Impacts would be less than significant.

Off-site Improvements

As discussed previously, SCE is the electricity provider for the project site. To supply power to the site, SCE requires two main components, a power line and a fiber-optic (telecommunication) line. The power line will consist of an upgrade to a portion of the Corum-Goldtown-Rosamond 66 kilovolt (kV) line, which runs from the Rosamond Substation (on the corner of Rosamond Boulevard and 60th Street W) parallel to Rosamond Boulevard before connecting to the north-south 66 kV line at approximately Rosamond Boulevard/Division Street, within the Edwards Air Force Base (EAFB) utility corridor. The connection will continue north within EAFB's utility corridor approximately following the path of Division Street until Sopp Road. From the corner of Sopp Road and Division Street a new 66 kV power line will be erected to the Project Site.

The re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines would not require wastewater, stormwater, natural gas utilities nor additional electricity or telecommunication utilities once operational. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. As such, SCE would comply with all applicable State and federal laws and regulations during construction and operation for improvement areas within the County Jurisdiction, and implement the appropriate adopted minimization measures as identified in the Edwards Air Force Base (EAFB) Environmental Assessment pertaining to on-base utility corridors. Impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.10-1 and MM 4.10-2 from **Section 4.10, *Hydrology and Water Quality***.

MM 4.19-1: All facilities of the water system shall be designed and constructed to comply with Kern County Development Standards and approved by the Kern County Public Works Department.

MM 4.19-2: Any new wastewater package plant facility shall be constructed according to State specifications, with coordination of Kern County Public Works and Kern County Environmental Health Services Departments and shall be operated in such a way as to not contaminate the underlying unconfined aquifer.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.10-1, MM 4.10-2, MM 4.19-1, and MM 4.19-2, impacts would be less than significant.

Impact 4.19-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

The sufficiency of water supplies for the project were determined by the Supply and Demand Model, developed by AVEK, and AVEK's Urban Water Management Plan (UWMP). AVEK developed a Supply and Demand Model to compare future supply and demand conditions under multiple supply and demand scenarios. Scenario analysis allows AVEK to compare the benefits (and costs) of different long-term water resource conditions and strategies. The model is comprised of supply and demand variables, which are combined to form scenarios with different supply and demand assumptions. AVEK provides a supplemental imported water supply (SWP Water) to retailers in the greater Antelope Valley region, which is a secondary water source to supplement pumped groundwater. For water supply planning purposes local supply variables were also considered.

As described in AVEK's 2020 UWMP, water demand projections for the AVEK service area were estimated using the total demand in the service area and the amount of that demand that retailers can supply from other sources (i.e., non-AVEK local retailer supplies). AVEK's retailers have diverse water supply portfolio that includes non-AVEK water sources. The difference, referred to as the net demand, equates to the amount of water that AVEK would need to provide to its retailers and customers. The supply-demand model was used to project demand through 2045. Using its supply-demand model, AVEK estimated total service area demand projections and net demand on AVEK projections through 2045.

Construction activities are anticipated to begin in Q2 of 2024 and will be completed in one phase with operation proposed for Q2 of 2026. Over this period, construction of the micro-mill facility, ancillary buildings, and additional site components, and the solar array would require water for dust suppression, soil compaction, excavation, grading activities, equipment cleaning, vehicle wash downs, washout basins, and re-compaction of backfill materials, concrete pouring and related activities. It is assumed that construction of the micro mill facility would take up to two years with installation of the solar array completed within six months.

Construction activities for the proposed project would occur on approximately 3.25 million sf (75 acres). Based on projects of similar size and duration, a conservative estimate of construction water use for the micro mill facility, ancillary buildings and additional site components could be up 50 gallons per day per 1000 square-feet (gpd/1000 sf). Construction water use for the solar array was estimated based on water demand for similar solar installations. Based on these assumptions of construction water use at the project site, water use during construction is assumed to be 32,679 gallons per day (gpd), or approximately 37 AFY. Water use over the two-year construction period would be up to approximately 22 million-gallons (MG) or 69 AF as shown in **Table 4.19-1, Proposed Project – Construction Water Demand.**

Table 4.19-1: Proposed Project – Construction Water Demand

Construction Activity	Square footage	Gallons per year	Total Construction Water Demand (AFY)	Construction Period (years)	Total Construction Water Demand (AF)
Micro Mill Facility, Ancillary Buildings, and Additional Site Components	597,337	10,901,400	33.5	2	66.9
Solar Array	2,744,280	1,026,430	3.1	0.5	1.6
Totals	3,341,617	11,927,830	36.6	--	68.5

SOURCE: ESA, 2022

AFY = acre-feet per year

Water demand during construction is the same during all water year types

The calculated operational water demand for the proposed project was estimated to be 1,018 AFY. This would be new demand within AVEK's service area. An additional 400 gallons, or 0.001 AF, of water is estimated for bi-annual maintenance, such as washing and cleaning of the 10 megawatt-hour (MWh) solar array. This assumes 20 gallons per MWh of water demand. Thus, the resulting operational water use is estimated to be 1,018 AFY as shown in **Table 4.19-2, Proposed Project - Operational Water Demand**.

Table 4.19-2: Proposed Project – Operational Water Demand

Project Facility	Industrial Water Use (gpm)	Domestic Water Use (gpm)	Total (gpm)	Total (AFY)
MICRO MILL FACILITY				
Scrap Bay	-	-	-	-
Electric Arc Furnace (EAF)/ Ladle Metallurgy Station (LMS) Bay ^a	-	-	-	-
Caster Bay	-	7.8	7.8	13
Melt Shop (MS) Complex Structure	-	9.9	9.9	16
Ladle Maintenance Bay ^a	-	-	-	-
Rolling Mill Bay	-	7.8	7.8	13
Spooler Bay	-	7.8	7.8	13
Service Bay	-	6.1	6.1	10
Finished Goods Bay ^a	-	-	-	-
Roll Shop ^a	-	-	-	-
Test Bay	-	7.8	7.8	13
Stock Bay ^a	-	-	-	-
Fabrication Bay	-	25.3	25.3	41
ANCILLARY BUILDINGS				
Storeroom and Vehicle Maintenance	-	15.6	15.6	25
Office Building	-	18.4	18.4	30
Locker Room	-	54.6	54.6	88
Slag Processing Office Building	136.0	12.4	148.4	239
Containerized Power Control Room (PCR) ^a	-	-	-	-
Guard Shack/ Scale House	-	5.4	5.4	9
Trucker Restroom Facility	-	7.8	7.8	13
Scale Classifier	-	-	-	-

Water Pre-Treatment Building	-	-	-	-
ADDITIONAL SITE COMPONENTS				
Water Treatment Plant	308.2	-	308.2	497
Flume Treatment Plant ^a	-	-	-	-
TOTAL	444.2	186.7	630.9	1,018

NOTES:

Gpm = gallons per minute

AFY – acre feet per year

a Assumes no water industrial or domestic water demand these facilities/buildings.

SOURCE: Mojave Micro Mill Project Description; Pacific Steel Group, Water Demand Data, September 13, 2022; OEM data.

It is anticipated that operational water demand of approximately 1,018 AFY generated by the proposed project will remain unchanged in all water year types including single-dry and multiple dry years. Construction water demand of 34 AFY is expected to remain unchanged in all water year types until completion in 2026.

Table 4.19-3: AVEK Supply and Demand Projections, Normal Year (AFY), identifies the normal year supply and demand estimates from 2025 through year 2045 and **Table 4.19-4: AVEK Supply and Demand Projections, Single Dry Year (AFY)** also shows water these value over five-year increments but during a dry year.

Average SWP allocation is projected to decrease from 58 percent in 2020 to 52 percent in 2040. Based on these assumptions, AVEK has sufficient supplies in normal years to meet projected demand including demand generated by the proposed project as seen in **Table 4.19-3**. In dry years or during disruptions in SWP supplies AVEK can use stored groundwater to bolster its supply to meet regional demand (Appendix L).

Table 4.19-3: AVEK Supply and Demand Projections, Normal Year (AFY)

	2025	2030	2035	2040	2045
Supply Total ^a	87,890	85,710	83,540	81,370	81,370
Demand Total	44,440	50,990	51,880	55,210	57,590
<i>Difference (Surplus)</i>	43,450	34,720	31,660	26,160	23,780

NOTES:

AFY = acre feet per year

a. Supply total includes SWP Table A water, Non-SWP Water, and Groundwater Production Rights, and Imported Water Return Flows (see Table 4-5).

b. SOURCE: AVEK 2020 Urban Water Management Plan, Figure 7-1

Single dry year yield for SWP water is based on actual 2014 and 2021 allocation of 5 percent (i.e., 13,290 AF). Groundwater rights and non-SWP water are not impacted by short-term drought conditions, so normal year supply assumptions are applied. The remainder of demand is met with groundwater in storage. AVEK's annual banking recovery target is to produce at least enough groundwater to meet demand with 10 percent allocations from the SWP. As presented in **Table 4.19-4**, recovered imported water from AVEK groundwater banks enable AVEK to meet its demands in a single dry year including demand generated by the proposed project (Appendix L).

Table 4.19-4: AVEK Supply and Demand Projections, Single Dry Year (AFY)

	2025	2030	2035	2040	2045
Supply Total ^a	13,290	13,290	13,290	13,290	13,290
Demand Total	44,440	50,990	51,880	55,210	57,590
<i>Difference before use of groundwater</i>	-31,150	-37,700	-38,590	-41,920	-44,300
Recovered Imported Water to Meet Supply Deficit	31,150	37,700	38,590	41,920	44,300
<i>Difference after use of groundwater</i>	0	0	0	0	0

NOTES:

AFY = acre feet per year

a. Single dry year yield for SWP water is based on actual 2014 and 2021 allocation of 5%. Supply total includes SWP Table A water, Non-SWP Water, and Groundwater Production Rights, and Imported Water Return Flows (see Table 4-5).

SOURCE: AVEK 2020 Urban Water Management Plan, Figure 7-2

For multiple dry years, SWP water availability is based on the multiple dry year period from 1988 to 1992 as simulated yield from the 2019 SWP Delivery Capability Report. **Table 4.19-5, AVEK Supply and Demand Comparison, Multiple Dry Years (AFY)**, summarizes AVEK supply and demand totals under multiple dry year scenarios through 2045. Similar to a single dry year, groundwater rights and non-SWP water are not impacted by an extended drought, and recovered imported water from AVEK's groundwater banks are pumped and used to meet remaining demands including demand generated by the proposed project (Appendix L).

Table 4.19-5: AVEK Supply and Demand Comparison, Multiple Dry Years (AFY)

Years	2025	2030	2035	2040	2045
Year 1					
Supply Totals	44,440	50,990	51,880	55,210	57,590
Demand Totals	44,440	50,990	51,880	55,210	57,590
Difference	0	0	0	0	0
Year 2					
Supply Totals	52,730	32,730	52,370	55,210	57,590
Demand Totals	44,440	50,990	51,880	55,210	57,590
Difference	8,290	1,740	850	0	0
Years 3					
Supply Totals	44,440	50,990	51,880	55,210	57,590
Demand Totals	44,440	50,990	51,880	55,210	57,590
Difference		0	0	0	0
Years 4					
Supply Totals	44,440	50,990	51,880	55,210	57,590
Demand Totals	44,440	50,990	51,880	55,210	57,590
Difference	0	0	0	0	0
Year 5					
Supply Totals	44,440	50,990	51,880	55,210	57,590
Demand Totals	44,440	50,990	51,880	55,210	57,590
Difference	0	0	0	0	0
AFY = acre feet per year					

Supply totals include recovered imported water from groundwater banks.

SOURCE: AVEK 2020 Urban Water Management Plan, Table 7-2

AVEK's total banking storage target is at least enough groundwater to meet demand with 10 percent allocations from the SWP for three consecutive years. **Table 4.19-6, AVEK Groundwater Bank Storage Capacity vs. Use During Five Consecutive Dry Years (AFY)**, presents the total volume imported recovered water from AVEK groundwater banks during a multiple year drought compared with the target total storage volume. As shown in the figure, recovered imported water from AVEK groundwater banks would be available if the five-year drought continued (Appendix L).

Table 4.19-6: AVEK Groundwater Bank Storage Capacity vs. Use During Five Consecutive Dry Years (AFY)

	2025-2029	2030-2034	2035-2039	2040-2044	2045-2049
Total Storage Capacity	93,450	113,100	115,770	125,760	132,900
Total Use of Recovered Imported Water	53,340	79,540	83,100	98,900	110,800

AFY = acre feet per year

SOURCE: AVEK 2020 Urban Water Management Plan, Figure 7-3

Water Code Section 10635(b) requires a Drought Risk Assessment (DRA) for the upcoming five years (2021-2025) based on the driest years on record. The supply assumptions are similar to the multiple dry year assumptions used for the water supply reliability assessment seen in **Table 4.19-5**. AVEK currently has roughly 90,000 AF of imported water stored within its groundwater banks for future recovery and is implementing infrastructure projects to expand its capacity to recharge water, recover water, and distribute recovered water. As shown in **Table 4.19-7, AVEK Supply Projections for Five Year Drought Risk Assessment (AFY)**, AVEK still would have over 45,000 AF of groundwater remaining in storage at the end of the five-year drought that starts in 2021 (Appendix L).

Table 4.19-7: AVEK Supply Projections for Five Year Drought Risk Assessment (AFY)

	Dry Year 1	Dry Year 2	Dry Year 3	Dry Year 4	Dry Year 5
Supply Total	24,080	52,860	25,410	43,120	32,100
Recovered Imported Water	14,980	-	17,180	220	12,340
TOTAL AVEK SUPPLIES	39,060	40,930	42,590	43,340	44,440
TOTAL AVEK DEMAND	39,060	40,930	42,590	43,340	44,440
Difference	0	11,930	0	0	0

AFY = acre feet per year

Dry year 2 did not necessitate the use of recovered imported water to meet demand and therefore resulted in a supply surplus.

SOURCE: AVEK 2020 Urban Water Management Plan, Figure 7-3. Data provided from year 2021 through 2025.

The Water Shortage Contingency Plan (WSCP) is a detailed plan for how AVEK intends to respond to foreseeable and unforeseeable water shortages. A water shortage occurs when the water supply

is reduced to a level that cannot support typical demand at any given time. The WSCP provides guidance by identifying response actions to allow for efficient management of any water shortage with predictability and accountability. The tools in the WSCP enable AVEK to maintain reliable supplies and reduce the impact of supply interruptions due to extended drought or catastrophic supply interruptions which can be found in Appendix L of this EIR.

As shown in **Tables 4.19-3, 4.19-4, and 4.19-5**, AVEK can meet all water demands in normal, single-dry, and multiple-dry years by utilizing its current water supply portfolio of SWP supplies and groundwater. Recovered imported water from AVEK's groundwater banks enable AVEK to meet its demands in single dry years. Similar to a single dry year, groundwater rights and non-SWP water are not impacted by an extended drought, and recovered imported water from AVEK groundwater banks and can be used to meet demands in AVEK's service area. Implementation of AVEK's DMMs for Wholesale Suppliers as active conservation would reduce demand and assist AVEK in managing regional water supplies.

In normal years, the proposed project would create an estimated 1,018 AFY of operational water demand. This equates to approximately 2 to 4 percent of the estimated difference during normal years. During a single dry year, 1,018 AFY of operational water demand is approximately 2 to 3 percent of the recovered imported water available. An estimated 69 AF of water would be needed for construction of the proposed project over the two-year construction period. Construction water use is assumed to be equivalent during all water year types.

Additional recovery of imported water from AVEK groundwater banks would be available to meet demand over multiple dry years including five-year drought similar to the 1988 – 1992 drought. Therefore, this WSA finds that AVEK, as the water supplier has sufficient water supplies available to serve the proposed project, its member agencies now and over a 20-year planning horizon. In addition, AVEK's groundwater, including its groundwater banks, are reliable in all water year types and can be pumped during dry years to meet demand within its service area. With that understanding, AVEK has sufficient water supplies to meet existing demands combined with the proposed project demands and cumulative demands in 2025, in 2035, and to the 2045 planning horizon of its draft 2020 UWMP. Therefore, potential impacts associated with water supply would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. As noted previously, these off-site improvements are small parts of the overall project, however SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to water supplies and development during normal, dry and multiple dry years, and implement any existing best management practices and adopted minimization measures. As such, impacts related to substantial erosion and/or sedimentation on-site or off-site would be less than significant in this regard.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.19-3: The project would result in a determination by the waste water treatment provider which may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

The proposed project would include an engineered septic system for sewage disposal. The septic system would consist of a septic tank and drainfield that would be located on the northwest portion of the project site and serve the project's wastewater needs. More specifically, it will be located north of the on-site water treatment plant, south of the northwest portion of the solar array, and east of the office building and locker room. A second septic system and drainfield would also be located in the northeast of the site, in between Building 7 and Building 2, south of the 40-space truck staging area.

In addition to the on-site septic system, a connection for water will be provided by the Antelope Valley-East Kern Water Agency. The Antelope Valley-East Kern Water Agency (AVEK) water main is located on the eastern side of Sierra Highway, approximately 200' feet from the boundary of the project site. For operations, a new water line would be installed from the project site, underneath the railroad, connecting to the 360-inch main AVEK line via an existing 10-inch turnout that is currently capped with a blind flange.

The proposed project also includes a 9,000-square-foot water pre-treatment building that houses the equipment that would take the initial raw water (i.e., water to initially fill the water treatment plant system) and make-up water (replaces water lost through the process) from the Antelope Valley-East Kern Water Agency (AVEK) water main and treat using an Ultrafiltration and Reverse Osmosis (UF/RO) process.

In addition to the water pre-treatment building, a separate on-site water treatment plant is also proposed for the purpose of treating water that has direct contact with contaminants in the steel making process (contact water). Water that has run through the steel making process then flows to a settling basin where settleable matter is dropped out. An oil skimmer also removes oils from the water in the basin. Water is pumped to a sand filter for further treatment. Water is stored in a clarified water tank where chemical dosing units are used to balance the water's chemistry. Cooling towers would be used to reduce the temperature of the system, then collect water in the basin before pumping cooled water back to the process.

Note that cooling water, which does not come into contact with contaminants (non-contact water) is used to control temperatures of the steel making process. This water is in an enclosed system as it runs through the building. Cooling towers to reduce the temperature of the system, then collect water in the basin and is chemically balanced and strained before pumping cooled water back to the process. As a result, the project's waste water is unlikely to affect the provider's capacity for waste water. Therefore, no mitigation is required and impacts would be less than significant.

Off-site Improvements

Off-site improvements specific to the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. After the temporary ground disturbance and construction activities, the upgraded structures and lines will not generate waste water or require the need for new or connection to existing wastewater facilities. Nonetheless, SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to any potential waste water generation and servicing. SCE would also implement any existing best management practices and adopted minimization measures. Impacts would be less than significant in this regard.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.19-4: The project would generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

The proposed project would generate a minimal amount of solid waste that would be disposed of by a permitted hauler at the Mojave-Rosamond Recycling and Sanitary Landfill, (approximately 4 miles north). As of 2013, approximately 76,310,297 cubic yards (98 percent) of the total 78,000,000 cubic yard capacity remained. The permitted maximum daily disposal is 3,000 tons per day (Cal Recycle, 2020a). The construction period for the proposed project is expected to last 24 months. The next closest landfill to the proposed project is the Tehachapi Sanitary Landfill. This landfill is located in Tehachapi approximately 16 miles to the northwest. As of 2015, the landfill can accept up to 1,000 tons per day, has a remaining capacity of 522,298 and a maximum permit capacity of 4,000,000 (Cal Recycle, 2020b).

Construction

Solid waste generated by construction of the proposed project is not anticipated to be significant. Non-hazardous construction refuse, and solid waste would be either collected and recycled or disposed of at the Mojave-Rosamond Recycling and Sanitary Landfill, the Tehachapi Sanitary Landfill, and or another Class III landfill, while any hazardous waste generated during construction would be disposed of at an approved location. During the construction phase, waste materials will be recycled where feasible, with remaining unrecyclable materials disposed of in landfills in compliance with all applicable regulations including Kern County Building code requirements. Common construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. The proposed project would not generate any acutely hazardous material,

and any other hazardous waste, such as fuels, greases and solvents, generated or used during construction would be disposed of at an approved facility.

Non-hazardous construction refuse and solid waste would either be collected and recycled, or disposed of at a local landfill, either the Mojave-Rosamond Landfill or the Tehachapi Sanitary Landfill. The Mojave-Rosamond landfill is the closest, and therefore, would be the most likely recipient of project site solid waste and has adequate capacity. The Mojave-Rosamond Landfill is a Class III landfill and, therefore, accept wastes from construction and demolition as well as industrial sources. In addition, with the implementation of Mitigation Measures MM 4.1-3 (see **Section 4.1, Aesthetics**, for full mitigation measure) a recycling coordinator would ensure the separation and proper disposal of recyclable materials and solid waste during construction. Therefore, construction impacts of the project on existing landfills are anticipated to be less than significant.

Operation

Solid waste generated by operations may include residual from imported scrap metal that cannot be recycled into the manufacturing process, as well as metal byproducts from the manufacturing and fabrication processes that have the potential to be incapable of being recycled into product or exported for off-site processing (slag, dust from Fume Treatment Plant, etc.). Additional waste generated by employees and visitors on site is also anticipated, requiring appropriate facilities and receptacles throughout the developed area. The Boron Landfill is scheduled to operate until January 1, 2048 and therefore is only anticipated to service the project site until retirement of the landfill. The Mojave-Rosamond Landfill is planned to continue operations through 2123 and is expected to serve the project throughout its operational phase. Therefore, impacts related to landfill capacity would be less than significant.

Off-site Improvements

Off-site improvements specific to the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. After the completion of these construction activities, the fully operational and upgraded structures and lines are not anticipated to generate solid waste that would exceed State or local standards. Nonetheless, SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to construction waste recycling and disposal. SCE would also implement any existing best management practices and adopted minimization measures to reduce solid waste generation such that it does not exceed capacities at the nearby solid waste facilities. Impacts would be less than significant in this regard.

Mitigation Measures

Implementation of Mitigation Measure MM 4.1-3 (see **Section 4.1, Aesthetics**, for full mitigation measure) would be required.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.1-3 (see **Section 4.1**, *Aesthetics*, for full mitigation measure), impacts would be less than significant for the project.

Impact 4.19-5: The project would comply with Federal, State, and Local management and reduction statutes and regulations related to solid waste.

The proposed project would generate solid waste during construction and operation for the micro mill facility building, the 63-acre solar array and substation, ancillary structures, and other project components. Common construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. AB 341 requires Kern County to attain a waste diversion goals of 75 percent by 2020 through reduction, recycling, or composting. In addition, as part of compliance with CALGreen requirements, Kern County implements the following construction waste diversion requirements:

- Submittal of a Construction Waste Management Plan;
- Recycle and/or reuse a minimum 65 percent C&D waste; and
- Recycle or reuse 100 percent of tree stumps, rocks, and associated vegetation and soils resulting from land clearing.

Furthermore, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the project design. The project would be required to comply with all federal, State, and local statutes and regulations related to the handling and disposal of solid waste. Compliance with the established regulatory framework would ensure less-than-significant impacts regarding compliance with management and reduction statutes and regulations related to solid waste.

Off-site Improvements

As discussed previously, off-site improvements specific to the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility lines would occur within previously disturbed rights-of-way and/or utility corridors that are currently maintained by SCE. All new and upgraded structures, poles and circuits related to these improvements would be engineered, constructed (or caused to be constructed), operated and maintained by SCE. Although construction activities are expected to generate solid waste that is similar in characteristic to the construction activities of the overall proposed project, after the completion of these construction activities, the fully operational and upgraded structures and lines are not anticipated to generate solid waste that would require continued removal or disposal. Nonetheless, SCE would comply with applicable State and federal laws and regulations during construction, including those regulations that relate to construction waste recycling and disposal. SCE would also implement any existing best management practices and adopted minimization measures. Impacts would be less than significant in this regard.

Mitigation Measures

No mitigation would be required.

Level of Significance after Mitigation

Impacts would be less than significant with implementation of the above listed mitigation measures.

Cumulative Setting, Impacts, and Mitigation Measures

The geographic scope for cumulative analysis of impacts on water supply and wastewater are the related projects that would impact the Antelope Valley Groundwater Basin. The geographic scope of analysis for stormwater drainage, electricity, telecommunications, natural gas, and solid waste disposal, includes the projects that would be relying on the same facilities and infrastructure. Impacts of the project would be cumulatively considerable if the incremental effects of the project when combined with other past, present, or reasonably foreseeable projects (listed in **Table 3-4, Cumulative Projects List**, in **Chapter 3, Project Description**), would result in a significant cumulative effect. Physical impacts to public services, utilities, and service systems are usually associated with population in-migration and growth in an area, which increase the demand for a particular service, leading to the need for expanded or new facilities. There is little to no growth associated with the project and nearby other solar and wind energy projects, thereby limiting the potential to contribute to demand for a particular service.

As described above, the project would place few demands on water, wastewater, stormwater drainage, electricity telecommunications, natural gas, and solid waste disposal (during construction and operation).

Water

In total, 36 projects are being proposed in the Antelope Valley that would impact the existing water supply, which is derived almost entirely from the Antelope Valley Groundwater Basin. These projects range from new solar facilities, residential, commercial, and industrial. Given the limited water supply in the area, other projects are expected to either rely on new or existing wells or truck in their water supply (similar to the project). In response to the recent adjudication of the Antelope Valley Groundwater Basin, all projects relying on water from Antelope Valley Groundwater Basin would be required to obtain water from water purveyors that have existing water rights within the Antelope Valley Groundwater Basin or would be required to apply for new water rights from the Antelope Valley Watermaster and would be required to comply with the terms of the Antelope Valley Groundwater Basin adjudication. To mitigate for some of these potential impacts, Mitigation Measures 4.19-1 aimed at requiring all facilities of the water system to be designed and constructed to comply with Kern County Development Standards. Therefore, cumulative impacts related to water supply and facilities would be less than significant.

Wastewater

The project is located in an area with no wastewater treatment provider or infrastructure and would not generate a significant volume of wastewater. Wastewater produced during construction would be collected in portable toilet facilities and portable hand wishing facilities and disposed of at an

approved facility. During the operational phase, an on-site septic system, which will include a septic tank and drainfield, will recycle some of the wastewater produced on-site. In addition, to the on-site septic system, a connection for water and sewage disposal will be provided to the Antelope Valley-East Kern Water Agency. As a result, the project's waste water is unlikely to exceed the provider's capacity for waste water. Additionally, the integration of Mitigation Measure MM 4.19-2 requiring any new wastewater package plant facility shall be constructed according to State specifications would mitigate for some of these potential impacts. Therefore, the project would not have the potential, when combined with impacts from past, present, or reasonably foreseeable projects, to result in a cumulative impact to a regional wastewater treatment facility.

Stormwater Drainage

As stated previously, the project site is located in a developing industrial area which does not contain any existing or planned stormwater infrastructure. There are no existing stormwater drainage systems on the project site.

For the operational phase, approximately 50% of the overall site will be an impervious surface. However, the drainage sub-area delineations and flowpaths would be preserved from the existing condition, and while the stormwater drainage design will progress, the parameters would be updated. The project site will also include two detention basins to capture any runoff from stormwater. To mitigate some of the potential impacts, Mitigation Measures MM 4.10-1 and MM 4.10-2 would be implemented (see **Section 4.10, Hydrology and Water Quality**, for full mitigation measure). Mitigation Measure MM 4.10-1 would require the development of a SWPPP, while MM 4.10-2 would include creating a hydrologic study and final drainage plan that would detail engineering design measures to manage stormwater flows and reduce potential increases in stormwater runoff to off-site areas. Other projects in the vicinity would be required to offset substantial increases in stormwater as well per County requirements and would also be required to implement BMPs, as well as comply with the NPDES General Construction Permit and their respective SWPPP as applicable. Therefore, the project would not contribute to a cumulatively considerable impact related to stormwater drainage.

Electric Power

For the construction phase of the project and as stated previously, electricity for construction use would either be provided by diesel generators and/or a temporary SCE distribution line hookup which would be installed on the project site. Because construction of the project would not displace existing electrical facilities, and would tie into existing off-site facilities, relocation of electrical facilities would not be required.

For the operational phase of the project, electricity will be needed to power the machines needed to produce rebar. Electricity demand will be satisfied from two different sources. The first source will be from electricity provided by Southern California Edison (SCE), which consists of a variety of sources to provide electricity; see **Table 4.6-1, Electric Power Mix Delivered to Retail Customers in 2021**, located in **Section 4.6, Energy**, of this EIR. The second of these sources will be from the 63-acre solar array that will be built on-site. This will help offset the need for energy from SCE for the proposed project. Additionally, the amount needed by the project from SCE will represent approximately 0.3 percent of all of SCE's network sales. As a result of the proposed project's power consumption being a fraction of the overall electricity usage, the project would not

require or result in the relocation or construction of electric power facilities and impacts would be less than significant.

Natural Gas

The project will not use natural during construction or operation phase. Therefore, operation of the project would not require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects and there would be no impact.

Telecommunications

The project in combination with cumulative projects would increase demand on telecommunication facilities. However, demand associated with cumulative development would be minimal and is expected to be within the planning forecasts of the affected telecommunications provider. Therefore, cumulative impacts related to telecommunications facilities would be less than significant.

Solid Waste

The proposed project would generate a minimal amount of solid waste that would be disposed of by a permitted hauler at the Mojave-Rosamond Recycling and Sanitary Landfill. Solid waste generated by construction of the proposed project is not anticipated to be significant. Non-hazardous construction refuse, and solid waste would be either collected and recycled or disposed of at the Mojave-Rosamond Recycling and Sanitary Landfill, the Tehachapi Sanitary Landfill, and or another Class III landfill, while any hazardous waste generated during construction would be disposed of at an approved location. Construction materials waste typically consist of metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste with the potential for a small amount of hazardous waste such as fuels, greases, and solvents. Non-hazardous construction refuse and solid waste would either be collected and recycled or disposed of at a local landfill with hazardous waste being disposed of at an approved facility.

For the operational phase of the project, the solid waste generated could include residual waste from the imported scrap metal, as well as non-recyclable metal byproducts from the manufacturing and fabrication processes which could include slag and dust from the Fume Treatment Plant. Additional waste would include waste generated by employees and visitors coming to the project site. All solid waste that can be disposed in a landfill will likely go to the closest landfill to the project site which is the Mojave-Rosamond Landfill. To mitigate some of the impacts, Mitigation Measure MM 4.1-3 (see **Section 4.1**, *Aesthetics*, for full mitigation measure) would be implemented. This consists of designating a recycling coordinator that would ensure the separation and proper disposal of recyclable materials and solid waste generated during project operation, thereby further reducing solid waste generated during operation. Surrounding projects would also be required to comply with all applicable ordinances in place designed to reduce the amount of solid waste disposed in landfills. Therefore, with the implementation of Mitigation Measure MM 4.1-3 from **Section 4.1**, *Aesthetics*, impacts would be less than significant.

The project would not have a significant impact on public utilities. The incremental effects of the project would also not be substantial enough to result in a cumulatively considerable impact on utilities and service systems with implementation of Mitigation Measures MM 4.10-1, MM 4.10-

2, MM 4.1-3, MM 4.19-1 and 4.19-2. Therefore, with the implementation of Mitigation Measures MM 4.10-1, MM 4.10-2, MM 4.1-3, MM 4.19-1 and 4.19-2, impacts would be less than significant.

Off-site Improvements

As discussed previously, the re-poling and reconductoring of approximately 13 miles of existing SCE transmission lines do not include structures or facilities requiring permanent staffing or visitors on site. The newly installed poles and circuits are needed to support the proposed project's overall on-site energy demand that cannot be offset by the solar array. However, upon completion and activation of the reconductored route, these off-site facilities would be fully maintained by SCE. Construction of new transmission equipment would involve temporary ground disturbance around the new structure locations, however use of these areas for these project elements would not exacerbate the potential result in a cumulative impact on utilities. Construction of the upgraded transmission structures and lines are expected to use existing pole sites, new poles, and/or below ground installations between the existing infrastructure and the appropriate on/off-site substations. Lines would be placed within utility franchise easements and as noted as noted previously, the entire project would not result in cumulatively considerable contribution to significant cumulative impacts. These necessary improvements are small parts of that overall project, thus not contributing to significant population growth or a sustained increase in demand on utilities and service systems. When considered with other past, present and future projects, these improvements would not be cumulatively considerable. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.1-3 (see **Section 4.1, Aesthetics**, for full mitigation measure), MM 4.10-1, MM 4.10-2 (see **Section 4.10, Hydrology and Water Quality**, for full mitigation measure), MM 4.19-1 and 4.19-2.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.1-3, MM 4.10-1, MM 4.10-2, MM 4.19-1 and 4.19-2, cumulative impacts would be less than significant.

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Section 4.20

Wildfire

4.20.1 Introduction

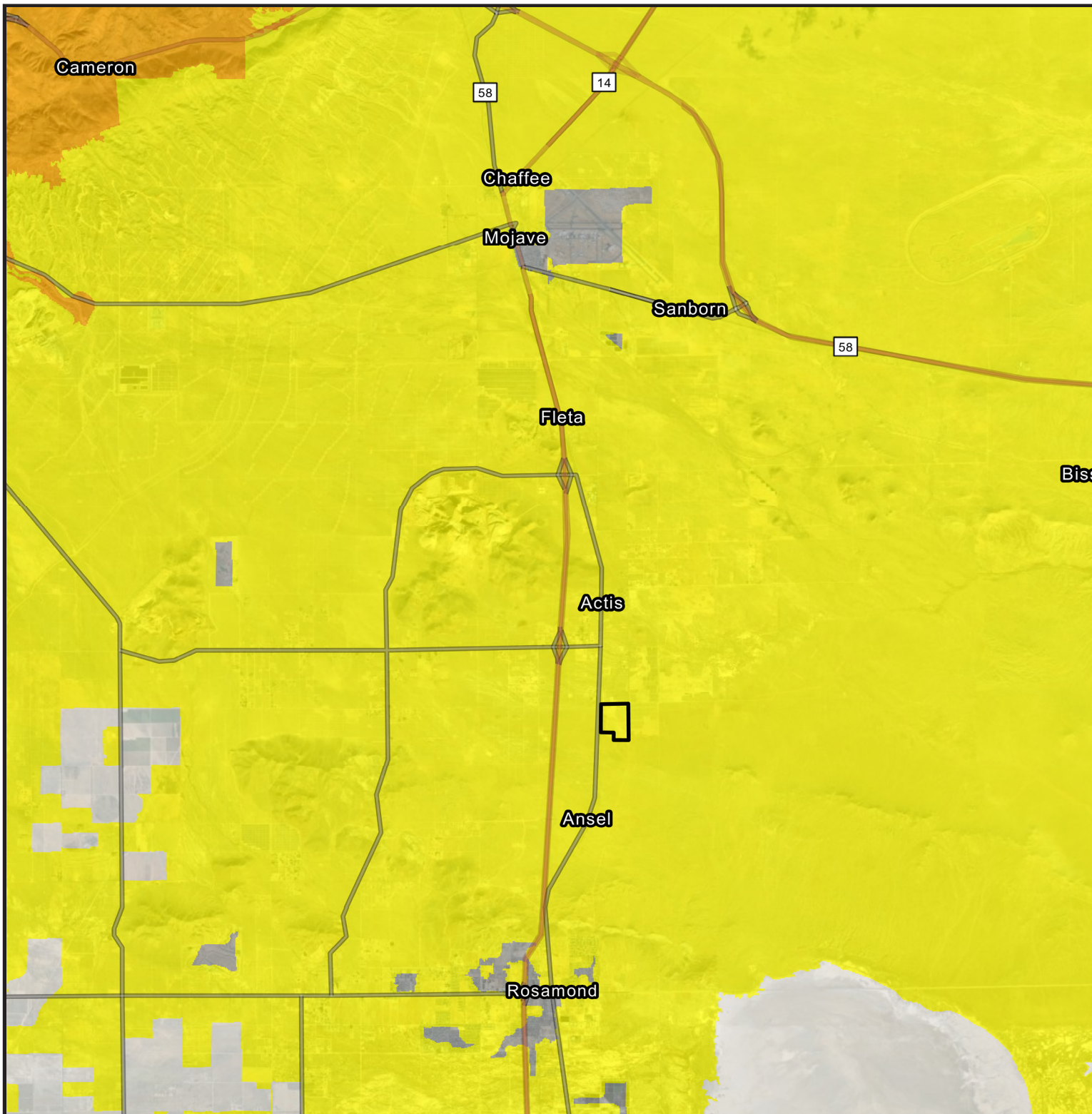
This section of the EIR describes the affected environment and regulatory setting for wildfire. The section includes the physical and regulatory setting for the project, the methods used in evaluating these potential impacts, the criteria used to evaluate the significance of potential impacts, and an analysis of potential impacts from wildfire. The analysis in this section is based on the project plans and California Department of Forestry and Fire Protection (CAL FIRE) and Kern County Fire Hazards Severity Zone (FHSZ) Maps.

4.20.2 Environmental Setting

Site Characteristics and Fire Environment

The proposed project is located on approximately 174 acres of undeveloped land. The project site is located on privately owned land in the western extent of the Mojave Desert, approximately 5.5 miles north of the unincorporated community of Rosamond. California Desert vegetation (Mojave Creosote Bush Scrub community) dominates most of the project site and region and the topography across the project site is relatively flat with little variation. As discussed, the project site primarily consists of sparse desert vegetation. Existing development in the vicinity of the project includes a mix of undeveloped land, sparse residential, renewable energy projects (solar), and dispersed industrial.

The CAL FIRE maps FHSZs, based on factors such as fuel, slope, and fire weather to identify the degree of fire hazard throughout California (i.e., moderate, high, or very high). While FHSZs do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and therefore are of greater concern. According to the Fire Hazard Severity Zones map published by CAL FIRE, the proposed project is not located within a State Responsibility Area (SRA), i.e. an area where CAL FIRE is responsible for fire prevention and suppression, nor within lands classified as very high fire hazard severity zone (VHFHSZ) and is approximately 8.5 miles southeast of such designations. The project site is classified as Moderate within a Local Responsibility Area (LRA) (see **Figure 4.20-1, Fire Hazard Severity Zones for Local Responsibility Areas**). Moderate zones are typically wildland supporting areas of low fire frequency and relatively modest fire behavior. The project site is also not within a Federal Responsibility Area (FRA), but is immediately adjacent to the FRA associated with Edwards Air Force Base. The project site is surrounded by other areas designated with a moderate fire hazard designation.



Mojave Micro Mill Project

GPA No.3, Map No. 213
 ZCC No. 62, Map No. 213
 CUP No. 71, Map No. 213
 CUP No. 72, Map No. 213
 PD Plan No. 3, Map No. 213
 ZV No. 24, Map No. 213
 ZV No. 25, Map No. 213

Figure 4.20-1: Fire Hazard Severity Zones for Local Responsibility Area

PSGM3 Holdings Corp (Pacific Steel Group)

Project Site

FIRE HAZARD SEVERITY ZONES

- Very High
- High
- Moderate
- Non-Wildland/Non-Urban
- Urban Unzoned

APN: 431-010-02 & 431-030-02
 Sec. 27 - T10N/R12W



**Kern County
 Planning & Natural
 Resources Department**

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Fire History

Fire history information can provide an understanding of fire frequency, fire type, most vulnerable project areas, and significant ignition sources. Fire history represented in this section uses CAL FIRE's California Statewide Fire Map that shows historic fire and fire patterns within the state and CAL FIRE's Fire and Resource Assessment Program (FRAP) Fire Perimeters. Based on a review of these maps, no fires in the recorded history have burned across the project site (CAL FIRE, 2022).

Vegetation (Fuels)

The Mojave Creosote Bush Scrub (creosote bush scrub) community dominates most of the project area. This vegetative community typically occurs on well-drained soils in alluvial fans, bajadas, and upland slopes. Growth occurs during spring (or rarely in summer or fall) if rainfall is sufficient. This is one of the most widely distributed desert plant communities in the Mojave Desert, occurring from the desert floor up to approximately 3,500 feet in elevation and extending into northwestern Arizona and southern Utah to the east. Scattered, widely spaced Joshua trees occur throughout portions of the creosote bush scrub communities present within the project site; however, they do not occur at a density high enough to consider them a distinct woodland community. A description of the vegetation communities and land cover types, along with applicable acreage of each, is provided in **Table 4.4-1: Natural Communities and Land Cover Types within the Project Site** in **Section 4.4, Biological Resource**, of this EIR.

4.20.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

2022 California Fire Code

The 2022 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. Chapter 6 (Building Services and Systems) of the Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed and include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to

fire emergencies. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems (for inhabited structures), fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

2019 California Building Code, Chapter 7A

Chapter 7 of the 2019 California Building Code, which was supplemented on July 2021, details the materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area. A Wildland-Urban Interface Area is defined in Section 702A as a geographical area identified by the state as a “Fire Hazard Severity Zone” in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. The building code details the materials, systems and assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings.

Public Resources Code 4291–4299

California Public Resources Code Section 4291-4299 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be maintained. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability, may be maintained; as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Additionally, the Public Resources Code outlines infraction fees, certification, and compliance procedures applicable with state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code.

Local

Kern County General Plan

Chapter 4: Safety Element

4.6 Wildland and Urban Fire

Policies

- | | |
|-----------|---|
| Policy 1: | Require discretionary projects to assess impacts on emergency services and facilities. |
| Policy 3: | The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers. |
| Policy 4: | Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents. |
| Policy 6: | All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department. |

Implementation Measure

Measure A Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Kern County Fire Code

Chapter 17.32 of the County Municipal Code details the Kern County Fire Code, which is an adoption of the California Code of Regulations, Title 24, Part 9, 2022 edition of the California Fire Code with some amendments made to more specifically address conditions in Kern County. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release, and/or explosion due to handling of dangerous and hazardous materials; conditions hazardous to life or property in the occupancy and use of buildings and premises; the operation, installation, construction, and location of attendant equipment; and the installation and maintenance of adequate means of egress. It also provides for the issuance of permits and collection of fees related to such activities (Kern County, 2022b).

Kern County Fire Department Wildland Fire Management Plan

The KCFD Wildland Fire Management Plan adopted in 2009 assesses the wildland fire situation throughout the SRA within the County. The Plan includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan systematically assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses. The project site is located within a moderate fire hazard severity zone under the KCFD Wildland Fire Management Plan (KCFD, 2009).

Kern County Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan was updated in April 2022 and is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local area. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires.

According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 1 (Tehachapi) and the project site is designated as a moderate fire hazard severity zone within the Tehachapi fire plan management area (KCFD, 2020).

Fire Prevention Standard No. 503-507 Solar Panels

The Kern County Fire Department Fire Prevention Division adopted Standard No. 503-507 Solar Panels (Ground Mounted, Commercial & Residential) on April 8, 2021. The standard is implemented in accordance with the 2019 CFC and Kern County Ordinance and is an official interpretation of the Kern County Fire Marshal's Office. The standard outlines installation requirements for photovoltaic ground-mounted and roof-mounted solar panels. The proposed project would mount systems for the modules on steel support posts that would be pile driven into the ground and would therefore comply with the ground mounted requirements of this fire prevention standard. Ground mounted solar panel requirements of this standard include water supply, clearance and combustibles, stationary storage battery/energy storage systems, clean agent system permits, fire extinguisher placement, and emergency vehicle access (KCFD, 2021).

4.20.4 Impacts and Mitigation Measures

Methodology

Wildfire impacts are considered on the basis of: 1) offsite wildland fires that could result due to the proposed project, and 2) onsite generated combustion that could affect surrounding areas. The project's potential impacts associated with wildfires have been evaluated using a variety of resources, including CAL FIRE maps showing FHSZs, FRAP, fire history, and vegetation data. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant impact with respect to Wildfires.

A project would have a significant impact with respect to wildfires if it would be located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and if the project would:

- a. Substantially impair an adopted emergency response plan or emergency evacuation plan;
- b. Due to slope, prevailing winds, or other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
- d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Project Impacts

Impact 4.20-1: The project would substantially impair an adopted emergency response plan or emergency evacuation plan.

The project site is not classified as being within a high fire hazard severity zone and is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The project site is located in a industrially dispersed area with limited population. Although, there are multiple existing local roadways adjacent to the project site that lead to primary emergency evacuation routes, adjacent roadways as well as the project site are not located along an identified emergency evacuation route and are not identified in any adopted emergency evacuation plan. Accordingly, the project site is not identified for any purpose in an adopted emergency evacuation plan to address wildfires or other types of emergencies. Also in compliance with applicable Fire Code and Building Code requirements, construction managers and personnel would be trained in fire prevention and emergency response. Fire suppression equipment specific to construction would be maintained on site. Additionally, project construction and operations would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials.

As noted in **Section 4.17, *Traffic and Transportation***, the need for and number of any escorts (i.e., from California Highway Patrol), as well as the timing of transport, would be at the discretion of Caltrans and Kern County, and would be detailed in the Construction Traffic Control Plan which would be required under mitigation measure MM 4.17-2. MM 4.17-2 would outline requirements for the methods used to count worker vehicle traffic arriving and departing from the project site during peak AM and PM hours, the methods used to control the number of trips during these hours, and documentation of reasonable coordination efforts with other projects in the area to avoid impacts to study intersections. This would ensure that the potential for project-related construction traffic to interfere with vehicular circulation or emergency access along local roadways would be minimized, including during any times of emergency evacuation.

The operational phase would generate daily traffic to and from the project site, but would be broken into portions. Most the traffic generated to and from the site would stem from employees commuting between work and home and trucks delivering materials to the project site and delivering finished products elsewhere. As stated previously, the approximate amount of workers that would be employed would be 440. Of those 440, approximately 417 would be full hourly and salaried employees with approximately 23 third-party employees for on-site security and slag processing services. The majority of the commuting would be done Monday through Friday and would include a third of the steel manufacturing operations employees, half of the fabrication operations employees, and the administrative staff. Truck traffic is also expected to contribute approximately 30 trucks per day, seven days a week. To ensure operational traffic associated with project would not impair an emergency response plan or conflict with an emergency evacuation plan, MM 4.17-3, (see **Section 4.17, *Transportation and Traffic***) would be implemented. MM 4.17-3 would require the installation of a traffic signal and dedicated turn lanes at State Route 14 and northbound ramps and another traffic signal at State Route 14 and southbound ramps intersections. These improvements would ensure operational traffic from the project would not conflict with LOS guidelines identified in the Kern

County General Plan, and therefore would not interfere with an emergency response plan or evacuation plans.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SoCalEdison (SCE) lines would occur simultaneously with existing transmission inspections and maintenance that already occur and are facilitated by SCE. Accordingly, these elements of the project would require minimal ground disturbance, use of fuels, solvents, and other construction materials. The same mitigation measures as listed throughout this chapter also would be applied, as applicable, to these project elements. More specifically, SCE would also adhere to existing best management practices within their rights of way under the County's jurisdiction, or adhere to minimization measures applicable to the affected utility corridor within the boundaries of Edwards Air Force Base, including those regulations that relate to emergency response. Once operational, these upgraded transmission lines would be managed by SCE in accordance with all safety and maintenance requirements including those for construction in proximity to and within existing utility easements. As the upgraded transmission structures would be installed along the existing SCE transmission corridors, these off-site improvements are not expected to result in a significant impact to an adopted emergency response plan or emergency evacuation plan. Impacts from the this off-site improvement work would therefore be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.17-2 and MM 4.17-3, (see **Section 4.17, *Traffic and Transportation***, for full mitigation measures).

Level of Significance

With implementation of Mitigation Measures MM 4.17-2 and MM 4.17-3 impacts would be less than significant for the project.

Impact 4.20-2: The project would, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

As described in **Chapter 3, *Project Description***, of the EIR, the project site ranges between approximately 2,554 and 2,564 feet above mean sea level (AMSL). The project site is relatively flat with a gentle southeast-facing slope. When steep slopes and upslope topography is present, these features can increase the spread rate of the fire in all fuel beds compared to vegetation flat conditions (International Journal of Wildland Fire, 2010). As previously stated the project falls within a Moderate LRA, which would have low fire frequency and relatively modest fire behavior, which would not be anticipated to result in the uncontrolled spread of wildfire.

The proposed project does not include permanent occupancy, though during construction the project site would be temporarily occupied by construction personnel. Construction activities

would temporarily introduce ignition sources due to the use of vehicles, heavy machinery. Machinery and tools could result in sparks and heat-generating. To further minimize the risk of fire during construction, the project would adhere to the Kern County Fire Code, the 2019 California Fire Code (CFC), and would adhere to Chapter 33 of the CFC, which outlines standards for fire safety during construction activities.

The project would employ approximately 440 employees for operation, security, and maintenance of the project. Due to existing vegetative patterns and use of the site and surrounding areas for grazing and agriculture, the site has a moderate potential to experience wildfire. Nonetheless, if a wildfire occurs in the area either onsite or offsite pollutants may be released. However, it is anticipated that any employees occupying the site would be rapidly evacuated at the time of the event, and/or evacuated well in advance of an approaching wildfire, in conformance with applicable County evacuation directives put in place. Such measures would ensure that the exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire from prevailing winds would be minimized to the extent feasible.

Thus, because of the existing and proposed condition, the potential for wildfire on the project site is considered moderate. Construction and operation of the project on the project site and would not exacerbate the risk of wildfire. Additionally, project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Given the moderate potential for fire and the lack of permanent occupants, the project is not anticipated to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds and other factors. Impacts would be less than significant.

Off-site Improvements

As discussed previously, the reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency and energy transmission to the site. Impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility infrastructure would comply with all safety requirements. Further, the majority of the transmission corridors are generally flat in nature and would require minimal to no ground disturbance, and therefore no slope wildfire risks would occur. As the upgraded transmission lines would be installed on existing or replaced SCE structures, this improvement work would not exacerbate risks to the project occupants and impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant for the project.

Impact 4.20-3: The project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

Development of the proposed project is limited to approximately 527,021 square feet of building coverage with an approximately 63 acres of ground-mounted solar panels, all within the 174-acre project boundary. One new road would be constructed along the eastern boundary of the project site to provide an additional access point to the project site, which would primarily be designated for large trucks importing and exporting material to and from the project site. Additionally, vehicle traffic would occur on paved and unpaved roads located throughout the facility. On-site roads would be used by various vehicles, including haul trucks, trailers, Taylor trucks (fork lifts), loader trucks, Euclid/roll-off trucks, inert gas (nitrogen, argon, oxygen) trucks, forklifts/loaders, water trucks, and small forklifts. The construction of new internal roads are not anticipated to have the potential to exacerbate fire risk. Additionally, SCE estimates that the existing 66 kV line from Rosamond Substation to the corner of Sopp Road and Division Street will need to be reconductored (totaling approximately 13 miles), with all existing transmission poles requiring replacement with new poles installed for the section from the corner of Sopp Road and Division Street to the project site. It should be noted that the project site also is not adjacent to any area with a substantial risk of wildfire and the listed improvements would not exacerbate the risk of wildfire or result in impacts to the environment. Construction, operation, and maintenance associated with the above mentioned infrastructure would adhere with all federal, state, and local laws, regulations, codes, and safety standards.

Additionally, as discussed in **Section 4.15, Public Services**, the project proponent would be required to develop and implement a Fire Safety Plan that contains notification procedures and emergency fire precautions for use during construction and operation, per implementation of Mitigation Measure MM 4.15-1. Implementation of this plan would ensure that potential impacts related to installation or maintenance of associated infrastructure is reduced and, thus, project improvements would not exacerbate fire risk and impacts would be less than significant.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SCE lines would occur simultaneously with existing transmission inspections and maintenance that already occur. The upgraded SCE transmission lines are not anticipated to expose people or structures to a significant risk of loss, injury or death involving wildland fires. Accordingly, these elements of the project would require minimal ground disturbance, use of fuels, solvents, and other construction materials. Once operational, the electrical transmission lines would be managed in accordance with all safety and maintenance requirements including those for construction in proximity to and within an existing utility easement (gas pipeline). Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.15-1, see **Section 4.15**, *Public Services* to see full mitigation measure.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.15-1, impacts will be less than significant.

Impact 4.20-4: The project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

As stated previously, the project site is a relatively flat site within a Moderate LRA. As described further in **Section 4.7**, *Geology and Soils*, conditions for landslides are not present at the project site, which is characterized by relatively gradual inclines across the site. Therefore, the site would not be subject to post-fire slope instability, or drainage changes that would expose people or structures to significant risks. The topographic characteristics of the project site consists of little variation, generally drains from the east to the west in an overall easterly direction, while runoff is conveyed easterly across the site via sheet flow and shallow concentrated flow during larger storms.

Once the project has been constructed, and to capture any potential stormwater runoff, the project will incorporate two retention basins; accessible concrete lined fore-bays and perimeter fencing are proposed for each retention basin. Each of the two retention basins will provide storage in exceedance of the post-development 100-year, 24-hour storm event. The project would also be required to adhere to Kern County Public Works Department storm water requirements, which include measures to address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. Although about 33 percent of the project site would be impervious, the overall drainage pattern on the site would not fundamentally change.

To reduce potential impacts during construction, the proposed project would implement MM 4.10-1 (see **Section 4.10**, *Hydrology and Water Quality* for full mitigation measure) which requires a project-specific stormwater pollution prevention plan (SWPPP) that includes BMPs designed to prevent the occurrence of soil erosion and discharge of other construction-related pollutants that could contaminate water quality and would be applicable to all areas of the project. In addition, prior to the commencement of construction activities, the project proponent would be required to adhere to the requirements of the Kern County Grading Code. This includes implementation of various measures designed to prevent erosion and control drainage onsite, thereby further preventing risk to people or structures from runoff, post-fire slope instability, or drainage changes.

Overall, with the lack of topographic variation, fire history, and with the implementation of Mitigation Measure MM 4.10-1, the project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant with mitigation incorporated.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits. The construction and installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation, this off-site improvement work is not expected to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. SCE would comply with all applicable State and federal laws and regulations during construction and operation, including regulations that relate to flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be implemented. Therefore, impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.10-1 (see **Section 4.10, *Hydrology and Water Quality*** for full mitigation measure).

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-1, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

The Antelope Valley region represents the geographic scope for wildfire impacts. This geographic scope was selected because the land within the region possesses relatively similar features and uses, including sparse desert vegetation, rural access roads, scattered rural residences, producing and non-producing water wells, cattle ranching and maintenance facilities, mining, wind and solar energy uses. As shown in **Chapter 3, *Project Description***, **Table 3-4, *Cumulative Project List***, the area includes several utility-scale solar developments as well as a variety of residential, commercial, and industrial developments. These have the potential to result in cumulative impacts to wildfire when considered together with the project. However, the proposed project is not within an SRA or a High Fire Hazard Severity Zone

With regard to impairment of an adopted emergency response plan or emergency evacuation plan, all of the related projects would be required to provide adequate emergency access in accordance with County Fire Code and Building Code requirements and prior to the issuance of a building permit. As previously mentioned, the project site is located within a moderate fire hazard severity zone has sparse vegetation and lacks steep slopes. The project is located in a rural, sparsely developed area with limited population. Additionally, the project is not located along an identified emergency evacuation route or within an adopted emergency evacuation plan, and would be in compliance with Fire Code and Building Code requirements, including fire prevention and emergency response training for site personnel. Additionally, MM 4.17-2 and MM 4.17-3 would ensure traffic associated with the project would not conflict with the Kern County General Plan and therefore an emergency response plan or evacuation plan. As concluded in the discussion of project impacts above, the project would have a less than significant impact related to impairment of an adopted emergency response or evacuation plan. Similar to the project, related projects would be required to determine whether they are classified as being within a high fire hazard severity zone,

identified within an emergency evacuation route or within an adopted emergency evacuation plan, and whether they meet the requirements of applicable Fire Code and Building Code. Thus, cumulatively the project would have a less than significant impact in this regard.

With regard to cumulative impacts related to exposure of project occupants to pollutant concentrations from a wildfire, while the proposed project is not within an SRA and/or High Fire Hazard Severity Zones, some related projects in the area may be. Similar to the proposed project, all related projects would be required to implement building and landscape design features in accordance with the Fire Code and Building Code to reduce wildfire risk and exposure of occupants to pollutant concentrations from a wildfire. Adherence to the Fire Code and Building Code requirements would minimize potential impacts related to exposure to and the uncontrolled spread of a wildfire. As concluded in the discussion of project impacts above, the project would have a less-than-significant impact related to exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Nevertheless, given the location could be subject to high wind speeds, and is a rural area with limited infrastructure, the project and related projects have the potential to result in a cumulative impact related to exposure of project occupants to pollutant concentrations from a wildfire and, thus, would result in a significant and unavoidable cumulative impact in this regard.

The proposed project would require the installation of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. However, the two proposed access roads and internal roads will provide access to emergency vehicles in the event of a fire. Additionally, Mitigation Measure 4.15-1 would require the project proponent to develop and implement a Fire Safety Plan to the satisfaction of the Kern County Fire Department. It can be assumed projects within Antelope Valley would be required to prepare a Fire Safety plan as well. Therefore, cumulative impacts associated with infrastructure that could exacerbate fire risk would be less than significant.

Additionally, with the lack of topographic variation, fire history, and with the implementation of Mitigation Measure MM 4.10-1, the project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant with mitigation incorporated for the project. Conditions within Antelope Valley are similar to the project site with respect to topographic variation, fire history, and vegetation. It can be assumed projects within the area, if applicable, would be required to prepare a SWPPP as well. Therefore, cumulative impacts associated with risk to people or structures from runoff, post-fire slope instability, or drainage changes would be less than significant.

Nevertheless, given the location is subject to high wind speeds, and is a rural area with limited infrastructure, the project and related projects have the potential to result in a cumulative impact related to exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes and, thus, would result in a significant and unavoidable cumulative impact.

Off-site Improvements

The reconductoring of SCE's existing 66kV transmission lines from the Rosamond Substation to the corner of Sopp Road and Division Street will result in the installation of upgraded poles and circuits, resulting in greater efficiency for energy transmission to the site. The construction and

installation of upgraded utility infrastructure would occur along existing transmission easements and corridors that have been previously disturbed at the time of original installation. It is assumed that inspections and maintenance of the upgraded SCE lines would occur simultaneously with existing transmission inspections and maintenance that already occur. Accordingly, these elements of the project would require temporary and minimal off-site ground disturbance when compared to the overall on-site project. The same mitigation measures as listed throughout this chapter also would be applied, as applicable, to these project elements. Once operational, these upgraded transmission lines would be managed by SCE in accordance with all safety and maintenance requirements including those for construction in proximity to and within existing utility easements.

Thus, these parts of the project are not anticipated to create an exacerbated risk of wildfire or expose people or structures to significant risks due to post-fire slope instability or drainage changes. Impacts associated with these components are included in the whole-project analysis; for the reasons explained there, construction and installation of upgraded utility structures would not contribute to cumulatively considerable impacts and comparatively, these SCE improvements are small parts of the overall project. SCE would comply with all applicable State and federal laws and regulations during construction and operation, including those regulations that relate to hazards and hazardous materials. Given these off-site improvements would not result in a cumulatively considerable contribution to cumulative impacts, impacts in this regard would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.10-1 (see **Section 4.10**, *Hydrology and Water Quality* for mitigation measure), MM 4.15-1 (see **Section 4.15**, *Public Services* for mitigation measure), MM 4.17-2 and MM 4.17-3 (see **Section 4.17**, *Traffic and Transportation* for mitigation measure).

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-1, MM 4.15-1, MM 4.17-2 and MM 4.17-3 cumulative impacts would be significant and unavoidable for the micro mill facility and solar array. Cumulative impacts would be less than significant for the SCE off-site improvements work.

Chapter 5

Consequences of Project Implementation

5.1 Environmental Effects Found to Be Less than Significant

Section 15128 of the *CEQA Guidelines* requires that an EIR “contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.”

Kern County has engaged the public in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The contents of this EIR were established based on an Initial Study (IS)/Notice of Preparation (NOP) prepared in accordance with the CEQA Guidelines and on public and agency input received during the scoping process. Issues that were found to have no impact or less-than-significant impacts during preparation of the IS/NOP do not need to be addressed further in this EIR; no issues were excluded from analysis in the EIR. The EIR must contain a comprehensive analysis of the remaining environmental issues identified in Appendix G of the CEQA Guidelines.

After further study and environmental review, as provided in this EIR, it was determined that project-level impacts in the following areas would be less than significant or could be reduced to less-than-significant levels with mitigation measures; however, these resource areas are evaluated in this EIR for their potential significance:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities
- Wildfire

5.2 Significant Environmental Effects that Cannot Be Avoided

Section 15126.2(b) of the *CEQA Guidelines* requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in **Chapter 4** of this EIR.

After further study and environmental review, as provided in this EIR, it was determined that project-level and cumulative impacts in the following areas would be significant and unavoidable

for the project, even with the incorporation of reasonable mitigation measures, which would attempt to reduce impacts to the greatest extent feasible.

As shown in **Table 5-1, Summary of Significant and Unavoidable Impacts of the Project**, impacts in the following areas would be significant and unavoidable, even with the incorporation of feasible mitigation measures that attempt to reduce impacts to the extent feasible.

Table 5-1: Summary of Significant and Unavoidable Impacts of the Project

Resources	Project Impacts	Cumulative Impacts
Aesthetics	Implementation of the project would result in potentially significant visual impacts to the existing visual quality or character of the site. Mitigation Measures MM 4.1-1 through MM 4.1-7 would be incorporated to reduce visual impacts associated with the proposed project by color treating proposed buildings to blend with surrounding landscape, implementing regular waste/trash removal and recycling programs, directing nighttime lighting downward, shielding it and confining it to the project site, requiring rooftop screening features, and installing landscape structural elements. However, because there are no feasible mitigation measures that can be implemented to maintain the existing open and undeveloped desert landscape character of the project site, impacts to visual character would be significant and unavoidable .	The project would result in significant and unavoidable impacts related to visual character despite implementation of mitigation. While other projects in the region would also be required to implement various mitigation measures to reduce impacts, the conversion of a presently rural desert area to industrial and solar development cannot be mitigated to a degree that impacts are no longer significant. Even with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-7, the project's contribution to significant impacts associated with visual character in the Antelope Valley would be cumulatively significant and unavoidable .
Air Quality	<p>The proposed project's long-term operational emissions would exceed EKAPCD's applicable significance thresholds. Implementation of Mitigation Measure MM 4.3-1 would reduce operational emissions from off-road equipment. However, emissions would still exceed the significance thresholds.</p> <p>In addition, compliance with all applicable EKAPCD New Source Review (NSR) rules would reduce operational emissions. However operational emissions of the project would still exceed EKAPCD CEQA significance thresholds; therefore, impacts would be significant and unavoidable.</p>	<p>The construction emissions generated by the project individually, but inclusive of both on-site facilities and off-site improvements, would not exceed EKAPCD thresholds. With regard to project level construction emissions, Mitigation Measures MM 4.3-1 and MM 4.3-5 would reduce impacts related to NOX and PM10 from diesel emissions, reduce dust generation, and address potential Valley Fever risk by implementing fugitive dust control measures, establishing a public complaint protocol for excessive dust generation, and requiring Valley Fever-related training for construction workers. However, assuming on a worst-case basis that the construction schedules for all cumulative projects would overlap with each other and with the proposed project, cumulative impacts during construction could be significant and unavoidable related to NOX and PM10 emissions.</p> <p>Despite implementation of mitigation measures MM 4.3-1 through MM 4.3-5, operation of the project exceeds the project level regulatory thresholds and, therefore, would contribute to a long-term cumulative</p>

Resources	Project Impacts	Cumulative Impacts
		increase in criteria pollutants. Therefore, the project would result in a significant and unavoidable cumulative impact.
Biological Resources	With the implementation of Mitigation Measures MM 4.1-5 through MM 4.1-7 from Section 4.1 , <i>Aesthetics</i> , and, 4.4-1 through MM 4.4-7, project impacts to biological resources would be less than significant	As development increases within Kern County, impacts to biological resources within the region are increasing on a cumulative level. When considered with the number of present and reasonably foreseeable future development projects in the Antelope Valley, the project would result cumulative loss of habitat for transient special-status species. Even with the implementation of project-specific Mitigation Measures MM 4.4-1 through MM 4.4-7, when combined with other related development projects proposed throughout the County, cumulative impacts would be considered significant and unavoidable .
Noise	Implementation of the project would result in potentially significant impact to noise. Mitigation Measure MM 4.13-1 and MM 4.13-2 would require measures to reduce short-term noise associated with project construction. However, project level impacts to construction noise would still result in a significant and unavoidable impact. Additionally, operation traffic noise would be significant and unavoidable with no feasible mitigation to reduce impacts.	The proposed project's cumulative contribution from operational traffic and construction associated with the project would result in a cumulative significant and unavoidable impact.
Wildfire	With the implementation of Mitigation Measures MM 4.10-1, from Section 4.10 , <i>Hydrology and Water Quality</i> , MM 4.15-1 from Section 4.15 , <i>Public Services</i> , MM 4.17-2 and MM 4.17-3 from Section 4.17 , <i>Traffic and Transportation</i> , project impacts would be less than significant .	Given the location is subject to high wind speeds, with limited surrounding infrastructure, the project and related projects have the potential to result in a cumulative impact. The project, when considered with the number of present and reasonably foreseeable future development projects in the Antelope Valley, would result in the increased exposure of pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire given the character of the area. Therefore, even with implementation of MM 4.10-1, , MM 4.15-1, MM 4.17-2 and MM 4.17-3 cumulative impacts would be significant and unavoidable .

5.3 Irreversible Impacts

Section 15126.2(c) of the *CEQA Guidelines* defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

Build-out of the project would commit nonrenewable resources during project construction. During project operations, oil, gas, and other fossil fuels and nonrenewable resources would be consumed,

primarily in the form of transportation fuel for project employees and delivery trucks and supplemental energy for the micro mill. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Kern County General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

5.4 Growth Inducement

The Kern County General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the *CEQA Guidelines* provides the following guidance on growth-inducing impacts:

“A project is identified as growth-inducing if it “would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.”

Growth inducement can be a result of new development that requires an increase in employment levels, removes barriers to development, or provides resources that lead to secondary growth. With respect to employment, the project would not induce substantial growth. Construction workers would primarily be drawn from the local labor pool or would temporarily stay in hotels in local communities. The duration of the construction phase is expected to last approximately 24 months and would be temporary. Additionally, it is expected that the number of employees needed during the construction phase would be approximately 515 workers. Therefore, due to the temporary nature of the construction phase, it is not expected that the project would induce substantial population growth.

During the operational phase, it is expected that the proposed project would employ approximately 440 workers. Approximately 417 of the proposed workers would be hourly and salaried employees while approximately 23 employees being third-party employees mostly used for on-site security and slag processing. The employees needed for the operational phase of the project would most likely be drawn from the surrounding cities and unincorporated communities. These areas would include, but not be limited to, the unincorporated communities of Rosamond and Mojave and the cities of Tehachapi, Lancaster, and Palmdale. Given the size of the surrounding communities, the nature of the job, and the relatively high unemployment, it is not expected that the proposed project during the operational phase would induce substantial population growth.

Chapter 6 Alternatives

6.1 Introduction

The California Environmental Quality Act (CEQA) requires that an EIR describe a range of alternatives to the project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts of the project while attaining most of the project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration (including the reasons for elimination), and compares the environmental impacts of several alternatives retained with those of the project.

The following are key provisions of the *CEQA Guidelines* (Section 15126.6):

- The discussion of alternatives shall focus on alternatives to the project or its site that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede, to some degree, the attainment of the project objectives, or would be more costly.
- The No Project Alternative shall be evaluated, along with its impacts. The no-project analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a “rule of reason.” Therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner that fosters meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in *CEQA Guidelines* Section 15126.6(f)(1)) are environmental impacts, site suitability, economic viability, social and political acceptability, technological capacity, availability of infrastructure, General Plan consistency, specific plan consistency, regulatory limitations, jurisdictional boundaries, and whether the project proponent could reasonably acquire, control, or otherwise have access to an alternative site. If an alternative has effects that cannot be reasonably identified, if its implementation is remote or speculative, and if it would not achieve the basic project objectives, it need not be considered in the EIR.

6.1.1 Significant Impacts of the Project after Mitigation

Implementation of the proposed project has the potential to have significant adverse effects on:

- Aesthetics (project and cumulative)
- Air Quality (project and cumulative)
- Biological Resources (cumulative only)
- Noise (project and cumulative)
- Wildfire (cumulative only)

Even with the mitigation measures described in **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, of this EIR, impacts in these issue areas would be significant and unavoidable. Therefore, per the *CEQA Guidelines*, this section discusses alternatives that are capable of avoiding or substantially lessening effects on these resources. The significant and unavoidable impacts of the proposed project are discussed below.

Aesthetics

When introduced into the project viewshed, the industrial nature of the project would substantially change the existing visual character of the landscape as viewed from sensitive receptors for the life of the project. Operation of the proposed 550,921 square foot micro mill facility would introduce new infrastructure and other anthropogenic features, which includes but is not limited to: accessory buildings and structures that range in heights from 18-feet to 165-feet, in addition to on-site improvements for parking and truck staging, as well as the 63-acre solar array that surrounds the western and southern portions of the overall 174-acre project site. The visual character would be altered from one that is characterized as predominantly vacant desert landscape to more industrial in nature. Native vegetation would be substantially cleared during ground disturbance and grading activities. As such, the proposed project would result in both project-specific and cumulative significant and unavoidable impacts related to aesthetics. The project-specific significant and unavoidable impacts would consist of substantially degrading the existing visual character or quality of public views of the site and its surroundings and conflicting with the applicable zoning and other regulations governing scenic quality. To mitigate the project-specific impacts, Mitigation Measures MM 4.1-1 through MM 4.1-7 (see **Section 4.1, *Aesthetics*** for full mitigation measures) would be implemented to reduce visual impacts associated with the proposed project by color treating proposed buildings to blend with surrounding landscape, implementing regular waste/trash removal and recycling programs, directing nighttime lighting downward, shielding it and confining it to the project site, requiring rooftop screening features, and installing landscape structural elements. Even with the implementation of Mitigation Measures MM 4.1-1 through MM 4.1-7, impacts would be considered significant and unavoidable.

In addition to the project-specific significant and unavoidable impacts, the project would result in significant and unavoidable cumulative impacts. The surrounding area consists of a variety of new projects that have cumulatively impacted aesthetics. While other projects in the region would also be required to implement various mitigation measures to reduce impacts, the conversion of thousands of acres in a presently rural desert area to industrial and solar development cannot be mitigated to a degree that impacts are no longer significant. Even with the implementation of

Mitigation Measures MM 4.1-1 through MM 4.1-7, the cumulative impacts would be significant and unavoidable.

Air Quality

The proposed project would result in both project-specific and cumulative significant and unavoidable impacts related to air quality. The project-specific significant and unavoidable impacts would consist of the proposed project conflicting with or obstructing the implementation of the Eastern Kern Air Pollution Control District's (EKAPCD) 2017 Ozone AQAP and the project resulting in a cumulatively considerable net increase of any criteria pollutant in a non-attainment region. To mitigate these impacts, Mitigation Measures MM 4.3-1 and MM 4.3-2 (see **Section 4.3, Air Quality** for full mitigation measures) would require adherence to diesel emission-reduction measures during construction which would serve to reduce NO_x and PM emissions, as well as implementation of a dust control plan throughout construction, following EKAPCD standards and permitting requirements, and best practices for fugitive dust management in order to reduce emissions of particular matter. Even with the implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2, project-specific impacts would be considered significant and unavoidable.

In addition to the project-specific significant and unavoidable impacts, the proposed project would result in temporary significant and unavoidable cumulative impacts stemming from the construction phase as the Mojave Desert Air Basin (MDAB) is in nonattainment for PM₁₀ and the project would result in significant temporary levels of PM₁₀ emissions during construction. Specifically, the construction phase emissions from the project and other potential projects within 1-mile and 6-miles from the project site would exceed EKAPCD's significance thresholds for NO_x and PM₁₀. Additionally, construction schedules for all cumulative projects would overlap with each other and with the project, the localized effect would result in cumulatively significant construction NO_x and PM₁₀ emissions. To mitigate the cumulative impacts stemming from the construction phase, Mitigation Measures MM 4.3-1 through MM 4.3-5 would be implemented. Even with the implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5, impacts would still be considered significant and unavoidable.

Biological Resources

The project site and the surrounding area provide suitable habitat for a number of special-status species or otherwise protected plant and wildlife species (broadly referred to as special-status species). Implementation of the project in addition to other projects under way or proposed within the desert region of Kern County would impact habitat for several special-status species that could utilize the project site and vicinity including burrowing owl, desert tortoise, Mohave ground squirrel, raptors and migratory birds, alkali mariposa lily, recurved larkspur, pale-yellow layia, and western Joshua tree. Implementation of the project, along with related projects, has the potential to impact these plant and wildlife species. The project site contains habitat that can support plants, insects, rodents, and small birds that provide a prey base for raptors and terrestrial wildlife. In addition, based on the literature review and database search completed for the project, the region is known to support a diversity of special-status species, most of which are not expected to utilize the project site on a transient basis, if at all.

Given the number of present and reasonably foreseeable future development projects in the project area, the proposed project, when combined with other projects, would result in a significant and unavoidable cumulative loss of foraging and nesting habitat for special-status species. Implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7 would reduce impacts to habitat to less than significant for the proposed project. However, the proposed project, when combined with other related development projects proposed within the vicinity, would cumulatively impact habitat for special-status species. Thus, cumulative impacts would be significant and unavoidable.

Noise

The proposed project would result significant and unavoidable impacts related to noise during both the construction and operations. Project construction activities would generate worker trips per day, vendor trips, and haul truck trips that would result in substantial temporary increases in noise due to increased traffic. The existing baseline plus construction traffic noise levels along the analyzed roadway segments would not increase by a noise level of more than 5 dBA, which is considered to be a readily perceivable increase. Therefore, the proposed project would result in a less than, Mitigation Measures MM 4.13-1 and MM 4.13-2 (see **Section 4.13, Noise** for full mitigation measure) would be implemented requiring equipment laydown yards to be staged as far as possible from residences, construction equipment to be fitted with approved noise-reduction features, and construction vehicles to limit idling time and speeding on access roads. Even with the implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2, construction noise impacts would still be considered significant and unavoidable.

Similarly, during operations, the proposed project's traffic noise levels would result in a significant and unavoidable impact to off-site land uses at roadway segments in the project area. Until the County adopts a mechanism to collect fees for roadway improvements, there is no mechanism for the proposed project to contribute a fee for its fair share of the exceedance for roadway improvements to Dawn Road from Sierra Highway to the SR-14 freeway interchange. Therefore, no feasible mitigation measure is available and operational impacts would be significant and unavoidable.

In addition to the project-specific significant and unavoidable impacts, the project would result in significant and unavoidable cumulative impacts. When the project is considered cumulatively with the surrounding projects, the potential noise impacts stemming from the temporary construction phase (despite implementation of MM 4.13-1 and MM 4.13-2) and the increased truck trips during operations would be considered significant and unavoidable. Specifically, during the operational phase, no feasible mitigation exists to reduce the severity of or to avoid significant impacts. Therefore, the project's contribution to cumulative noise impacts would be significant and unavoidable.

Wildfire

The proposed project site is located within a sparsely developed area with limited existing infrastructure. The area contains low desert vegetation typical of the Mojave Desert. Wildland fires in such desert environments are generally infrequent and of low severity because the fuel loads are incapable of sustaining fire. No recorded wildfires have burned across the project site, and the

project site itself is not located in or near State Responsibility Areas or lands classified as “very high” Fire Hazards Severity Zones, which are the primary indicators for elevated fire risks that require detailed impact analysis according to Appendix G of the *CEQA Guidelines*. On a project-level, the proposed project would not result in individual impacts related to wildfire as it would not result in the impairment of an adopted emergency response plan; the exposure of project occupants to pollutant concentrations from a wildfire; require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or the exposure of people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. With the lack of topographic variation, fire history, and with the implementation of Mitigation Measure MM 4.10-1 (see **Section 4.10, Hydrology and Water Quality** for mitigation measure), the project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Implementation of Mitigation Measure MM 4.15-1 (see **Section 4.15, Public Services** for mitigation measure) would require the project proponent to develop and implement a Fire Safety Plan to the satisfaction of the Kern County Fire Department. Lastly, Implementation of Mitigation Measures MM 4.17-2 and MM 4.17-3 (see **Section 4.17, Traffic and Transportation** for mitigation measure) ensure traffic associated with the project would not conflict with the Kern County General Plan and therefore an emergency response plan or evacuation plan. However, given the project’s location could be subject to high wind speeds, and limited infrastructure is available due to the dispersed development in the area, the project and related projects have the potential to result in a cumulative impact related to exposure of project occupants to pollutant concentrations from a wildfire and, thus, would result in a significant and unavoidable cumulative impact related to wildfire.

6.2 Applicant Submitted Project Objectives

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (*CEQA Guidelines* Section 15126.6(c)). As described in **Chapter 3, Project Description**, of this EIR the following applicant submitted objectives have been established for the project and will aid decision makers in the review of the proposed project and associated environmental impacts:

- Provide an environmentally responsible, reliable, long-term method for disposing of junk cars and other iron and steel scrap materials.
- Provide a reliable, high quality and price-competitive supply of concrete-reinforcing rebar to serve California’s growing demand for rebar.
- Reintroduce the production of reinforcing steel to California, which is currently being imported from both domestic and international sources, with the objective to reduce emissions through the adoption of cutting-edge green technologies that are revolutionizing the steel industry.
- Develop an innovative industrial use on land with ready access to infrastructure and a major transportation corridor.

- Develop a visually appealing industrial project that is consistent with the provisions of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
- Promote land use compatibility with adjacent industrial uses by developing a compatible industrial project with a secure perimeter.
- Positively contribute to the local economy through new capital investment, the creation of new employment opportunities, expansion of the tax base, economic growth and development.
- Site an industrial project in a location that minimizes conflicts with residential, conservation, and agricultural land uses.
- Incorporate clean energy and emission-reduction technologies such as on-site, accessory solar energy generation and carbon capture and utilization (CCU).

6.3 Overview of the Proposed Project

The project proposes to develop and operate a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes.

Development would include an approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. The proposed project would include an approximate 63-acre accessory solar array on 174 total acres of privately owned land included in the proposed project site. Outdoor storage for scrap materials and staging is also proposed as part of the project. In total, the mill would be made up of 13 attached and detached buildings and 7 ancillary structures. The proposed project also includes off-site improvement work to upgrade a portion of the SCE's Corum-Goldtown-Rosamond 66 kilovolt (kV) line with new poles and circuits necessary to power the proposed project. **Chapter 3, Project Description** contains the more details and descriptions for the project components summarized above.

6.4 Overview of Alternatives to the Project

Under CEQA, and as indicated in California Public Resources Code (PRC) Section 21002.1(a), the identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process and is required to ensure the consideration of ways to mitigate or avoid the significant environmental effects of a project. Based on the significant environmental impacts of the proposed project, the aforementioned objectives established for the proposed project, and the feasibility of the alternatives considered, four alternatives, including the No Project Alternative as required by CEQA, are considered in this chapter and summarized in **Table 6-1, Summary of Development Alternatives**. The Environmentally Superior Alternative, as required by CEQA, is described in Section 6.8, *Environmentally Superior Alternative*, below.

6.4.1 Alternative 1: No Project Alternative

The *CEQA Guidelines* require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the proposed project versus a No Project Alternative. Accordingly, Alternative 1, the No Project Alternative, assumes that the development of the micro mill facility, 63-acre solar array, ancillary buildings, and project components would not occur. The No Project Alternative would not require Conditional Use Permits (CUPs), a Precise Development Plan (PDP) or Zone Variances (ZVs) for construction and operation of the proposed project and associated facilities. Amendments to the Kern County General Plan land use map and zone changes would not be required. The No Project Alternative would maintain the current land use designations, zoning classifications, and existing land uses, which consist mostly of undisturbed desert vegetation. No physical changes would be made to the project site.

6.4.2 Alternative 2: Micro Mill Only

Alternative 2, the Micro Mill Only Alternative, would develop and operate a micro mill facility with associated infrastructure. This alternative would eliminate solar energy production, but would still development the approximate 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet. Approval of this alternative would still require the GPA, ZCC, CUPs, PDP, and ZVs to allow the micro mill facility and accessory buildings and structures. It is reasonably assumed that by removing the proposed solar energy production component under Alternative 2, the severity of impacts to aesthetics, air quality, and biological resources would be reduced, although impacts would remain significant and unavoidable. Significant and unavoidable impacts to noise and wildfire would not be notably reduced under this alternative. The proposed project would also rely fully on SCE as the source for powering the facility, and the SCE off-site improvements would be installed in this alternative to ensure power is adequately delivered to the site. While this alternative would meet a majority of the project's objectives, it would reduce the degree to which the following objective is met due to the removal of a solar facility: incorporate clean energy and emission-reduction technologies such as on-site, accessory solar energy generation and carbon capture and utilization (CCU).

Table 6-1, *Summary of Development Alternatives*, provides a summary of the relative impacts and feasibility of each alternative. A complete discussion of each alternative is also provided below.

Table 6-1: Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Project	The project proposes to develop and operate a micro mill facility and associated infrastructure necessary to produce rebar from scrap metal (e.g., shredded automobiles, appliances, structural and sheet metal, and other pre-processed steel bundles) through various recycling processes. Additionally, the project would include an approximate 63-acre accessory solar array. The project would require the GPA, ZCC, CUPs, PDP, and ZVs.	N/A
Alternative 1: No Project Alternative	No development would occur on the project site. The project site would remain unchanged.	<ul style="list-style-type: none"> • Required by CEQA • Avoids need for GPA, ZCC, CUPs, PDP, and ZVs • Avoids all significant and unavoidable impacts • Less impact in all remaining environmental issue areas • Does not meet any of the project objectives
Alternative 2: Micro Mill Only	This alternative would consist of converting the proposed project to a project that would develop and operate a micro mill facility with associated infrastructure, but eliminate solar energy production.	<ul style="list-style-type: none"> • Similar significant and unavoidable impacts to noise, wildfire • Reduced significant and unavoidable impact to air quality, aesthetics and biological resources • Greater overall impacts to energy, greenhouse gas emissions • Similar impacts in all remaining environmental issue areas • Meets some of the project objectives

6.5 Alternatives Considered and Rejected

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (*CEQA Guidelines* Section 15126.6(c)). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (*CEQA Guidelines* Section 15126(f)(2)). Kern County considered several alternatives to reduce impacts to aesthetics (project and cumulative), biological resources (cumulative), and wildfire (cumulative). Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The following alternatives were initially considered but were eliminated from further consideration in this EIR because they do not meet project objectives or were infeasible:

6.5.1 Alternative Site

This alternative would involve the development of the proposed project the micro mill facility and solar facility on another site located within Kern County. Although undetermined at this time, the alternative project site would likely be located in the southeastern corner of the desert region of the County. Similar to the proposed project, this alternative is assumed to involve construction of a 489,200 square-foot steel mill facility with an additional 61,721 square feet of accessory buildings and structures, for a total of 550,921 square feet and 63-acre accessory solar array. *CEQA Guidelines* Section 15126.6(f)(2(a) states that the key and initial step in considering an alternative site is whether “any of the significant effects of the project would be avoided or substantially lessened” in relocating the project, while remaining consistent with the same basic objectives of the proposed project.

The desert region of the County has attracted renewable energy and industrial development applications that are being proposed for vacant land or land with a history of agricultural uses. However, the availability of alternative sites is constrained by the renewable energy market itself. While other sites with similar size, configuration, and use history may exist in the County, alternative project sites in the area are likely to have similar project and cumulatively significant impacts after mitigation, including cumulatively significant impacts to aesthetics, wildfire, and biological resources. This is based on the known general conditions in the area and the magnitude of the proposed project.

In addition, alternative sites for the proposed project are not considered to be “potentially feasible,” as there are no suitable sites within the control of the project proponent that would reduce project impacts. The potential amount of available, similar sites is further reduced because unlike the proposed project, alternative sites may not include sites with close proximity to transmission infrastructure. As noted above, alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce significant environmental effects. Therefore, this alternative was eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project.

6.5.2 Reduced Size Micro Mill – No Solar

This alternative would develop and operate an approximate 366,900 square-foot steel mill facility with an additional 46,290 square feet of accessory buildings and structures, for a total of 413,190 square feet. This alternative would represent an approximately 25-percent smaller micro mill facility as compared to the project. Further, this alternative would not include a solar energy production component, and the approximately 63-acres proposed for solar arrays under the project would remain vacant and unimproved.

The Reduced Size Micro Mill – No Solar alternative would result in proportionally lesser construction and operational impacts to all environmental resource areas due to the reduced project footprint. However, overall implementation of the Reduced Size Micro Mill – No Solar would still require development on a site that is currently vacant and within an area with limited development. Therefore, development of a reduced size project is likely to have similar project and cumulatively

significant impacts after mitigation, including cumulatively significant impacts to aesthetics, wildfire, and biological resources.

In addition, a Reduced Size Micro Mill – No Solar alternative is not considered to be “potentially feasible,” as this alternative would not have economy to scale and would be constrained by available technology. As proposed, the project would be economically viable; however, if the solar component was removed and the micro mill facility reduced in size, the proposed development would not have sufficient production capacity to be profitable. Additionally, the proposed micro mill technology is the most compact and energy-efficient rebar production technology available, with the smallest footprint for rebar manufacturing. If the project size were reduced, the facility would not be able to accommodate the necessary micro mill technology. Furthermore, this alternative would reduce the degree to which the project’s objectives are met.

As noted above, alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce significant environmental effects. Therefore, this alternative was eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project and would not be economically feasible.

6.6 Analysis Format

In accordance with *CEQA Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the project. Furthermore, each alternative is evaluated to determine whether the project objectives identified in **Chapter 3, Project Description**, of this EIR would be mostly attained by the alternative. The project’s impacts that form the basis of comparison in the alternatives analysis are those impacts which represent a conservative assessment of project impacts. The evaluation of each of the alternatives follows the process described below.

- a) The net environmental impacts of the alternative after implementation of reasonable mitigation measures are determined for each environmental issue area analyzed in this EIR.
- b) Post-mitigation significant and less than significant environmental impacts of the alternative and the project are compared for each environmental issue area as follows:
 - Less: Where the impact of the alternative after feasible mitigation would be clearly less adverse than the impact of the project, the comparative impact is said to be “less.”
 - Greater: Where the impact of the alternative after feasible mitigation would be clearly more adverse than the impact of the project, the comparative impact is said to be “greater.”
 - Similar: Where the impacts of the alternative after feasible mitigation and the project would be roughly equivalent, the comparative impact is said to be “similar.”
- c) The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose for the project, as well as the project’s basic objectives would be substantially attained by the alternative.

Table 6-2, Comparison of Alternatives, provides a summary and side-by-side comparison of the proposed project with the impacts of each of the alternatives analyzed. Please note that in Alternatives 1 through 4 in **Table 6-2, Comparison of Alternatives**, the references to “less, similar, or greater,”

refer to the impact of the alternative compared to the proposed project, and the impacts “no impact (NI), less than significant (LTS), or significant and unavoidable (SU),” in the parentheses refer to the significant impact of the specific alternative.

Table 6-2: Comparison of Alternatives

Environmental Resource	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Micro Mill Only
Aesthetics	Significant and Unavoidable (project and cumulative)	Less (NI)	Less (SU)
Agricultural and Forestry Resources	Less than Significant	Less (NI)	Less (LTS)
Air Quality	Significant and Unavoidable (project and cumulative)	Less (NI)	Less (SU)
Biological Resources	Less than Significant with Mitigation (project); Significant and Unavoidable (cumulative)	Less (NI)	Less (SU)
Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)
Energy	Less than Significant with Mitigation	Less (NI)	Greater (LTS)
Geology and Soils	Less than Significant with Mitigation	Less (NI)	Less (LTS)
Greenhouse Gas Emissions	Less than Significant	Less (NI)	Greater (LTS)
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Hydrology and Water Quality	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Land Use and Planning	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Mineral Resources	Less than Significant	Less (NI)	Similar (LTS)
Noise	Significant and Unavoidable (project and cumulative)	Less (NI)	Similar (SU)
Population and Housing	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Public Services	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Recreation	Less than Significant	Less (NI)	Similar (LTS)
Transportation and Traffic	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Tribal Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)
Utilities and Service Systems	Less than Significant with Mitigation	Less (NI)	Similar (LTS)
Wildfire	Less than Significant with Mitigation (project); Significant and Unavoidable (cumulative)	Less (NI)	Similar (SU)
Meet Project Objectives?	All	None	Some
Reduce Significant and Unavoidable Impacts?	N/A	All	None

6.7 Impact Analysis

6.7.1 Alternative 1: No Project Alternative

Environmental Impact Analysis

Aesthetics

Under the No Project Alternative, no development would take place on the project site. The project site would remain in its current state as undeveloped land and no change to the scenic vistas or existing visual character of the site would occur. Impacts to scenic resource and daytime and nighttime views in the area would not occur. Therefore, there would be no impact and the No Project Alternative would result in less impacts to aesthetics compared to the proposed project.

Agricultural and Forestry Resources

Under the No Project Alternative, the project site would remain undeveloped. The project site would remain in its current state, as undeveloped land containing desert vegetation. As such, the No Project Alternative would not involve changes to the existing environment which could result in the conversion of Farmland or forest land to non-agricultural or non-forest uses. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to agricultural and forestry resources compared to the proposed project.

Air Quality

Under the No Project Alternative, the project site would remain undeveloped and there would be no construction activities or operational activities that would generate air emissions. No exceedance of the EKAPCD's significance thresholds would occur, no confliction with the attainment standard would happen, nor would the No Project Alternative contribute to a cumulative net increase of criteria pollutant in the projects' region. Therefore, there would be no impact to air quality and the No Project Alternative would result in less impacts related to air quality compared to the proposed project.

Biological Resources

Under the No Project Alternative, the project site would remain undeveloped and existing biological resources on the project site, including special-status plant and wildlife species, would remain undisturbed since no construction or operation would occur. The project site would remain in its current state, as undeveloped land containing desert vegetation, and would not contribute to a cumulative loss of habitat that support special-status and rare species that have potential to occur on the project site. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to biological resources compared to the proposed project.

Cultural Resources

Under the No Project Alternative, the project site would remain undeveloped and no ground disturbing activities would occur. Therefore, disturbance to potential historical resources, archeological resources, or human remains located on site would not occur and this alternative would not require mitigation. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to cultural resource compared to the proposed project.

Energy

Under the No Project Alternative, the project site would remain undeveloped and no energy consumption activities would occur. As such, the No Project Alternative would not result in wasteful, inefficient, or unnecessary consumption of energy resources and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to energy compared to the proposed project.

Geology and Soils

Under the No Project Alternative, the project site would remain undeveloped and no ground disturbance would occur. As such, the No Project Alternative would not directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault or strong seismic ground shaking; result in substantial soil erosion or loss of topsoil; or directly or indirectly destroy a unique paleontological resource or unique geologic feature. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to geology and soils compared to the proposed project.

Greenhouse Gas Emissions

Under the No Project Alternative, emissions associated with the proposed project would not occur. Therefore, those emissions that contribute to GHGs would be eliminated and no impacts would occur related to generating emissions that may have a significant impact on the environment or consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore there would be no impact and the No Project Alternative would result in less impacts related to greenhouse gas emissions compared to the proposed project.

Hazards and Hazardous Materials

Under the No Project Alternative, the project site would remain undeveloped, and no construction or operational activities would occur. The project site would remain in its current condition. As such, this alternative would not involve use, transport, and disposal of hazardous materials associated with the project site; create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; emit hazardous emissions or handling of hazardous materials within 0.25 miles of an existing or proposed school; create a significant hazard to the public or environment; result in a safety hazard or excessive noise for people residing or working in the project area for a project located within the vicinity of a private airstrip; impair implementation of or interfere with an emergency response plan or emergency evacuation plan; or expose people or structures to

significant risk of loss, injury, or death involving wildland fires; or generate vectors or have a component that includes agricultural waste. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to hazards and hazardous materials compared to the proposed project.

Hydrology and Water Quality

Under the No Project Alternative, the project site's existing hydrology and water quality would remain unchanged as no development or ground disturbance would occur on the project site. As such, this alternative would not violate water quality standards or waste discharge requirements; substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion and or sedimentation on-site or off site; substantially increase the rate or amount of surface runoff which would result in flooding on site or off site; create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage system; contribute to inundation by a flood hazards, tsunami, or seiche; or conflict with or obstruct implementation of a water quality control plan or groundwater management plan. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to hydrology and water quality compared to the proposed project.

Land Use and Planning

The No Project Alternative would not develop any new uses at the project site, and would thus not require any of the submitted land use applications (GPA, ZCC, CUPs, PDP, and ZVs). Current land uses on the site would not require a General Plan Amendment or Zone Change. As such, the No Project Alternative would not cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to land use and planning compared to the proposed project.

Mineral Resources

The project site is not located on lands designated as an MRZ by the State and the project site is not known to contain mineral resources. Additionally, any proposed mineral resource extraction would require a Conditional Use Permit (CUP) to be secured from Kern County. The closest land designated as Map Code 8.4 (Mineral and Petroleum – Minimum 5 Acre Parcel Size) is approximately 3 miles north of the project site. As such, the No Project Alternative would not cause a significant environmental impact due to loss of availability of a known mineral resource or mineral resource recovery site. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to mineral resources as compared to the proposed project.

Noise

Under the No Project Alternative, the project site would remain undeveloped. Noise sources from construction and operation would not be present on site, and existing noise conditions would remain the same. As such, the No Project Alternative would not result in generation of a substantial temporary or permanent increase in ambient noise levels or generate excessive ground-borne

vibration. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to noise compared to the proposed project.

Population and Housing

Under the No Project Alternative, the project site would remain undeveloped. As such, the No Project Alternative would not have the potential to induce unplanned population growth directly or indirectly. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to population and housing compared to the proposed project.

Public Services

Under the No Project Alternative, the project site would remain undeveloped and no new demand for fire or police protection services would occur. Furthermore, no new demand for schools, parks, or other government facilities would occur. As such, the No Project Alternative would not result in the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, or other government facilities. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to public services compared to the proposed project.

Recreation

Under the No Project Alternative, the project site would remain undeveloped and no increase in population that could increase use of existing neighborhood or regional parks or require construction or expansion of recreational facilities. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to recreation compared to the proposed project.

Transportation and Traffic

Under the No Project Alternative, the micro mill facilities would not be constructed and this alternative would not introduce construction and operational-related trips. Existing traffic patterns and volumes on nearby roadways would remain unchanged. As such, the No Project Alternative would not conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities and not conflict or be inconsistent with *CEQA Guidelines* Section 15064.3(b). In addition, the No Project Alternative would not substantially increase hazards due to a geometric design feature or result in inadequate emergency access because no changes to the existing roadways, alignments, or site access would occur. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to transportation and traffic than the project.

Tribal Cultural Resources

Under the No Project Alternative, the project site would remain undeveloped and no ground disturbing activities would occur. The No Project Alternative would not involve construction activities that could impact tribal cultural resources, and the No Project Alternative would not cause a substantial adverse change in the significance of a tribal cultural resources with cultural value to

a California Native American tribe that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k) or as a resource determined by the lead agency. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to tribal cultural resource compared to the proposed project.

Utilities and Service Systems

Under the No Project Alternative, the proposed project would not be constructed and there would be no new demand for utilities and service systems on the project site. As such, the No Project Alternative would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; impact water supplies; generate solid waste in excess of State or local standards; or conflict with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to utilities and service systems compared to the proposed project.

Wildfires

Under the No Project Alternative, the proposed project would not be constructed. As such, the No Project Alternative would not expose occupants to pollutant concentrations from a wildfire; require the installation or maintenance of associated infrastructure; or expose people or structures to significant risks, in each case related to the project. Therefore, there would be no impact for the No Project Alternative on an individual basis. In addition, as no development would occur, on a cumulative basis with other past, present or reasonably foreseeable projects, the No Project Alternative would not result in significant and unavoidable impact to risks associated with wildfires. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to wildfires compared to the proposed project.

Comparison of Impacts

The No Project Alternative would avoid all of the significant and unavoidable impacts associated with the proposed project. This alternative would result in less impact to all remaining environmental issue areas.

Relationship to Project Objectives

The No Project Alternative would not achieve any of the project objectives listed above in **Section 6.2, *Project Objectives***. Although this alternative would create less environmental impacts overall, the objectives that shape the project would not be realized under this alternative.

6.7.2 Alternative 2: Micro Mill Only

Environmental Impact Analysis

Aesthetics

With regard to scenic resources, as discussed in the IS/NOP, the project would not be visible from any Officially Designated State or County Scenic Highway and impacts would remain less than significant under the Micro Mill Only alternative.

With regard to impacts related to scenic vistas, there are no local areas that are designated as scenic vistas within the vicinity of the project. The Pacific Coast Trail is located approximately 13.5 miles northwest of the project site. The project site is unlikely to be visible from the PCT. Therefore, similar to the proposed project, impacts would be less than significant under Alternative 2.

While this alternative would avoid development of a portion of the project site, this alternative would still result in development on a currently vacant site. Similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.1-1 through MM 4.1-4, which would reduce impacts to visual character and quality to the maximum extent feasible by color treating proposed buildings to blend with surrounding landscape, implementing regular waste/trash removal and recycling programs, limiting vegetation removal, planting native vegetation, providing privacy fencing, reducing the visibility of project features, and ensuring that the site is kept free of debris and trash. Nevertheless, similar to the proposed project, impacts would be significant and unavoidable. In addition, in combination with other projects, the Micro Mill Only alternative would contribute to added aesthetic modifications in the project area. While Mitigation Measures MM 4.1-1 through MM 4.1-4 would be implemented to reduce aesthetics impacts, and other projects in the region would be required to implement similar mitigation measures to reduce impacts, the conversion of thousands of acres in a presently rural area cannot be mitigated to a degree that impacts are no longer significant. As such, similar to the project, cumulative impacts from the change to the visual character of the site would remain significant and unavoidable for the Micro Mill Only alternative.

With regard to project impacts due to new sources of light or glare, this alternative would result in relatively less impact than the proposed project due to the reduced project footprint and absence of solar panels from the project site. Furthermore, this alternative would be required to implement Mitigation Measures MM 4.1-5 and MM 4.1-6 to reduce impacts from the micro mill facility regarding light emissions and ensuring compliance with the Kern County Dark Skies Ordinance. The Micro Mill Only alternative would result in reduced impacts, as no solar component would be developed and glare from solar facilities would not exist. Therefore, the Micro Mill Only alternative would have proportionally less significant impact to aesthetics than the proposed project.

Agriculture and Forestry Resources

The project is not considered Farmland of Statewide Importance, is not currently under a Williamson Act Contract, and is not considered forestland. The project site is located within the boundaries of Agricultural Preserve No. 24 and is vacant, previously disturbed land. The project site is currently zoned A-1 (Limited Agriculture). Similar to the proposed project, the Micro Mill

Only alternative would rezone the A-1 parcels to M-3 PD (Heavy Industrial – Precise Development Combining) in Zone Map 213. Similar to the proposed project, following approval of necessary entitlements, impacts to farmland would be less than significant. However, under the Micro Mill Only alternative, due to the reduced footprint, some portions of the project site that are currently zoned for agricultural uses would remain unimproved. Therefore, under the Micro Mill Only alternative, impacts to agriculture and forestry resources would be reduced.

Air Quality

Under the Micro Mill Only alternative, the solar facility would not be developed, thereby reducing the overall extent of construction-related impacts to air quality. The use of construction vehicles, heavy equipment operation, and worker carpool trips would be less compared to the proposed project. Similar to the proposed project, this alternative would require implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2 to reduce the severity of construction-related emissions. However, cumulative impacts would remain significant and unavoidable for temporary construction, as the construction schedule for cumulative projects could still overlap with the construction schedule for the Micro Mill Only alternative. Operational emissions would be nominally less under the Micro Mill Only alternative due to reduced trips for solar facility maintenance; however, a majority of operational emissions result from micro mill operations and there would be no substantial reduction in emissions. Similar to the proposed project, operational impacts would be less than significant.

As it relates to impacts on implementation of the applicable air quality plan, since temporary cumulative construction impacts would be significant and unavoidable, as the Micro Mill Only alternative would result in temporary construction emissions of a magnitude that would obstruct the air quality planning goals set forth by EKAPCD. While construction-related emissions would be proportionally less due to the exclusion of the solar facility, emissions associated with construction on the remainder of the project site would remain significant. Therefore, similar to the proposed project, impacts would be significant and unavoidable.

Similar to the proposed project, visibility at offsite locations may be impacted by emissions of airborne PM from short-term construction activities and long-term operation of the project. Accordingly, the Micro Mill Only alternative would be required to implement MM 4.3-3. Implementation of this alternative would expose sensitive receptors to substantial pollutant concentrations. In particular, during construction of this alternative, it is possible that onsite workers could be exposed to *Coccidioides immitis*, the fungal spore that has potential to cause Valley Fever as fugitive dust is generated during construction. However, dust-minimizing techniques, as implemented through Mitigation Measures MM 4.3-4 and MM 4.3-5, would reduce these impacts to less than significant. As with the proposed project, the Micro Mill Only alternative would result in less-than-significant impacts related to toxic air contaminants, localized pollutant concentrations, and asbestos.

Due to the reduction in emissions from a reduced grading footprint under this alternative, the Micro Mill Only alternative would result in less overall impacts related to air quality than the proposed project. However, despite exclusion of the proposed solar facility, due to the scale of development activity associated with the Micro Mill Facility, even with implementation of mitigation proposed for the impacts to air quality under this alternative would likely remain significant and unavoidable.

Biological Resources

As it relates to impacts on candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS), as with the proposed project, the Micro Mill Only alternative would have an impact to plant species and transient wildlife species, including burrowing owl, desert tortoise, Mohave ground squirrel, raptors and migratory birds, alkali mariposa lily, recurved larkspur, pale-yellow layia, and western Joshua tree. The project site contains habitat that support insects, rodents, and small birds that provide a prey base for raptors and terrestrial wildlife. In addition, based on the literature review and database search completed for the project, the region is known to support a diversity of special-status species. With implementation of Mitigation Measures MM 4.4-1 through MM 4.4-7, impacts would be reduced to less than significant. However, as this alternative would avoid disturbing at least 63 acres of land within the project site, the Micro Mill Only alternative would proportionally reduce the project's impact to biological resources.

Based on the above, project-level impacts under the Micro Mill Only alternative would be less than significant with implementation of mitigation and proportionally reduced as compared to the proposed project. However, cumulatively, this alternative would still result in significant and unavoidable impacts to biological resources; regardless of the type of development, biological resources are being impacted throughout the County.

Cultural Resources

Ground-disturbing activities associated with the project have the potential to encounter undocumented archaeological resources that could qualify as historical resources. Similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.5-1 through MM 4.5-3 to avoid impacts to cultural resources. However, in the unlikely event that previously unidentified resources or human remains are inadvertently discovered during project construction activities, implementation of Mitigation Measures MM 4.5-4 and 4.5-5 would ensure that resources encountered are appropriately addressed and impacts would be less than significant. However, as this alternative would avoid disturbing at least 63 acres of land within the project site, the Micro Mill Only alternative would proportionally reduce the project's impact to cultural resources.

Based on the above, impacts to cultural resources under this alternative would be less than significant. However, the Micro Mill Only alternative would result in less impacts related to cultural resources compared to the proposed project due to the reduction in ground disturbance required under this alternative.

Energy

Due to the reduced project area and exclusion of a solar component under the Micro Mill Only alternative, all construction and operational methods, workforce, and timing would be reduced as compared with the proposed project. Similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measure MM 4.6-1, which would require incorporation of energy conservation and design features to reduce the level of energy consumption on the project site. As such, the wasteful, inefficient, or unnecessary consumption of energy resources would be reduced in comparison with the proposed project. Similar to the proposed project, this alternative

would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. However, as the Micro Mill Only alternative would not include a solar facility, micro mill facilities would be required to source energy from alternate providers, potentially including more energy from non-renewable sources. Therefore, impacts would be greater. The Micro Mill Only alternative would result in potentially more significant energy impacts compared to the proposed project.

Geology and Soils

Similar to the proposed project, the Micro Mill Only alternative would not directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault, seismic-related ground failure including liquefaction, unstable or expansive soils. Adherence to all applicable regulations, as well as implementation of Mitigation Measures 4.7-1 through 4.7-8 would ensure that effects from rupture of a known earthquake fault, seismic-related ground failure including liquefaction, unstable or expansive soils, would be minimized.

With regard to soils incapable of adequately supporting the use of septic tanks or alternative wastewater systems, similar to the proposed project, the Micro Mill Only alternative would require the construction of a septic wastewater treatment system. However, similar to the proposed project, the Micro Mill Only alternative would be required to implement Mitigation Measures MM 4.7-9 and 4.7-10 which require the septic system be required to be permitted through the Kern County Public Health Services Department to ensure adequate drainage of wastewater. As it relates to unique paleontological resource or site or unique geologic feature, similar to the proposed project, under the Micro Mill Only alternative any ground disturbance within the project site could result in a potentially significant impact to paleontological resources. As such, the Micro Mill Only alternative would implement Mitigation Measures MM 4.5-1 through MM 4.5-5 to reduce impacts to paleontological resources. Therefore, impacts would be less than significant.

As discussed above, with implementation of mitigation similar to that required for the proposed project, impacts to geology and soils would likely be less than significant. However, impacts to geology and soils would result in less impact to geology and soils compared to the proposed project due to the reduction in ground disturbance required under this alternative.

Greenhouse Gas Emissions

Given a smaller project footprint than the proposed project, the construction impacts from the Micro Mill Only alternative would be proportionally less than the proposed project. However, operational emissions would remain consistent with the proposed project, as operational emissions associated with the solar facility represents a fraction of overall emissions, and a majority of emissions would be generated from the micro mill facility. Therefore, the Micro Mill Only alternative would result in fewer GHG emissions during construction, but similar emissions during operations when compared with the proposed project. However, eliminating the solar production component from project development would prevent the generation of renewable energy on the project site. As such, the proposed micro mill facility would be required to use energy from alternate sources, including potentially non-renewable sources. Therefore, while project-related GHG impacts would remain less than significant, this alternative would result in greater GHG impacts in comparison to the project due to the corresponding loss in GHG offsets from the development of solar facilities.

Hazards and Hazardous Materials

Similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.9-1 and MM 4.9-2, in order to avoid spills and minimize impacts in the event of a spill; regulate the use of hazardous materials during construction and operation, including the use of pesticides and herbicides; and ensure that wastes requiring special disposal are handled according to state and county regulations that are in effect at the time of disposal, respectively. Implementation of these mitigation measures would reduce impacts related to a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. With regard to hazardous emissions within 0.25 miles of a school, the nearest school to the project site is the Rosamond High School and Abraham Lincoln Alternative School, located approximately 5 miles south of the project site in the unincorporated community of Rosamond. Therefore, there would be no impact related to hazardous emissions within 0.25-mile of a school.

As it relates to wildland fires, the project site is not within an area of high or very high fire hazard. However, similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measure MM 4.15-1, which would require the preparation and submittal of a Fire Safety Plan to the Kern County Fire Department for review and approval.

Impacts under the Micro Mill Only alternative and the proposed project would result in less-than-significant impacts after implementation of mitigation measures and the potential impacts from hazards and hazardous materials under the Micro Mill Only alternative would be similar to those of the proposed project.

Hydrology and Water Quality

Similar to the proposed project, the Micro Mill Only alternative would include of a NPDES completion form as well as implementation of Mitigation Measure MM 4.10-1 in order to reduce potential impacts related to violating water quality standards or degradation of surface or groundwater quality during construction and operation. As it relates to groundwater supplies, water requirements under the Micro Mill Only alternative, similar to the proposed project, would represent a small portion of the established safe yield of the basin, and would not substantially deplete groundwater levels in comparison to existing conditions. As such, impacts would be less than significant.

With regard to existing drainage patterns, installation of the facilities required under the Micro Mill Only alternative would alter existing onsite drainage patterns and flowpaths to some degree, and could alter the way that stormwater from upgradient flows across the project site during major events. Similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measure MM 4.10-2, which requires the project to: (1) ensure that the retention basins and other stormwater management features are consistent with existing regulatory requirements and can minimize any erosion or sedimentation to less-than-significant levels; (2) ensure that flooding on site or off site is reduced to less-than-significant levels; and (3) minimize potential increases in stormwater flow and other project-induced changes to drainage patterns to less-than-significant levels.

The project site is located well inland and far from the ocean or any enclosed or semi-enclosed water body such that there would be no potential threat from tsunami or seiche hazards and impacts would be less than significant. Overall, impacts related to hydrology and water quality would be less than significant, as the exclusion of the solar component under this alternative would not significantly reduce construction water demand or increase impervious area, as the solar facility site would be considered pervious even if developed. Therefore, the Micro Mill Only alternative would have similar impacts related to hydrology and water quality as compared to the proposed project.

Land Use and Planning

Development of the Micro Mill Only alternative would still require a GPA, ZCC, PD Plan, CUPs, and zone variances to facilitate development of the micro mill. As the proposed solar array is accessory to the proposed micro mill facility and would otherwise be included as part of the PD Plan design due to being allowed in the M-3 PD District on a “by right” basis in that regard, elimination of the solar array in the Micro Mill Only alternative would not affect the required land use entitlements. However, similar to the proposed project, impacts would be less than significant following approval of the requested entitlements. Land use and planning impacts would be similar under the Micro Mill Only alternative when compared to the proposed project.

Mineral Resources

The project site is not located on lands designated as an MRZ by the State and the project site is not known to contain mineral resources. Additionally, any proposed mineral resource extraction would require a Conditional Use Permit (CUP) to be secured from Kern County. The closest land designated as Map Code 8.4 (Mineral and Petroleum – Minimum 5 Acre Parcel Size) is approximately 3 miles north of the project site. As such, similar to the proposed project, the Micro Mill Only alternative would not result in less than significant impacts concerning the loss of availability of a known mineral resource or mineral resource recovery site. Therefore, the Micro Mill Only alternative would result in similar impacts related to mineral resources compared to the proposed project.

Noise

Under this alternative, similar to the proposed project, construction activities have the potential to result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards. However, Mitigation Measures MM 4.13-1 and MM 4.13-2 are designed to reduce impacts to the extent feasible during construction activities and, thus, impacts would be less than significant with the implementation of the Mitigation Measures. However, similar to the proposed project, the Micro Mill Only alternative would have the potential to result in operational noise impacts, as operational noise associated with the project is attributable to the micro mill facility and not the solar facility.

Similar to the proposed project, the Micro Mill Only alternative would include several bays in the micro mill facility, a storeroom and vehicle maintenance building, a fume treatment plant, a slag processing plant, and a water treatment plant each of which would include noise-generating equipment or activity. As the Micro Mill Only alternative would include the same uses and on-site equipment, operational noise impacts from on-site operations would be similarly less than

significant. Further, while the Micro Mill Only alternative would have nighttime operations, the number of nighttime employees would be less than the proposed project and the majority of the operations would be conducted indoors. Therefore, no nighttime noise impacts are expected to impact the nearby sensitive receptors.

As with the proposed project, operation of the Micro Mill Only alternative would add traffic trips to local roadways and highways in the project area. Specifically, adding project traffic to the existing conditions at Backus Road between SB-14 northbound ramps and Sierra Highway would result in an increase by a noise level of more than 5 dBA, which is considered to be a readily perceivable increase. Although the Micro Mill Only alternative would result in nominally fewer trips associated with solar facility maintenance, the resulting increase in traffic noise would still be greater than 5 dBA due to micro mill operations, and would constitute a significant and unavoidable traffic noise impact.

Similar to the proposed project, the Micro Mill Only alternative would not result in construction or operational vibration with values above the 0.2 in/sec PPV significance threshold for non-engineered timber and masonry buildings and the 0.4 in/sec PPV human annoyance criteria, no sources of groundborne vibration would be expected to affect receptors outside of the work areas, and there would not be any potential for excessive exposure of persons to or generation of groundborne vibration levels. As such, the vibration levels at the nearest residences would not reach the vibration level threshold for older residential structures. As such, vibration impacts would be minimal and are not expected to have any measurable effect on the adjacent offsite sensitive receivers.

This alternative is expected to result in less-than-significant noise impacts during construction and impacts related to noise would be similar to those of the proposed project. This alternative is expected to result in significant and unavoidable impacts during operational activities, similar to the proposed project.

Population and Housing

Similar to the proposed project, construction of the Micro Mill Only alternative would provide a substantial amount of new jobs to the area during the construction and operational phases. During the construction phase, the Micro Mill Only alternative may require fewer construction workers due to the exclusion of solar facilities. However, a majority of construction activities would be associated with development of the micro mill facility. As with the proposed project, construction workers are expected to travel to the site from various locations throughout Southern California, and the number of workers expected to relocate to the surrounding area is not expected to be substantial.

Operation of the proposed project would require a nominally reduced number of employees due to reduced demand for staff associated with solar facility maintenance operations. This would represent a negligible decrease, as the majority of staff associated with operations are from the micro mill facility. Similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.15-3 which encourages contractors to hire at least 50 percent of construction employees from local Kern County communities. In addition, the Micro Mill Only alternative does not propose the extension of roads or the development of other infrastructures, such as utilities, that would indirectly induce population growth. While impacts would be less than significant, implementation of Mitigation Measure MM 4.15-3 would further

reduce the impacts. Therefore, the Micro Mill Only alternative would result in similar impacts related to population and housing as compared to the proposed project.

Public Services

Similar to the proposed project, construction of the Micro Mill Only alternative would result in construction workers on the project site and increased fire service demands would occur during construction of this alternative. However, the Micro Mill Only alternative would implement Mitigation Measure MM 4.15-1, which would require the implementation of a Fire Safety Plan. Implementation of Mitigation Measure MM 4.15-1 would also reduce fire risks on site during operation of this alternative.

During operation, the Micro Mill Only alternative would require nominally fewer full time employees, due to reduced operational needs associated with solar facility maintenance. Similar to the project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.13-2 and MM 4.13-3, which would require the project operator to work with the County to determine how the use of sales and use taxes from construction of the project can be maximized to reduce impacts to County facilities, and to submit a letter detailing hiring efforts to encourage all contractors to hire at least 50 percent of workers from the local community. Therefore, similar to the proposed project, staff required during operation would not increase demand for public facilities such that substantial physical deterioration of such facilities would occur, nor would project construction require the construction or expansion of public facilities which might have an adverse effect on the environment.

Based on the above, impacts would be less than significant under this alternative following implementation of similar mitigation measures proposed for the project. As project impacts to public services are primarily due to micro mill operations and not solar facility, impacts related to public services would be similar to those of the proposed project.

Recreation

Construction and operation of the Micro Mill Only alternative would require a similar number of employees for construction and operations. While the project footprint would be reduced, a majority of employees required are associated with the micro mill facility and no notable decrease would occur.

Similar to the proposed project, construction of the Micro Mill Only alternative could result in a temporary increase in population during construction as a result of the influx of construction workers. The temporary increase in use of recreation facilities during construction that might be caused by an influx of workers would be minimal. Similarly, operation of the Micro Mill Only alternative would require fulltime employees that could be a mix of Kern County and Los Angeles County residents, including employees relocating to Kern County. Operation of the project would not result in a substantial influx of people (such as a new residential development, school, or other use that would result in large volumes of people residing or traveling to the project site) and therefore the potential increase in use by project personnel at any one neighborhood and/or regional park is not anticipated to be significant. Therefore, as the number of construction and operational employees under the Micro Mill Only alternative would be similar to the proposed project, impacts related to recreation would be similar to those of the proposed project.

Transportation and Traffic

Construction of the Micro Mill Only alternative would require construction-related trips over the construction period, though total trips may be proportionally less than the proposed project due to the reduced in project footprint. Based on the Traffic Impact Study prepared for the proposed project, LOS would drop to LOS D and LOS F at some study intersections, constituting a potentially significant impact. While the Micro Mill Only alternative could require fewer construction traffic trips, this alternative would still have the potential to result in significant impacts due to the number of construction trips required for micro mill facility development. Therefore, as with the proposed project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.17-1 through MM 4.17-3 which require preparation of a Traffic Control Plan and implementation of necessary traffic improvements to reduce construction- and operation-related impacts to less than significant.

With regard to consistency with *CEQA Guidelines* Section 15064.3(b), construction of the Micro Mill Only Alternative would require similar construction trips and travel distances, but the volume of vehicle miles traveled would be less, due to the reduced amount of materials and equipment that would be used to construct the project. During operation of this alternative, distances of day-to-day trips would be the same, while total trips and total vehicle miles traveled would be nominally reduced in comparison to the project due to the reduced employees required for solar facility maintenance. Both the proposed project and Micro Mill Only alternative would result in less than significant impacts.

Based on the above, impacts would be less than significant. Given the similarity between this alternative's and the proposed project's construction and operational vehicle and truck trips, the Micro Mill Only alternative would result in similar impacts related to transportation and traffic as the proposed project.

Tribal Cultural Resources

The Micro Mill Only alternative would occur within the same area as would the proposed project; however, approximately 63-acres would remain undeveloped, thereby reducing potential impacts associated with ground disturbing activities. Similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.5-1 through 4.5-5, which would to reduce potential impacts to tribal cultural resources. Based on the above, although both the project and this alternative would result in physical modifications and the erection of structures within the site, the Micro Mill Only alternative would result in fewer modifications, however, and would result in a marginal reduction in the potential for impacts to tribal cultural resources.

Utilities and Service Systems

As with the proposed project, project construction under the Micro Mill Only alternative would require water usage for dust suppression as well as minimal generation of wastewater, usage of electrical power, and telecommunications. In addition, construction of the Micro Mill Only alternative would not substantially alter stormwater drainage. With regard to operation, the Micro Mill Only alternative would result in a nominally reduced water demand in comparison with the proposed project, as no water resources would be required for solar panel maintenance. Wastewater and solid waste generation associated with this alternative would similar to the proposed project,

as operational impacts are primarily associated with the micro mill facility and not solar facilities. Similar to the proposed project, the Micro Mill Only Alternative would require and rely on the off-site improvement work to upgrade a portion of the SCE's Corum-Goldtown-Rosamond 66 kilovolt (kV) line with new poles and circuits entirely to power the site. The Micro Mill Only alternative would implement Mitigation Measures MM 4.19-1 and MM 4.19-2 to ensure reduce impacts to water and wastewater to less than significant. As the Micro Mill Only alternative would develop the project site, impervious surfaces would be minimized as much as possible and similar to the proposed project, the Micro Mill Only alternative would implement Mitigation Measures MM 4.10-1 and MM 4.10-2 to offset increases in stormwater runoff caused by the project and further reduce impacts. Therefore, the Micro Mill Only alternative is expected to result in less-than-significant impacts to utilities and service systems and impacts would be similar to those of the proposed project.

Wildfires

The potential impacts associated with wildfire hazards would be similar under the Micro Mill Only alternative, as the proposed location would remain the same. The proposed project site is classified as LRA Unzoned and the entirety of the project site is outside of areas identified by CAL FIRE as having substantial or very high risk. While the potential for wildfire on the project site does exist, the potential for wildfire on the project site is considered low and would be considered low for both the proposed project and under the Micro Mill Only alternative.

Concerns regarding wildfire risks stemming from impairing an adopted emergency response plan or emergency evacuation plan, exacerbating wildfire risks, or exposing people or structures to significant risks would largely be the same for the proposed project and the Micro Mill Only alternative. In order to mitigate any potential risks stemming from wildfires, Mitigation Measures MM 4.10-1, MM 4.15-1, MM 4.17-2 and 4.17-3 would be implemented. However, the proposed project would include a larger project footprint, which would carry a proportionally higher risk associated with wildfire. Therefore, Micro Mill Only alternative would result in a less intense development with a marginal reduction in the potential for impacts stemming from wildfires and cumulative impacts for wildfire would remain significant and unavoidable for the Micro Mill Only alternative.

Comparison of Impacts

The Micro Mill Only alternative would be reduced in size compared to the proposed project, and would not generate solar energy due to the removal of a solar component. Due to the proportional reduction in project size, all construction and operational methods, workforce, and timing for the Micro Mill Only alternative would be reduced in comparison with the proposed project. Due to the reduced footprint, the Micro Mill Only alternative would result in less or similar impacts for nearly all of the environmental issue areas. However, this alternative would result in greater GHG impacts when compared to the proposed project since the beneficial reduction in GHG emissions would be reduced. This alternative would not eliminate significant and unavoidable impacts associated with aesthetics (project and cumulative), air quality (project and cumulative), biological resources (cumulative only), noise (project and cumulative), and wildfires (cumulative only).

Relationship to Project Objectives

The Micro Mill Only alternative would achieve many of the project objectives listed above in **Section 6.2**, by facilitating the development of a micro mill facility. However, the applicant submitted objectives related to incorporate clean energy and emission-reduction technologies such as on-site, accessory solar energy generation and carbon capture and utilization (CCU) would not be achieved.

6.8 Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in **Table 6-2, Comparison of Alternatives**, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the project on the basis of its minimization or avoidance of physical environmental impacts. However, *CEQA Guidelines* Section 15126.6(e)(2) states:

The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Because the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA, the Environmentally Superior Alternative is considered to be the Micro Mill Only alternative. This alternative would reduce the severity of significant and unavoidable impacts to aesthetics, air quality, and biological resources due to the proportionate reduction in project size. This alternative, however, would have lower efficiency and greater GHG impacts due to the lack of a solar component to aid in offsetting total on-site energy demand.

The Micro Mill Only alternative would result in less impact to aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology/soils, and tribal cultural resources. Thus, for most environmental issue areas, this alternative would result in fewer environmental impacts, when compared to the proposed project.

It is important to note that it is considered to be impracticable and infeasible to construct the Micro Mill Only alternative, as the increased cost of energy resources due to the lack of solar infrastructure would make this alternative economically infeasible. Nonetheless, because this alternative reduces the severity of some potential impacts, the Micro Mill Only alternative is considered the Environmentally Superior Alternative.

Chapter 7

Response to Comments

This chapter is being reserved for, and will be included with, the Final EIR.

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Chapter 8

Organizations and Persons Consulted

8.1 Federal

China Lake Naval Weapons Center	U.S. Department of Agriculture
Edwards Air Force Base, Mission Sustainability Liaison	U.S. Environmental Protection Agency Region IX Office
Natural Resource Conservation Service	U.S. Fish and Wildlife Service
U.S. Air Force	U.S. Marine Corps
U.S. Army	U.S. Navy
U.S. Army Corp of Engineers, Regulatory Division	U.S. Postal Service, Address Management Systems
U.S. Bureau of Land Management	

8.2 State of California

California Air Resources Board	California State University Bakersfield - Library
California Department of Fish & Wildlife, Central Region	Caltrans District 6
California Department of Water Resources, San Joaquin District	State Department of Conservation, Director's Office
California Department of Water Resources, Division of Land & Right-of-Way	State Department of Conservation, Geologic Energy Management Division
California Energy Commission	State Department of Conservation, Office of Land Conservation
California Native American Heritage Commission	State Water Resources Control Board Division of Drinking Water
California Public Utilities Commission, Energy Division	
California Regional Water Quality Control Board, Lahontan Region	
California State Clearinghouse	

8.3 Regional and Local

Adams, Broadwell, Joseph & Cardozo	Trinity Consultants	Sespe Consulting, Inc
U.S. Bureau of Land Management Ridgecrest Field Office	Eastern Kern Resource Cons Dist.	So. San Joaquin Valley Arch Info Ctr California State University of Bkfd
Caltrans/Dist 6 Planning/Land Bank Bldg.	Caltrans/Dist 9 Planning Department	State Dept of Conservation Director's Office
State Dept of Conservation Geologic Energy Management Division	California Fish & Wildlife	California Regional Water Quality Control Board/Lahontan Region

Kern County Public Works Department/ Building & Development/Floodplain	Kern County Public Works Department/Building & Development/Survey	Kern County Env Health Services Department
Kern County Fire Dept	Kern County Parks & Recreation	Kern County Library/Beale Local History Room
Kern County Public Works Department/Building & Development/Development Review	Kern County Public Works Department/Operations & Maintenance/Regulatory Monitoring & Reporting	Kern County Public Works Department/Building & Development/Code Compliance
Mojave Unified School Dist	Kern County Superintendent of Schools Attention School District Facility Services	Local Agency Formation Comm/LAFCO
Antelope Valley-East Kern Water Agency	Kern County Water Agency	East Kern Air Pollution Control District
Richard Gazinya	Kern County Sheriff's Dept Administration	AT&T California OSP Engineering/Right-of-Way
Center on Race, Poverty & the Environment	Center on Race, Poverty & the Environmental/CA Rural Legal Assistance Foundation	Defenders of Wildlife
Mojave Chamber of Commerce	Native American Heritage Council of Kern County	Sierra Club/Kern Kaweah Chapter
Southern California Edison Planning Dept.	Southern California Gas Co	Southern California Gas Co Transportation Dept
Kevin Johnston	Alvaro Gutierrez	David Laughing Horse Robinson
Kern Valley Indian Council	Kern Valley Indian Council Historic Preservation Office	Leadership Counsel for Justice & Accountability
LIUNA	Northcutt and Associates	Native American Heritage Council of Kern County
Kern County Water Agency	Big Pine Paiute Tribe of the Owens Valley	Tejon Indian Tribe
San Manuel Band of Mission Indians	Chumash Council of Bakersfield	Kern Valley Indian Community
Kitanemuk & Yowlumne Tejon Indians	Quechan Tribe of the Fort Yuma Reservation	San Fernando Band of Mission Indians
Lozeau Drury LLP	City of Arvin	Bakersfield City Planning Dept
Bakersfield City Public Works Dept	California City Planning Dept	Delano City Planning Dept
City of Maricopa	City of McFarland	City of Ridgecrest

City of Shafter	City of Taft Planning & Building	City of Tehachapi
City of Wasco	Inyo County Planning Dept	Kings County Planning Agency
Los Angeles Co Reg Planning Dept	San Bernardino Co Planning Dept	San Luis Obispo Co Planning Dept Planning and Building
Santa Barbara Co Resource	Tulare County Planning & Dev Dept	Ventura County RMA Planning Div
State Air Resources Board Stationary Resource Division	Caltrans/Division of Aeronautics, MS #40	State Clearinghouse Office of Planning and Research
State Dept of Conservation Office of Land Conservation	State Dept of Conservation Div Recycling Cert. Sec.	California State University Bakersfield - Library
California Energy Commission James W. Reed, Jr.	California Highway Patrol Planning & Analysis Division	Integrated Waste Management
State Dept of Toxic Substance Control Environmental Protection Agency	Cal Environmental Protection Agency/ Dept of Toxic Substances Control, Reg 1	Kern County Agriculture Department
Kern County Administrative Officer	Mojave Town Council Bill Deaver, President	KernCOG
Mojave Airport	East Kern Airport Dist	East Kern Airport Dist Engineer
Northcutt and Associates	Southern California Edison	Kern Audubon Society

8.4 Tribal Organizations

Tejon Indian Tribe	Kitanemuk & Yowlumne Tejon Indians
Twenty-Nine Palms Band of Mission Indians	Quechan Tribe of the Fort Yuma Reservation
Big Pine Paiute Tribe of Owens Valley	San Fernando Band of Mission Indians
Chumash Council of Bakersfield	San Manuel Band of Mission Indians
Kern Valley Indian Community	Tejon Indian Tribe

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Chapter 9

List of Preparers

9.1 Lead Agency

Kern County Planning and Natural Resources Department

Lorelei H. Oviatt, AICP – Director

Terrance Smalls – Supervising Planner

Mark Tolentino – Staff Planner

9.2 Technical Assistance

Kimley-Horn and Associates, Inc.

Alex Jewell, AICP - Senior Planner/Project Manager

Randall Kopff – Landscape Architect

Addie Sedoff – Environmental Planning Analyst

Prathna Maharaj, AICP – Environmental Planning Analyst

Taylor Blanford – Environmental Planning Analyst

Gracielle Garin – Environmental Planning Analyst

Environmental Science Associates (ESA)

Air Quality Technical Report

Alan Sako – Director of Air Quality, Climate, and Acoustics

Anitra Rice – Managing Associate, Air Quality, Climate & Acoustics

Sarah Patterson – Air Quality, Climate & Acoustics Analyst

Matthew Fagundes – Air Quality, Climate & Acoustics Analyst

Cheri Velzy – Senior Managing Associate, Air Quality, Climate & Acoustics

Ed Warner – Managing Associate, Air Quality, Climate & Acoustics

Biological Technical Report

Ryan Gilmore – Principle Biologist

Cultural Resources Assessment Report

Monica Strauss, M.A., RPA

Michael Vader, B.A.

Matheson Lowe, B.A.

Greenhouse Gas and Energy Technical Report

Alan Sako – Director of Air Quality, Climate, and Acoustics

Anitra Rice – Managing Associate, Air Quality, Climate Change & Acoustics

Sarah Patterson – Air Quality, Climate Change & Acoustics Analyst

Matthew Fagundes – Air Quality, Climate Change & Acoustics Analyst
Cheri Velzy – Senior Managing Associate, Air Quality, Climate, Acoustics
Ed Warner – Managing Associate, Air Quality, Climate, Acoustics

Noise and Vibration Impact Study

Alan Sako – Director of Air Quality, Climate, and Acoustics
Anitra Rice – Managing Associate, Air Quality, Climate & Acoustics
Tim Witwer – Air Quality, Climate & Acoustics Analyst
Elbert Hsiung – Air Quality, Climate & Acoustics Analyst

Paleontological Resources Assessment Report

Monica Strauss, M.A., RPA
Russel Shapiro, PH.D.

Water Supply Assessment

David Beauchamp – Senior Project Manager
Kelley Sterle – Environmental Planner/Hydrologist

RMA GeoScience**Geotechnical Investigation**

Haiyan Liu, PE – Project Engineer
Mark Swiatek, CEG – Principal Geologist

Michael Baker International**Preliminary Hydrology Study**

Jay Sullivan, PE, CFM, QSD

Partner Engineering and Science, Inc.**Phase I Environmental Site Assessment**

Lyly Churchill, M.A. – Project Manager
Jared Eudell – Senior Author
Nathaniel Grondin – Environmental Scientist

Limited Site Assessment

Lyly Churchill, M.A. – Principal

LAV//Pinnacle Engineering, Inc.**Traffic Impact Study**

Matthew K. VoVilla, R.C.E.

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Chapter 11

Acronyms and Abbreviations

AAQA	ambient air quality analysis
AB	Assembly Bill
AC	alternating current
ACHP	Advisory Council on Historic Preservation
ACOE	Army Corps of Engineers
AFB	Air Force Base
AF	acre-feet
AFY	acre-feet per year
ALUCP	Airport Land Use Compatibility Plan
ANSI	American National Standard Institute
APCD	Air Pollution Control District
APE	Area of Potential Effect
APLIC	Avian Power Line Interaction Committee's
APN	Assessor Parcel Number
AQAP	Air Quality Attainment Plan
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ARP	accidental release prevention
ARPA	Archeological Resources Protection Act
ASCE	American Society of Civil Engineers
ASF	age sensitivity factor
AVAQMD	Antelope Valley Air Quality Management District
AVEK	Antelope Valley-East Kern
BLM	Bureau of Land Management
BMCM	bulk material control measures
BMPs	best management practices
BSA	biological study area
BTR	Biological Technical Report
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards

CaCO ₃	calcium carbonate
CAFE	corporate average fuel economy
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	Clean Air Act of 1988
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CCS	Carbon Capture and Sequestration
CCU	Carbon Capture and Utilization
CDC	Center for Disease Control
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CDOC	California Department of Conservation
CEC	California Energy Commission
CERS	California Environmental Reporting System
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CH ₄	methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CMA	Congestion Management Agency
CMP	Congestion Management Plan
CNDDB	Fish and Game Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide

COG	Council of Governments
CPUC	California Public Utility Commission
CREC	controlled recognized environmental conditions
CRHR	California Register of Historical Resources
CRPC	California Rare Plant Rank
CSLC	California State Lands Commission
CSP	concentrated solar power
CUP	conditional use permit
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CWA	Clean Water Act
DAT	dual access tracker
dBA	decibel
DC	direct current
DEC	direct evacuation control
DEIR	draft environmental impact report
DI	drilling island
DOC	Department of Conservation
DOGGR	Division of Oil, Gas, and Geothermal Resources
DNL	Day-Night Average Sound Level
DPM	diesel particulate matter
DRECP	Desert Renewable Energy Conservation Plan
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EAF	Electric Arc Furnace
ECCMP	Environmental and Construction Compliance Monitoring Plan
ECS	Endless charging system
EIR	Environmental Impact Report
EKAPCD	Eastern Kern Air Pollution Control District
EMF	electromagnetic field
EMT	emergency medical technician
EO	Executive Order
EPA	Environmental Protection Agency
EPS	Emissions Performance Standard
ESA	Endangered Species Act

ESS	Energy Storage System
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FR	Federal Register
FRA	Federal Responsibility Area
FRAP	Fire and Resource Assessment Program
FTA	Federal Transit Administration
FTE	full-time equivalent
FTIP	Federal Transportation Improvement Program
GDP	Gross Domestic Product
GHG	greenhouse gas
GIS	geographic information system
GO	general order
GPA	general plan amendment
GPS	global positioning system
GSP	groundwater sustainability plan
GWP	Global Warming Potential
H2O	water
HAPs	total hazardous air pollutants
HCP	habitat conservation plan
HFC	hydrofluorocarbons
HHWE	Hazardous Waste Element
HM	habitat management
HMBP	Hazardous Materials Business Plan
HMMP	Hazardous Materials Management Plan
HRA	Health Risk Assessment
HREC	historical recognized environmental conditions

HSAT	horizontal single axis tracker
HSWA	Hazardous Solid Waste Act
HUD	Department of Housing and Urban Development
HVAC	heating/ventilation/air conditioning
HWMP	Hazardous Waste Management Plan
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IPCC	Intergovernmental Panel on Climate Change
IS/NOP	Initial Study/Notice of Preparation
AVIRWMP	Antelope Valley Integrated Regional Water Management Plan
KEDC	Kern Economic Development Cooperation
KCFD	Kern County Fire Department
KCGP	Kern County General Plan
KCOG	Kern Council of Governments
KCPD	Kern County Planning Department
KCSO	Kern County Sheriff's Department
KCZO	Kern County Zoning Ordinance
KOP	Key Observation Point
LACM	Museum of Los Angeles County
LADWP	Los Angeles Department of Water and Power
LCFS	Low Carbon Fuel Standard
LID	low impact design
LLC	Limited Liability Corporation
LMS	Ladle Metallurgy Station
LOS	Level of Service
LRA	local responsibility area
LUPA	Land Use Plan Amendment
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MDAB	Mojave Desert Air Basin
MM	mitigation measure
MMRCP	Monitoring, Reporting, and Compliance Program
MOUs	Memoranda of Understanding
MRZs	Mineral Resource Zones
MS	Melt Shop

MT	metric tons
MV	medium voltage
MW	megawatts
NO _x	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCP	National Contingency Act
NCCP	Natural Communities Conservation Plan
NDFE	Nondisposal Facility Element
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NF ₃	nitrogen trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO _x	nitrogen oxide
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NOP/IS	Notice of Preparation and Initial Study
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NR	natural resources
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
O ₃	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHV	off-highway vehicle
OSHA	Occupational Safety and Health Administrations

OPR	California Governor's Office of Planning and Research
PCE	passenger car equivalent
PCR	Power Control Room
PCS	power conversion station
PCT	Pacific Crest Trail
PD	Precise Development
PE	petroleum extraction
PFC	perfluorocarbons
PHI	points of historic interest
PL	platted lands
PLC	Programmable Logic Controller
PM	particulate matter
PM10	Respirable Particulate Matter
PM2.5	Fine Particulate Matter
PPA	Power Purchase Agreement
PPV	peak particle velocity
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
PSG	Pacific Steel Group
PV	solar photovoltaic
PVC	polyvinyl chloride
PVSC	PV combining switchgear
Q1/Q2/Q3/Q4	Quarter 1/Quarter 2/Quarter 3/Quarter 4
R-2	Medium-density Residential
RACM	reasonably available control measures
RCRA	Resource Conservation and Recovery Act
RCSD	Rosamond Community Services District
RE	Recurrent Energy
REC	recognized environmental condition
RHNA	Regional Housing Needs Allocation
RMS	root mean square
RO	Reverse Osmosis
ROGs	reactive organic gases
ROWs	Rights-of-Way
RPS	Renewable Portfolio Standard

RS	Residential Suburban
RTP	Regional Transportation Plan
RV	recreational vehicle
RWMG	Regional Water Management Group
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SBBM	San Bernardino Base and Meridian
SBCM	San Bernardino County Museum
SC	sectionalizing cabinets
SCC	site control centers
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCC	site control center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SDC	seismic design category
SDNHM	San Diego Natural History Museum
SF6	sulfur hexafluoride
SGHAT	Solar Glare Hazard Analysis Tool
SGMA	Sustainable Groundwater Management Agency
SHPO	State Historic Preservation Officer
SIPs	State Implementation Plans
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SKUSD	Southern Kern Unified School District
SLAMS	State and Local Air Monitoring Stations
SLF	sacred lands file
SMARA	Surface Mining and Reclamation Act of 1975
SO _x	sulfur oxides
SO2	sulfur dioxide
SPA	specific plan amendment
SPCC	Prevention, Control, and Countermeasure
SR	State Route
SRAs	State Responsibility Areas
SRRE	Source Reduction and Recycling Element

SSC	Species of Special Concern
SSJVIC	San Joaquin Valley Archaeological Information Center
STIP	State Transportation Improvement Program
SVP	Society of Vertebrate Paleontology
SWANCC	Solid Waste Agency of Northern Cook County
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TAZ	Traffic Analysis Zones
UBC	Uniform Building Code
UF	Ultrafiltration
UL	Underwriters Laboratory
USC	United States Code
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USPS	United States Postal Service
UST	underground storage tank
UV	ultraviolet
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VRM	Visual Resource Management
WEMO	West Mojave Plan
WRCC	Western Regional Climate Center
WSA	water supply assessment
ZCC	zone classification change/zone change case
ZEV	zero-emissions vehicle
ZV	zone variance

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