Appendix A

Draft Environmental Impact Report Comment Letters

Comment Letter A

Mojave Desert Air Quality Management District
Brad Poiriez, *Executive Director*
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 • Fax 760.245.2022
www.MDAQMD.ca.gov • @MDAQMD

June 11, 2024

Rick Hirsch, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

Project: Cordova Complex and Quarry at Pawnee Warehouse Project (State Clearinghouse No. 2023090009)

Dear Mr. Hirsch:

The Mojave Desert Air Quality Management District (District) has received a request for comments on the DEIR for the proposed Cordova Complex and Quarry at Pawnee Warehouse Project in North Apple Valley. The Project would operate as high-pile storage warehouses for the storage and distribution of manufactured goods/materials with ancillary office uses. The Cordova Complex warehouse building would be 1,559,952 sf and would include a total of 266 loading dock doors, with 133 loading dock doors along the northern warehouse façade and 133 loading dock doors along the southern façade. The Quarry at Pawnee warehouse building would be slightly smaller at 1,462,342 sf and include a total of 235 loading dock doors with 118 loading dock doors along the eastern warehouse façade with an additional 117 loading dock doors along the western façade. The Project would involve associated on-site improvements, including truck and vehicle parking, on-site stormwater detention basins, and landscaped areas. The Project would also include off-site roadway improvements, including widening and paving of roadways used to access the Project site, as well as installation of or upsizing of water and sewer lines in the immediate vicinity of the Project site. The warehouses would be built as tilt-up (Type III-B) structures with concrete walls. No refrigeration would be included for cold storage. The DEIR states that Project would have significant and unavoidable impacts, even with mitigation measures incorporated, for the following environmental topics: air quality; greenhouse gas emissions; and noise. A-1

There are three existing residences proximate to the Project sites, the closest of which are about 205 feet to the south of the Cordova Complex site (along Dachshund Avenue) and 305 feet to the east of the Quarry at Pawnee site (along Flint Road), as well as additional scattered rural residences along the Project's haul routes. Since the Project could also result in exceedances of MDAQMD significance thresholds for NOx and PM10, even after implementation of all feasible reduction measures as outlined in the DEIR, the potential health effects associated with criteria air pollutants are conservatively considered significant and unavoidable. No additional feasible mitigation measures have been identified or proposed that could reduce the Project's impacts. A-2

We have reviewed the project as proposed and agree with the DEIR finding that the Project's cumulative impact would be significant and unavoidable despite mitigation measures, with potentially significant health effects to sensitive receptors. Based on the information available to us at this time, the District recommends that the City require the owner/operator utilize all and/or additional feasible mitigation measures to reduce emissions during operation to a level below MDAQMD significance thresholds and minimize impacts to sensitive receptors.

A-3

Furthermore, the operators must obtain a Dust Control Plan (DCP) for the planned project. The most current Dust Control Plan Requirements and Dust Control Plan Submission Form are available at https://www.mdaqmd.ca.gov/permitting/compliance-forms.

Specifically, the District will require:

- Signage compliant with Rule 403 Attachment B shall be erected at each project site entrance not later than the commencement of construction.

- Use a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes to minimize visible fugitive dust emissions. For projects with exposed sand or fines deposits (and for projects that expose such soils through earthmoving), chemical stabilization or covering with a stabilizing layer of gravel will be required to eliminate visible dust/sand from sand/fines deposits.

- All perimeter fencing shall be wind fencing or the equivalent, to a minimum of four feet of height or the top of all perimeter fencing. The owner/operator shall maintain the wind fencing as needed to keep it intact and remove windblown dropout. This wind fencing requirement may be superseded by local ordinance, rule or project-specific biological mitigation prohibiting wind fencing.

- All maintenance and access vehicular roads and parking areas shall be stabilized with chemical, gravel or asphaltic pavement sufficient to eliminate visible fugitive dust from vehicular travel and wind erosion. Take actions to prevent project-related trackout onto paved surfaces, and clean any project-related trackout within 24 hours. All other earthen surfaces within the project area shall be stabilized by natural or irrigated vegetation, compaction, chemical or other means sufficient to prohibit visible fugitive dust from wind erosion.

- Obtain District permits for any miscellaneous process equipment that may not be exempt under District Rule 219 including, but not limited to internal combustion engines with a manufacture's maximum continuous rating greater than or equal to 50 brake horsepower.

A-4

Thank you for the opportunity to review this planning document. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726, or Bertrand Gaschot at extension 4020.

Sincerely,

Alan J. De Salvio
Deputy APCO

AJD/bg

Apple Valley Redwood West Cordova 2024 10 Jun

Comment Letter B

ADAMS BROADWELL JOSEPH & CARDOZO
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TANYA A. GULESSERIAN
DARION N. JOHNSTON
RACHAEL E. KOSS
AIDAN P. MARSHALL
TARA C. RENGIFO

Of Counsel
MARC D. JOSEPH
DANIEL L. CARDOZO

June 20, 2024

VIA EMAIL AND U.S. MAIL

Daniel Alcayaga, AICP, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307
Email: dalcayaga@applevalley.org; planning@applevalley.org

La Vonda M. Pearson, Town Clerk
Town of Apple Valley
14955 Dale Evans Pkwy
Apple Valley, CA 92307
Email: townclerk@applevalley.org

VIA EMAIL ONLY

Richard Hirsch, Planning Manager
Email: rhirsch@interwestgrp.com

Re: Request for Immediate Access to Documents Referenced in the Draft Environmental Impact Report – Cordova Complex and Quarry at Pawnee Warehouse Project (SCH No. 2023090009)

Dear Mr. Alcayaga, Ms. Pearson, and Mr. Hirsch:

We are writing on behalf of Californians Allied for a Responsible Economy ("CARE CA") to request ***immediate access*** to any and all documents referenced, incorporated by reference, and relied upon in the Draft Environmental Impact Report ("DEIR") prepared for the Cordova Complex and Quarry at Pawnee Warehouse Project (SCH No. 2023090009) ("Project"), proposed by VVLIG US Holdings LP ("Applicant"). *This request does not include documents that are currently available on the Town of Apple Valley website*.[1]

The Project includes the construction and operation of two new warehouse buildings (Cordova Complex and Quarry at Pawnee warehouse buildings) totaling approximately 3,022,294 square feet (SF), located on approximately 163 acres of vacant land in the Town of Apple Valley, San Bernardino County, California. The Cordova Complex warehouse building would be 1,559,952 SF and is bounded by Cordova Road to the north, Navajo Road to the east, Doberman Street and undeveloped land to the south, and Dachshund Avenue to the west (Assessor's

B-1

[1] Accessed https://www.applevalley.org/services/planning-division/environmentalon June 20, 2024.

Parcel Numbers [APNs] 0463-213-05, 06, 07, 08, 09, 16, 33, 34, 35, and
Quarry at Pawnee warehouse building would be slightly smaller at 1,46
and is bounded by Quarry Road to the north, Flint Road to the east, Co
to the south, and an unnamed road to the west (APNs 0463-214-06, 07,

Rebracket to only include the paragraph starting w/ " Our request...

Our request for ***immediate access*** to all documents referenced in the DEIR is made pursuant to the California Environmental Quality Act ("CEQA"), which requires that all documents referenced, incorporated by reference, and relied upon in an environmental review document be made available to the public for the entire comment period.[2]

B-1 cont.

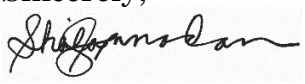
Please use the following contact information for all correspondence:

U.S. Mail
Sheila M. Sannadan
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080-7037

Email
ssannadan@adamsbroadwell.com

If you have any questions, please call me at (650) 589-1660 or email me at ssannadan@adamsbroadwell.com. Thank you for your assistance with this matter.

Sincerely,



Sheila M. Sannadan
Legal Assistant

SMS:acp

[2] *See* Public Resources Code § 21092(b)(1) (stating that "all documents referenced in the draft environmental impact report" shall be made "available for review"); 14 Cal. Code Reg. § 15087(c)(5) (stating that all documents incorporated by reference in the EIR . . . shall be readily accessible to the public"); see also *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 442, as modified (Apr. 18, 2007) (EIR must transparently incorporate and describe the reference materials relied on in its analysis); *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3rd 818, 831 ("[W]hatever is required to be considered in an EIR must be in that formal report. . ."), internal citations omitted.

Comment Letter C

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Of Counsel
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DANIEL L. CARDOZO

June 20, 2024

VIA EMAIL AND U.S. MAIL

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La Vonda M. Pearson, Town Clerk
Town of Apple Valley
14955 Dale Evans Pkwy
Apple Valley, CA 92307
Email: townclerk@applevalley.org

VIA EMAIL ONLY

Richard Hirsch, Planning Manager
Email: rhirsch@interwestgrp.com

Public Records Act Coordinator
Email: records@applevalley.org

Re: Request for Immediate Access to Public Records – Cordova Complex and Quarry at Pawnee Warehouse Project (SCH No. 2023090009)

Dear Mr. Alcayaga, Ms. Pearson, Mr. Hirsch, and Public Records Act Coordinator:

We are writing on behalf of Coalition for Californians Allied for a Responsible Economy ("CARE CA") to request ***immediate access*** to any and all public records referring or related to the Cordova Complex and Quarry at Pawnee Warehouse Project (SCH No. 2023090009) ("Project"), proposed by VVLIG US Holdings LP ("Applicant"). This request includes, but is not limited to, any and all file materials, applications, correspondence, resolutions, memos, notes, analysis, email messages, files, maps, charts, and any other documents related to the Project. ***This request does not include the Draft Environmental Impact Report ("DEIR") or documents referenced or relied upon in the DEIR, which we have requested in a separate letter pursuant to the California Environmental Quality Act.*** C-1

The Project includes the construction and operation of two new warehouse buildings (Cordova Complex and Quarry at Pawnee warehouse buildings) totaling approximately 3,022,294 square feet (SF), located on approximately 163 acres of vacant land in the Town of Apple Valley, San Bernardino County, California. The Cordova Complex warehouse building would be 1,559,952 SF and is bounded by Cordova Road to the north, Navajo Road to the east, Doberman Street and undeveloped land to the south, and Dachshund Avenue to the west (Assessor's

Parcel Numbers [APNs] 0463-213-05, 06, 07, 08, 09, 16, 33, 34, 35, and 36). The Quarry at Pawnee warehouse building would be slightly smaller at 1,462,342 SF and is bounded by Quarry Road to the north, Flint Road to the east, Cordova Road to the south, and an unnamed road to the west (APNs 0463-214-06, 07, 08, and 09).

This request is made pursuant to the **California Public Records Act** (Government Code §§ 7920.000, *et seq*.). This request is also made pursuant to Article I, section 3(b) of the California Constitution, which provides a Constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We request ***immediate access*** to review the above documents pursuant to section 7922.525 of the Public Records Act, which requires public records to be "open to inspection at all times during the office hours of a state or local agency" and provides that "every person has a right to inspect any public record."[1] Therefore, the 10-day response period applicable to a "request for a copy of records" under Section 7922.535(a) does not apply to this request.

C-1 cont.

We request access to the above records in their original form, as maintained by the agency.[2] Pursuant to Government Code Section 7922.570, if the requested documents are in electronic format, please upload them to a file hosting program such as Dropbox, NextRequest or a similar program. Alternatively, if the electronic documents are 10 MB or less (or can be easily broken into sections of 10 MB or less), they may be emailed to me as attachments.

We will pay for any direct costs of duplication associated with filling this request up to $200. However, please contact me at (650) 589-1660 with a cost estimate before copying/scanning the materials.

Please use the following contact information for all correspondence:

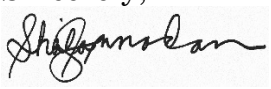
U.S. Mail
Sheila M. Sannadan
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080-7037

Email
ssannadan@adamsbroadwell.com

[1] Gov. Code §7922.525(a).
[2] Gov. Code § 7922.570; *Sierra Club v. Super. Ct*. (2013) 57 Cal. 4th 157, 161-62.

If you have any questions, please call me at (650) 589-1660 or email me at ssannadan@adamsbroadwell.com. Thank you for your assistance with this matter.

Sincerely,



Sheila M. Sannadan
Legal Assistant

SMS:acp

Comment Letter D

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June 20, 2024

VIA EMAIL AND U.S. MAIL

Daniel Alcayaga, AICP, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307
Email: dalcayaga@applevalley.org; planning@applevalley.org

La Vonda M. Pearson, Town Clerk
Town of Apple Valley
14955 Dale Evans Pkwy
Apple Valley, CA 92307
Email: townclerk@applevalley.org

VIA EMAIL ONLY

Richard Hirsch, Planning Manager
Email: rhirsch@interwestgrp.com

Re: Request for Mailed Notice of Actions and Hearings – Cordova Complex and Quarry at Pawnee Warehouse Project (SCH No. 2023090009)

Dear Mr. Alcayaga, Ms. Pearson, and Mr. Hirsch:

We are writing on behalf of Coalition for Californians Allied for a Responsible Economy ("CARE CA") to request mailed notice of the availability of any environmental review document, prepared pursuant to the California Environmental Quality Act, related to the Cordova Complex and Quarry at Pawnee Warehouse Project (SCH No. 2023090009) ("Project"), proposed by VVLIG US Holdings LP ("Applicant"), as well as a copy of the environmental review document when it is made available for public review.

The Project includes the construction and operation of two new warehouse buildings (Cordova Complex and Quarry at Pawnee warehouse buildings) totaling approximately 3,022,294 square feet (SF), located on approximately 163 acres of vacant land in the Town of Apple Valley, San Bernardino County, California. The Cordova Complex warehouse building would be 1,559,952 SF and is bounded by Cordova Road to the north, Navajo Road to the east, Doberman Street and undeveloped land to the south, and Dachshund Avenue to the west (Assessor's Parcel Numbers [APNs] 0463-213-05, 06, 07, 08, 09, 16, 33, 34, 35, and 36). The Quarry at Pawnee warehouse building would be slightly smaller at 1,462,342 SF

D-1

and is bounded by Quarry Road to the north, Flint Road to the east, Cordova Road to the south, and an unnamed road to the west (APNs 0463-214-06, 07, 08, and 09).

This request is made pursuant to the California Public Records Act (Government Code §§ 7920.000, et seq.). This request is also made pursuant to Article I, section 3(b) of the California Constitution, which provides a Constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We also request mailed notice of any and all hearings and/or actions related to the Project. These requests are made pursuant to Public Resources Code Sections 21092.2, 21080.4, 21083.9, 21092, 21108, 21152, and 21167(f) and Government Code Section 65092, which require local agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

D-1 cont.

Please send the above requested items by email and U.S. Mail to our San Francisco office as follows:

U.S. Mail
Sheila M. Sannadan
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080-7037

Email
ssannadan@adamsbroadwell.com

Please call me at (650) 589-1660 if you have any questions. Thank you for your assistance with this matter.

Sincerely,

Sheila M. Sannadan
Legal Assistant

SMS:acp

Comment Letter E

BLUM, COLLINS & HO LLP
ATTORNEYS AT LAW
AON CENTER
707 WILSHIRE BOULEVARD
SUITE 4880
LOS ANGELES, CALIFORNIA 90017 (213) 572-0400

July 3, 2024

Rick Hirsch, Consulting Planner
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

VIA EMAIL TO:
rhirsch@interwestgrp.com

SUBJECT: COMMENTS ON CORDOVA COMPLEX AND QUARRY AT PAWNEE WAREHOUSE PROJECT EIR (SCH NO. 2023090009)

Dear Mr. Hirsch,

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the proposed Cordova Complex and Quarry at Pawnee Warehouse Project. Please accept and consider these comments on behalf of Golden State Environmental Justice Alliance. Also, Golden State Environmental Justice Alliance formally requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877. E-1

1.0 Summary

The project involves two non-contiguous sites: the approximately 87-acre Cordova Complex site and approximately 76-acre Quarry at Pawnee site, totaling approximately 163 acres of land. The project includes the construction and operation of two new warehouse buildings totaling approximately 3,022,294 square feet (sf). The Cordova Complex warehouse building is 1,559,952 sf and is designed as a cross-dock fulfillment center with a total of 266 loading dock doors, with 133 loading dock doors along the northern warehouse façade and 133 loading dock doors along the southern façade. The Quarry at Pawnee warehouse building is 1,462,342 sf and is designed as a cross-dock fulfillment center with a total of 235 loading dock doors with 118 loading dock doors along the eastern warehouse façade with an additional 117 loading dock doors along the western façade. The Project would involve associated on-site improvements, including truck and vehicle parking, on-site stormwater detention basins, and landscaped areas. The Project would also include off-site roadway improvements, including widening and paving of roadways used to access the E-2

Project site, as well as installation of or upsizing of water and sewer lines in the immediate vicinity of the Project site. E-2 cont.

1.7.4 Effects Found Not to be Significant - Population and Housing

The EIR utilizes uncertain language and does not provide any meaningful analysis or supporting evidence to substantiate the conclusion that there will be no significant impacts to population and housing. For example, the EIR states regarding the project's construction and operational jobs that "Workforce requirements for construction and operation are *anticipated* to be met by the existing *local* labor force within the *region*," yet the information provided by the IS states that, "unemployment rate for the County is 4.3 percent, which is lower than the state average of 5.4 percent (EDD 2022)."

The EIR specifically states that the simultaneously the "local" and "regional" existing labor force will accommodate the jobs generated by the proposed project but only cites that the "unemployment rate for the County is 4.3%," which is lower than the state average of 5.4% and indicates that the available labor pool is significantly smaller than necessary to accommodate the proposed project and cumulative development. Notably, unemployment below 5% is considered full employment and does not support a less than significant finding. The EIR has not provided evidence that the local workforce (the Town specifically or San Bernardino County) is qualified for or interested in work in the construction and/or industrial sector. Without this supporting evidence, the project must relying on the entire labor force within the greater SCAG region to fill the project's construction and operational jobs. This will increase VMT and emissions during all phases of construction and operations and a revised EIR must be prepared to account for longer worker trip distances. E-3

The EIR and IS are inconsistent regarding the quantity of employees generated by the proposed project. The EIR states that the project will have, "a permanent operational workforce of an estimated 1,469 employees," while the IS states, "the Cordova Complex warehouse would support an estimated 1,305 employees, and the Quarry at Pawnee warehouse would support an estimated 1,224 employees, for a Project total of approximately 2,529 employees." The EIR must be revised to account for all employees of both project sites by utilizing the IS calculation of 2,529 employees. E-4

SCAG's Connect SoCal Demographics and Growth Forecast[1] states that Apple Valley will add 12,200 jobs between 2016 - 2045. Utilizing the EIR's calculation of 2,529 employees, the project represents 20.7% of Apple Valley's employment growth from 2016 - 2045. A single project E-5

[1] SCAG Connect SoCal Demographics and Growth Forecast adopted September 3, 2020 https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579

accounting for this amount of growth over 29 years represents a significant amount of growth. A revised EIR must be prepared to include this analysis, and also provide a cumulative analysis discussion of projects approved since 2016, NAVISP adoption, General Plan adoption, and projects "in the pipeline" to determine if the project will exceed SCAG's and/or the Town's employment and/or population growth forecast. For example, other recent projects such as Apple Valley 143 (2,520,000 square feet of industrial/warehouse space; 2,108 employees[2]), Apple Valley Commercial Project (49,995 square feet commercial space; 75 employees[3]), The Development at Dale Evans and Lafayette (1,207,544 square feet of industrial/warehouse space; 1,172 employees[4]), and 1M Warehouse (1,080,125 square feet of industrial/warehouse space; 904 employees[5]) combined with the proposed project will cumulatively generate 6,788 employees, which is 55.6% of Apple Valley's employment growth forecast over 29 years accounted for by only five recent industrial projects. These totals increase exponentially when commercial and other industrial development activity is added to the brief list of recent activity above. A revised EIR must be prepared to include this information for analysis, and also provide a cumulative analysis discussion of projects approved since 2016 (SCAG), General Plan adoption, NAVISP adoption, and projects "in the pipeline" to determine if the proposed project will exceed the employment/population growth forecasts by SCAG, the NAVISP, and/or the Town's General Plan.

E-5 cont.

3.0 Project Description

The EIR does not include a floor plan, detailed site plan, or a detailed grading plan. The basic components of a Planning Application include a detailed site plan, floor plan, conceptual grading plan, written narrative, and detailed elevations. For example, the building elevations provided in Figures 4.1-3 and 4.1-4 do not provide any useful information, such as the overall building height, colors, or materials. The site plans provided in Figures 3-4 and 3-5 have been edited for public review and exclude pertinent information that is readily available on all Site Plans, such as the floor area ratio, lot size, legend, and key notes. Providing the grading plan and earthwork quantity notes is also vital as the EIR states that "Earthwork required for construction on the Cordova Complex site would require approximately 287,500 cubic yards of cut and 359,500 cubic yards of fill, for a net fill of 72,000 cubic yards of material, and the Quarry at Pawnee site would require 423,000 cubic yards of cut and 351,000 cubic yards of fill, for a net cut of 72,000 cubic yards of material. Earthwork materials across the two sites would be balanced during the grading phase,

E-6

[2] Apple Valley 143 https://ceqanet.opr.ca.gov/2022070019
[3] Apple Valley Commercial Project https://ceqanet.opr.ca.gov/2021100585
[4] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[5] 1M Warehouse https://ceqanet.opr.ca.gov/2023020285/2

with cut from the Quarry at Pawnee site being used as fill on the Cordova Complex site." The EIR has not provided any method for the public to verify the claims made in this statement. Verification of the import/export materials is vital as it directly informs the quantity of necessary truck hauling trips due to soil import/export during the grading phase of construction. A revised EIR must be prepared to include wholly accurate and adequate detailed project site plan, floor plan, grading plan, elevations, and project narrative for public review. E-6 cont.

4.2 Air Quality, 4.5 Energy, and 4.6 Greenhouse Gas Emissions

Please refer to the attachment for a full technical commentary and analysis from SWAPE. E-7

The EIR does not include meaningful analysis of relevant environmental justice issues in reviewing potential impacts, including cumulative impacts from the proposed project. This is especially significant as the surrounding community is highly burdened by pollution. According to CalEnviroScreen 4.0[6], CalEPA's screening tool that ranks each census tract in the state for pollution and socioeconomic vulnerability, the proposed project's census tract (6071012101) is highly burdened by pollution. The surrounding community bears the impact of multiple sources of pollution and is more polluted than other census tracts in many pollution indicators measured by CalEnviroScreen. For example, the project census tract ranks in the 80th percentile for ozone burden and 60th percentile for traffic burdens. These environmental factors are attributed to heavy truck activity in the area. Ozone can cause lung irritation, inflammation, and worsening of existing chronic health conditions, even at low levels of exposure[7]. Exhaust fumes contain toxic chemicals that can damage DNA, cause cancer, make breathing difficult, and cause low weight and premature births[8]. E-8

The census tract ranks in the 85th percentile for solid waste facility impacts. Solid waste facilities can expose people to hazardous chemicals, release toxic gases into the air (even after these facilites are closed), and chemicals can leach into soil around the facility and pose a health risk to nearby populations[9]. The census tract also bears more impacts from cleanup sites than 52% of the state. Chemicals in the buildings, soil, or water at cleanup sites can move into nearby communities through the air or movement of water[10]. E-9

[6] CalEnviroScreen 4.0 https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[7] OEHHA Ozone https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone
[8] OEHHA Traffic https://oehha.ca.gov/calenviroscreen/indicator/traffic-density
[9] OEHHA Solid Waste Facilities https://oehha.ca.gov/calenviroscreen/indicator/solid-waste-sites-and-facilities
[10] OEHHA Cleanup Sites https://oehha.ca.gov/calenviroscreen/indicator/cleanup-sites

Further, the census tract is a diverse community including 22% Hispanic, 10% African-American, and 2% Asian-American residents, whom are especially vulnerable to the impacts of pollution. The community also has a high rate of poverty, meaning 53% of the households in the census tract have a total income before taxes that is less than the poverty level. Income can affect health when people cannot afford healthy living and working conditions, nutritious food and necessary medical care[11]. Poor communities are often located in areas with high levels of pollution[12]. Poverty can cause stress that weakens the immune system and causes people to become ill from pollution[13]. Living in poverty is also an indication that residents may lack health insurance or access to medical care. Medical care is vital for this census tract as it ranks in the 89th percentile for incidence of cardiovascular disease and 88th percentile for incidence of asthma. E-10

The State of California lists three approved compliance modeling softwares[14] for non-residential buildings: CBECC-Com, EnergyPro, and IES VE. CalEEMod is not listed as an approved software. The CalEEMod modeling does not comply with the 2022 Building Energy Efficiency Standards and under-reports the project's significant Energy impacts and fuel consumption to the public and decision makers. Since the EIR did not accurately or adequately model the energy impacts in compliance with Title 24, a finding of significance must be made. A revised EIR with modeling using one of the approved software types must be prepared and circulated for public review in order to adequately analyze the project's significant environmental impacts. This is vital as the EIR utilizes CalEEMod as a source in its methodology and analysis, which is clearly not an approved software. E-11

4.9 Land Use and Planning

The EIR does not provide a consistency analysis with all land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The project has significant potential to conflict with many of these items, including but not limited to the following from the Climate Action Plan and General Plan and a revised EIR must be prepared with a consistency analysis in order to provide an adequate and accurate environmental document: E-12

[11] OEHHA Poverty https://oehha.ca.gov/calenviroscreen/indicator/poverty
[12] Ibid.
[13] Ibid.
[14] California Energy Commission 2022 Energy Code Compliance Software https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-1

1. ND-6. For projects within the North Apple Valley Industrial Specific Plan, develop employee housing within one mile of the industrial project. (Climate Action Plan)

2. ND-7. Preserve trees occurring on-site either through in situ protection during and after construction, or through transplant and relocation within landscaped areas.(Climate Action Plan)

3. ND-10. Install bus stop(s) and secure scheduled transit service from Victor Valley Transit Authority. (Climate Action Plan)

4. ND-14. Use passive solar design by orienting buildings and incorporating landscaping to maximize passive solar heating during the winter, and minimize solar heating during the summer. (Climate Action Plan)

5. Air Quality Element Program 1.A.1: Apple Valley shall adhere to existing and future greenhouse gas and global warming rules, regulations, and requirements to monitor and reduce emissions.

6. Air Quality Element Policy 1.B: The Town shall proactively regulate local pollutant emitters by coordinating and cooperating with local, regional and federal efforts to monitor, manage and decrease the levels of major pollutants affecting the Town and region, with particular emphasis on PM10 and ozone emissions, as well as other emissions associated with diesel-fueled equipment and motor vehicles.

7. Circulation Element Program 1.A.4: The Town shall require that all intersections maintain a Level of Service D during both the morning and evening peak hour.

E-12 cont.

The EIR must also be revised to remove misleading and erroneous consistency analysis for several items. For example, the EIR concludes the project does not conflict with "Air Quality Element Policy 1.D: All proposals for development activities within the Town shall be reviewed for their potential to adversely impact local and regional air quality and shall be required to mitigate any significant impacts," and "Air Quality Element Program 1.D.1: All projects that have the potential to generate significant levels of air pollution shall be required to provide detailed impact analyses and design mitigation measures that incorporate the most advanced technological methods available. Prior to the issuance of grading or demolition permits, the Town shall review and determine the effectiveness of proposed mitigation measures and set forth additional measures as needed." The EIR claims that because "the Project would implement a rigorous suite of 26 PDFs related to construction, operation, and design of the Project to reduce potential local and regional air quality impacts. Through implementation of these PDFs, Project construction-source emissions would not exceed applicable regional air quality thresholds. However, even with the

E-13

implementation of operational and design PDFs Project operational-source air pollutant emissions would result in exceedances of regional thresholds for emissions of NOx and PM10, primarily associated with mobile source vehicles (about 99.9% of NOx and PM10), even after implementation of PDFs," the project does not conflict with the above listed items. However, the proposed project does not meet the requirement to mitigate significant impacts and the effectiveness of the proposed mitigation is not sufficient to achieve less than significant impacts. The EIR must be revised to include a finding of significance due to the project's inconsistency with these items from the General Plan.

E-13 cont.

Further, the EIR omits discussion and analysis regarding the project's inconsistency with other land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. For example, the project will have a significant and unavoidable cumulatively considerable impact to Greenhouse Gas Emissions because it will exceed the threshold of 3,000 metric tons of CO2e per year. The Land Use and Planning analysis omits any discussion regarding inconsistencies with California's statewide GHG reduction goals for 2030 and 2050. The project will also have significant and unavoidable impacts due to VMT, which is inconsistent with the legislative intent of SB743. The EIR must be revised to include these significant and unavoidable cumulatively considerable impacts for analysis and include a finding of significance.

E-14

Appendix C: Traffic concludes the following intersections require improvements to address the deficiencies per the applicable thresholds:

1. Intersection #4: Dale Evans Parkway / Johnson Road
2. Intersection #5: Stoddard Wells Road / Johnson Road
3. Intersection #6: Stoddard Wells Road / I-15 Northbound Ramps
4. Intersection #10: Dale Evans Parkway / Cordova Road

Table 1-5: Recommended Project-Specific and Cumulative Improvements to Mitigate LOS Deficiencies within Appendix C provides a list of recommended street/traffic improvements and Tables 1-7 and 1-8 provide a list of fair-share calculations for improvements that will allegedly mitigate significant and unavoidable impacts to less than significant levels. It must be noted that the impacts to the intersections listed above are located in the County of San Bernardino, and the I-215 is a Caltrans facility. For example, the west side of Dale Evans Parkway is under jurisdiction of County of San Bernardino (Intersections #4 and #10), and the north side of Stoddard Wells Road is is under jurisdiction of County of San Bernardino (Intersections #5 and #6). Any improvements planned/constructed or in-lieu fees/fair share fees paid for County of San Bernardino or Caltrans facilities are beyond the control/scope of the lead agency. An assessment of fees is appropriate when linked to a specific mitigation program. (*Anderson First Coalition v.*

E-15

City of Anderson (2005) 130 Cal.App.4th 1173, *Save our Peninsula Comm. v. Monterey County Bd. Of Supers.* (2001) 87 Cal.App.4th 99, 141.) Payment of fees is not sufficient where there is no evidence mitigation will actually result. (*Gray v. County of Madera* (2008) 167 Cal.App.4th 1099,1122.) The assessment of fees here is not adequate as there is no evidence mitigation will actually result. The improvements associated with the fair-share fees and any improvements recommended without fees are not planned to occur at all or by any certain date, whether by the County of San Bernardino or Caltrans. Any improvements recommended or fees paid to mitigate impacts for County of San Bernardino or Caltrans facilities are beyond the control of the lead agency and evidence that these improvements will be completed or approved by County of San Bernardino or Caltrans has not been provided. A revised EIR must be prepared to include the LOS analysis as cumulatively considerable significant impact as the project conflicts with Transportation Impact Thresholds A and E and Land Use and Planning Impact Thresholds B and C because it is not consistent with the following General Plan Policy:

1. Circulation Element Program 1.A.4: The Town shall require that all intersections maintain a Level of Service D during both the morning and evening peak hour.

E-15 cont.

The EIR has not provided any information or analysis on the buildout conditions of the General Plan or the North Apple Valley Industrial Specific Plan (NAVISP). Table II-2: Specific Plan Land Use Designations Buildout Summary of the NAVISP[15] states that the Industrial - Specific Plan designation will have a buildout square footage of 42,599,240, and this analysis is based upon new development construction at 22% building coverage of the site. The EIR states the "Cordova Complex site coverage is proposed to be approximately 41.2%. The Quarry at Pawnee site coverage is proposed to be approximately 44.2%," which is nearly double the quantity analyzed for every site in the NAVISP. Other projects in the NAVISP area have also constructed at higher building coverage rates than the NAVISP analyzed, such as the Project Jupiter Distribution Warehouse[16] that was constructed at 29% building coverage of the site, the Development at Dale Evans and Lafayette[17] that was proposed at 35% building coverage of the site, GTS Cold Storage[18] that was proposed at 49.9% building coverage of the site, and 1M Warehouse that was proposed at 36.9% building coverage of the site. The EIR has not demonstrated that the proposed project is within the buildout scenario of the NAVISP, including all cumulative development constructed since the inception of the NAVISP, approved projects not yet constructed, and "projects in the

E-16

[15] North Apple Valley Industrial Specific Plan https://www.applevalley.org/home/showpublisheddocument/18587/636149111285930000
[16] Project Jupiter Distribution Warehouse https://ceqanet.opr.ca.gov/2016041058
[17] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[18] GTS Cold Storage https://ceqanet.opr.ca.gov/2023080221

pipeline." A revised EIR must be prepared to include this analysis in order to provide an adequate and accurate environmental analysis. E-16 cont.

Table III-41: Preferred Alternative General Plan Land Use Designation Build Out Summary: Town & Unincorporated Lands of the General Plan EIR[19] states that the Industrial Specific Plan land use designation will have a buildout of 36,938,445 total square feet. The proposed project's 3,022,294 square feet represents 8.2% of the General Plan buildout for this land use designation, which is significant to be attributed to a single project. As discussed above, the EIR has not demonstrated that the proposed project is within the General Plan buildout scenario, including all cumulative development constructed since approval of the General Plan, approved projects not yet constructed, and "projects in the pipeline." Other recent industrial projects such as Project Jupiter Distribution Warehouse (1,360,875 square feet of industrial/warehouse space[20]), GTS Cold Storage (385,004 square feet of industrial/warehouse space[21]), The Development at Dale Evans and Lafayette (1,207,544 square feet of industrial/warehouse space[22]), Apple Valley 143 (2,520,000 square feet of industrial/warehouse space[23]), and 1M Warehouse (1,080,125 square feet of industrial/warehouse space[24]) cumulatively with the proposed project generate 9,575,842 square feet of industrial/warehouse space, which is 25.9% of the General Plan buildout capacity accounted for by only five recent industrial projects. A revised EIR must be prepared to include this analysis in order to provide an adequate and accurate environmental analysis. E-17

Table 4.9-2. Analysis of Potential for Project to Conflict with 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy Goals provides a misleading and erroneous consistency analysis with SCAG's 2020-2045 Connect SoCal RTP/SCS. Due to errors in modeling, modeling without supporting evidence (as noted throughout this comment letter and attachments) and the EIR's determination that the project will have significant and unavoidable cumulatively considerable impacts to Air Quality and Greenhouse Gas Emissions, the proposed project is directly inconsistent with Goal 5 to reduce greenhouse gas emissions and improve air quality, Goal 6 to support healthy and equitable communities, and Goal 7 to adapt to a changing climate. The EIR must be revised to include a finding of significance due to these direct inconsistencies with SCAG's 2020-2045 Connect SoCal RTP/SCS. E-18

[19] Apple Valley General Plan EIR https://www.applevalley.org/home/showpublisheddocument/24331/636552384686570000
[20] Project Jupiter Distribution Warehouse https://ceqanet.opr.ca.gov/2016041058
[21] GTS Cold Storage https://ceqanet.opr.ca.gov/2023080221
[22] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[23] Apple Valley 143 https://ceqanet.opr.ca.gov/2022070019
[24] 1M Warehouse https://ceqanet.opr.ca.gov/2023020285/2

4.11 Transportation

Appendix C: Traffic concludes the following intersections require improvements to address the deficiencies per the applicable thresholds:

1. Intersection #4: Dale Evans Parkway / Johnson Road
2. Intersection #5: Stoddard Wells Road / Johnson Road
3. Intersection #6: Stoddard Wells Road / I-15 Northbound Ramps
4. Intersection #10: Dale Evans Parkway / Cordova Road

Table 1-5: Recommended Project-Specific and Cumulative Improvements to Mitigate LOS Deficiencies within Appendix C provides a list of recommended street/traffic improvements and Tables 1-7 and 1-8 provide a list of fair-share calculations for improvements that will allegedly mitigate significant and unavoidable impacts to less than significant levels. It must be noted that the impacts to the intersections listed above are located in the County of San Bernardino, and the I-215 is a Caltrans facility. For example, the west side of Dale Evans Parkway is under jurisdiction of County of San Bernardino (Intersections #4 and #10), and the north side of Stoddard Wells Road is is under jurisdiction of County of San Bernardino (Intersections #5 and #6). Any improvements planned/constructed or in-lieu fees/fair share fees paid for County of San Bernardino or Caltrans facilities are beyond the control/scope of the lead agency. An assessment of fees is appropriate when linked to a specific mitigation program. (*Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, *Save our Peninsula Comm. v. Monterey County Bd. Of Supers.* (2001) 87 Cal.App.4th 99, 141.) Payment of fees is not sufficient where there is no evidence mitigation will actually result. (*Gray v. County of Madera* (2008) 167 Cal.App.4th 1099,1122.) The assessment of fees here is not adequate as there is no evidence mitigation will actually result. The improvements associated with the fair-share fees and any improvements recommended without fees are not planned to occur at all or by any certain date, whether by the County of San Bernardino or Caltrans. Any improvements recommended or fees paid to mitigate impacts for County of San Bernardino or Caltrans facilities are beyond the control of the lead agency and evidence that these improvements will be completed or approved by County of San Bernardino or Caltrans has not been provided. A revised EIR must be prepared to include the LOS analysis as cumulatively considerable significant impact as the project conflicts with Transportation Impact Thresholds A and E and Land Use and Planning Impact Thresholds B and C because it is not consistent with the following General Plan Policy:

1. Circulation Element Program 1.A.4: The Town shall require that all intersections maintain a Level of Service D during both the morning and evening peak hour.

E-19

Further, the EIR has underreported the quantity VMT generated by the proposed project operations. The operational nature of industrial/warehouse uses involves high rates of truck/trailer/delivery van VMT due to traveling from large import hubs to regional distribution centers to smaller industrial parks and then to their final delivery destinations. Once employees arrive at work at the proposed project, they will conduct their jobs by driving delivery vans across the region as part of the daily operations as a warehouse, which will drastically increase project-generated VMT. The project's truck/trailer and delivery van activity is unable to utilize public transit or active transportation and it is misleading to the public and decision makers to exclude this activity from VMT analysis. Even though the EIR concludes the project's employees will generate a significant and unavoidable VMT impact, the project's total operational VMT generated further exceeds the significance threshold and legislative intent of SB 743 to reduce greenhouse gas emissions by reducing VMT. A revised EIR must be prepared to reflect a quantified VMT analysis that includes all truck/trailer and delivery van activity. E-20

The EIR has not adequately analyzed the project's potential to substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses; or the project's potential to result in inadequate emergency access. The EIR has not provided any exhibits depicting the available truck/trailer turning radius at the intersection of the project driveways and the adjacent streets to determine if there is enough space available to accommodate heavy truck maneuvering. Further, there are no exhibits providing on-site analysis regarding available space on the property to accommodate heavy truck maneuvering. Notably, the Cordova site provides truck/trailer parking stalls within a rectangular area on the south side of the building, and the eastern internal driveway providing access to these parking stalls is only 30 feet wide. Further, these parking stalls that may be in use at any time and further restrict truck/trailer movement on the site. A revised EIR must be prepared for the proposed project with this analysis in order to provide an adequate and accurate environmental analysis. E-21

The EIR states that, "As the Project continues through design review, detailed roadway improvements would continue to be developed in coordination with the Town. These improvements would be overseen by Town and their qualified traffic engineers," which is deferred mitigation to after the CEQA public review process. There are also no exhibits depicting emergency vehicle access. A similar statement is made regarding emergency vehicle access, in that "the site plan would be subject to plan review by the Town's Fire Department to ensure proper access for fire and emergency response is provided and required fire suppression features are included." Deferring this environmental analysis required by CEQA to the construction permitting phase is improper mitigation, deferred mitigation, and does not comply with CEQA's requirement for meaningful disclosure and adequate informational documents. A revised EIR must be prepared to include a finding of significance due to these significant and unavoidable impacts. E-22

5.2 Significant Irreversible Environmental Changes and 5.3 Growth Inducing Impacts

The EIR relies upon erroneous Energy modeling to determine that the project will meet sustainability requirements. As noted above, the EIR did not model the project's energy consumption in compliance with Title 24 modeling software. The EIR must be revised to include a finding of significance due to the an inaccurate and erroneous analysis regarding the project's Air Quality, Greenhouse Gas, and Energy impacts, including those significant and unavoidable Air Quality and GHG impacts. E-23

The EIR does not meaningfully discuss or analyze the project's significant and unavoidable cumulatively considerable Air Quality and GHG impacts. The EIR does not provide any meaningful evidence that the project will not result in significant and irreversible environmental changes, especially considering the project's direct impact and contribution to negative climate change impacts. The EIR does not adequately discuss or and analyze the commitment of resources is not consistent with regional and local growth forecasts. E-24

As noted throughout this comment letter, the project represents a significant amount of building area growth in the Town and a significant amount of the Town's employment growth over 29 years. The EIR does not meaningfully discuss or analyze the project's compliance with the General Plan's Land Use Buildout Scenario. Table II-2: Specific Plan Land Use Designations Buildout Summary of the NAVISP[25] states that the Industrial - Specific Plan designation will have a buildout square footage of 42,599,240, and this analysis is based upon new development construction at 22% building coverage of the site. The EIR states the "Cordova Complex site coverage is proposed to be approximately 41.2%. The Quarry at Pawnee site coverage is proposed to be approximately 44.2%," which is nearly double the quantity analyzed for every site in the NAVISP. Other projects in the NAVISP area have also constructed at higher building coverage rates than the NAVISP analyzed, such as the Project Jupiter Distribution Warehouse[26] that was constructed at 29% building coverage of the site, the Development at Dale Evans and Lafayette[27] that was proposed at 35% building coverage of the site, GTS Cold Storage[28] that was proposed at 49.9% building coverage of the site, and 1M Warehouse that was proposed at 36.9% building coverage of the site. The EIR has not demonstrated that the proposed project is within the buildout scenario of the NAVISP, including all cumulative development constructed since the inception of the NAVISP, approved projects not yet constructed, and "projects in the pipeline." A revised EIR must be E-25

[25] North Apple Valley Industrial Specific Plan https://www.applevalley.org/home/showpublisheddocument/18587/636149111285930000
[26] Project Jupiter Distribution Warehouse https://ceqanet.opr.ca.gov/2016041058
[27] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[28] GTS Cold Storage https://ceqanet.opr.ca.gov/2023080221

prepared to include this analysis in order to provide an adequate and accurate environmental analysis. E-25 cont.

Table III-41: Preferred Alternative General Plan Land Use Designation Build Out Summary: Town & Unincorporated Lands of the General Plan EIR[29] states that the Industrial Specific Plan land use designation will have a buildout of 36,938,445 total square feet. The proposed project's 3,022,294 square feet represents 8.2% of the General Plan buildout for this land use designation, which is significant to be attributed to a single project. As discussed above, the EIR has not demonstrated that the proposed project is within the General Plan buildout scenario, including all cumulative development constructed since approval of the General Plan, approved projects not yet constructed, and "projects in the pipeline." Other recent industrial projects such as Project Jupiter Distribution Warehouse (1,360,875 square feet of industrial/warehouse space[30]), GTS Cold Storage (385,004 square feet of industrial/warehouse space[31]), The Development at Dale Evans and Lafayette (1,207,544 square feet of industrial/warehouse space[32]), Apple Valley 143 (2,520,000 square feet of industrial/warehouse space[33]), and 1M Warehouse (1,080,125 square feet of industrial/warehouse space[34]) cumulatively with the proposed project generate 9,575,842 square feet of industrial/warehouse space, which is 25.9% of the General Plan buildout capacity accounted for by only five recent industrial projects. A revised EIR must be prepared to include this analysis in order to provide an adequate and accurate environmental analysis. E-26

Further, employment generation has not been adequately analyzed as other recent projects such as other recent projects such as Apple Valley 143 (2,520,000 square feet of industrial/warehouse space; 2,108 employees[35]), Apple Valley Commercial Project (49,995 square feet commercial space; 75 employees[36]), The Development at Dale Evans and Lafayette (1,207,544 square feet of industrial/warehouse space; 1,172 employees[37]), and 1M Warehouse (1,080,125 square feet of industrial/warehouse space; 904 employees[38]) combined with the proposed project will cumulatively generate 6,788 employees, which is 55.6% of Apple Valley's employment growth forecast over 29 years accounted for by only five recent industrial projects. These totals increase exponentially when commercial and other industrial development activity is added to the brief list E-27

[29] Apple Valley General Plan EIR https://www.applevalley.org/home/showpublisheddocument/24331/636552384686570000
[30] Project Jupiter Distribution Warehouse https://ceqanet.opr.ca.gov/2016041058
[31] GTS Cold Storage https://ceqanet.opr.ca.gov/2023080221
[32] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[33] Apple Valley 143 https://ceqanet.opr.ca.gov/2022070019
[34] 1M Warehouse https://ceqanet.opr.ca.gov/2023020285/2
[35] Apple Valley 143 https://ceqanet.opr.ca.gov/2022070019
[36] Apple Valley Commercial Project https://ceqanet.opr.ca.gov/2021100585
[37] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[38] 1M Warehouse https://ceqanet.opr.ca.gov/2023020285/2

of recent activity above. A revised EIR must be prepared to include this information for analysis, and also provide a cumulative analysis discussion of projects approved since 2016 (SCAG), General Plan adoption, NAVISP adoption, and projects "in the pipeline" to determine if the proposed project will exceed the employment/population growth forecasts by SCAG, the NAVISP, and/or the Town's General Plan.

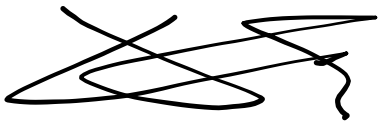
E-27 cont.

6.0 Alternatives

The EIR is required to evaluate a reasonable range of alternatives to the proposed project which will avoid or substantially lessen any of the significant effects of the project (CEQA § 15126.6.) The alternatives chosen for analysis include the CEQA required "No Project/No Development" alternative and only two others - Cordova Complex Only Alternative and Reduced Project Alternative. The EIR does not include an alternative that eliminates all of the project's significant and unavoidable impacts. The EIR must be revised to include analysis of a reasonable range of alternatives and foster informed decision making (CEQA § 15126.6). This could include alternatives such as development of the site with a project that reduces all of the proposed project's significant and unavoidable impacts to a less than significant level, and a mixed-use project that provides affordable housing and exclusively local-serving commercial uses that may reduce VMT, GHG emissions and simultaneously improve Air Quality.

E-28

Sincerely,



Gary Ho
Blum, Collins & Ho LLP

Attachment: SWAPE Analysis

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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June 28, 2024

Gary Ho
Blum, Collins & Ho LLP
707 Wilshire Blvd, Ste. 4880
Los Angeles, CA 90017

Subject: **Comments on the Cordova Complex and Quarry at Pawnee Warehouse Project (SCH No. 2023090009)**

Dear Mr. Ho,

We have reviewed the May 2024 Draft Environmental Impact Report ("DEIR") for the Cordova Complex and Quarry at Pawnee Warehouse Project ("Project") located in the City of Apple Valley ("City"). The Project proposes to construct 3,022,294-square-feet ("SF") of industrial space, divided between two separate warehouse buildings, on the 163-acre site.

Our review concludes that the DEIR fails to adequately evaluate the Project's hazards, hazardous materials, air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project may be underestimated and inadequately addressed. A revised Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential hazards, hazardous materials, air quality, health risk, and greenhouse gas impacts that the project may have on the environment. E-29

Hazards and Hazardous Materials

Inadequate Disclosure and Analysis of Impacts

The DEIR found less-than-significant impacts on the topic of Hazards and Hazardous Materials based in-part on a 2021 Phase I Environmental Site Assessment (Appendix H). The Phase I ESA did not include coverage of all of the Project parcels. Because only a portion of the Project site was covered by the Phase I ESA, the finding of less-than-significant impacts is unreliable and a revised EIR is necessary to include a Phase I ESA that includes all the Project site. E-30

The DEIR states that the Cordova Complex site consists of the following 10 Assessor's Parcel Numbers ("APNs"): 0463- 213-05, 06, 07, 08, 09, 16, 33, 34, 35, and 36. The DEIR states the Quarry at Pawnee site is comprised of four parcels: APNs 0463-214-06, 07, 08, and 09. The Phase I ESA covered the following parcels: 0463-213-03, 05, 07, 08, 09, 29, 33, 34, 35, 36; 0463-2141-06, 07, 08, 09. Missing from the Phase I ESA are parcels 0463-213-06 and 0463-213-16.

A revised EIR needs to be prepared to include a Phase I ESA to include missing parcels 0463-213-06 and 0463-213-16. Until the additional Phase I ESA is prepared, the DEIR's assertion that impacts are less-than-significant lacks sufficient basis.

E-30 cont.

Air Quality

Failure to Include Project Design Features as Formal Mitigation Measures

The DEIR concludes that the Project would result in significant-and-unavoidable NO_X and PM_{10} emissions. Specifically, the DEIR states:

> "As shown in Table 4.2-9, Project operations would result in exceedances of regional thresholds for emissions of NOx and PM10, primarily associated with mobile source vehicles (about 99.9% of NOx and PM10), even after implementation of PDFs. Although many PDFs have been identified that apply to mobile sources (PDF-DES-3, PDF-DES-4, PDF-DES-6, PDF-OP-2, PDF-OP-3, PDF-OP-4, PDF-OP-5, PDF-OP-6, and PDF-OP-9), quantitative reductions from these mobile source PDFs cannot be determined at this time and neither the Project Applicant nor the Town can substantively or materially affect reductions in Project on-road mobile source emissions beyond what is already required by regulation. No feasible mitigation measures or PDFs beyond those already identified exist that would reduce these emissions to levels that are less than significant. Therefore, even with the incorporation of mitigation, long-term impacts associated with a cumulatively considerable net increase of criteria pollutants for which the Project region is non-attainment would be significant and unavoidable" (p. 4.2-31).

E-31

The DEIR concludes that even with the implementation of Project Design Feature ("PDF") DES-3 through PDF-DES-9, the NO_x and PM_{10} emissions from Project operations would result in a significant-and-unavoidable impact. However, the DEIR and associated documents fail to implement the PDFs as formal mitigation measures. This is unsupported, as according to the Association of Environmental Professionals ("AEP") *CEQA Portal Topic Paper* on mitigation measures:

> "While not "mitigation", a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a

change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact."[1]

PDFs that are not formally included as mitigation measures may be eliminated from the Project's design altogether. As the PDFs described in the DEIR are not formally included as mitigation measures, we cannot guarantee that they would be implemented, monitored, and enforced on the Project site. Until the PDFs are included as mitigation measures, the DEIR's air quality analysis should not be relied upon to determine Project significance.

E-31 cont.

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with the California Emissions Estimator Model ("CalEEMod") Version 2020.4.0 (p. 4.2-40).[2] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose which parameters are used in calculating the Project's air pollutant emissions by identifying any changes to default values. Justifications are provided for each altered value.

When reviewing the Project's CalEEMod output files, provided in the Air Quality, Energy, and Greenhouse Gas Emissions Modeling Inputs and Outputs ("AQ & GHG Report"), provided as Appendix B-1 to the DEIR, we found that several model inputs were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions may be underestimated. A revised EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

E-32

Unsubstantiated Changes to Off-Road Equipment Input Parameters

Review of the CalEEMod output files demonstrates that the "Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project" model includes changes to the off-road construction equipment input parameters (see excerpt below) (Appendix B-1, pp. 101, 102).

[1] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.
[2] "CalEEMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/download-model.

Screen	Justification
Land Use	Adjusted land use based on applicant input for both sites. Total warehouse split to account for passenger vs truck trips. Added area to graded/paved for off-site improvements.
Construction: Construction Phases	Adjusted schedule based on applicant input
Construction: Off-Road Equipment	Added trenching phase for pipeline installation. Included PDFs that requires equipment >150 hp to have Tier 4 Interim engines and generators under 25 hp to be electric
Construction: Trips and VMT	Rounded one way trips/day up to even numbers. Added vendor trucks to Site Preparation and Grading phases for water transport and on-site trucks for water application. Haul truck 1-mile trip for soil transport b/t sites.
Operations: Vehicle Data	Trip generation based on traffic report, with Unrefrigerated Warehouse-Rail used to estimate trucks and Unrefrigerated Warehouse-No Rail used to estimate employee trips. Truck trip length of 41.02 miles assumed to account for trips from Port and local destinations.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic reports. Unrefrigerated Warehouse-Rail used to estimate trucks and Unrefrigerated Warehouse-No Rail used to estimate employee vehicles.
Operations: Off-Road Equipment	Total of 64 forklifts operating 24 hours per day per applicant input. 10 yard trucks were also assumed. PDF specifies all zero-emission cargo handling equipment.
Construction: Architectural Coatings	Project design feature = building coatings shall be 10 g/L or less VOC
Operations: Energy Use	Per the Project Description, the Project would not use natural gas. Increased the electricity demand compensate. Also accounted for solar required per CALGreen based on the anticipated conditioned space (office/mezzanine) (about 367,382 kWh/yr from solar total for the project)
Operations: Generators + Pumps EF	Accounted for PDF that specifies all stationary source engines shall be Tier 4

E-32 cont.

The CalEEMod User's Guide requires any changes to model defaults be justified.[3] As demonstrated above, the justification provided in the "User Changes to Default Data" table is:

> "Added trenching phase for pipeline installation. Included PDFs that requires equipment >150 hp to have Tier 4 Interim engines and generators under 25 hp to be electric)" (pp. 101).

As a result of these changes, the model includes the following construction equipment list (Appendix B-1, pp. 82, 83, 84):

[3] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 2, 9

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 4 Interim	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Electric	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Utilities/Off-Site Improvements	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Utilities/Off-Site Improvements	Cranes	Diesel	Tier 4 Interim	1.00	8.00	367	0.29
Utilities/Off-Site Improvements	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Utilities/Off-Site Improvements	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Utilities/Off-Site Improvements	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Utilities/Off-Site Improvements	Rollers	Diesel	Average	1.00	8.00	36.0	0.38

The DEIR provides additional information regarding construction equipment usage in their project design features, stating:

E-32 cont.

> "PDF-CON-1: Heavy-Duty Off-Road Construction Equipment Requirements/Restrictions. During Project construction, all internal combustion engines/construction equipment greater than 150 horsepower operating on the Project site shall meet U.S. EPA-certified Tier 4 Interim emissions standards. The Project Applicant or successor in interest shall include this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. An exemption from these requirements may be granted by the Town of Apple Valley in the event that the Project Applicant or successor in interest documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment.4 Before an exemption may be considered by the Town of Apple Valley, the Project Applicant or successor in interest shall be required to demonstrate that at least two construction fleet owners/operators in the High Desert and San Bernardino Region were contacted and that those owners/operators confirmed Tier 4 Interim or better equipment could not be located within the High Desert and San Bernardino Region" (p. 3-12).

The assumption that the Project's off-road construction equipment fleet would meet Tier 4 interim emissions standards is unsupported as the DEIR fails to explicitly require these standards through a

formal mitigation measure. As previously stated, according to the AEP *CEQA Portal Topic Paper*, measures that are not formally included in the mitigation monitoring and reporting program ("MMRP") may be eliminated from the Project's design altogether.[4] As PDF-CON-1 is not formally included as a mitigation measure, we cannot guarantee that these standards would be implemented, monitored, and enforced on the Project site. Consequently, the model's assumption that the off-road construction equipment fleet would adhere to Tier 4 interim emissions standards is unsupported.

Unsubstantiated Changes to Architectural Coating Emission Factors

Review of the CalEEMod output files demonstrates that the "Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project" model includes changes to the default architectural coating emission factors (see excerpt below) (Appendix B-1, pp. 101, 102).

Screen	Justification
Land Use	Adjusted land use based on applicant input for both sites. Total warehouse split to account for passenger vs truck trips. Added area to graded/paved for off-site improvements.
Construction: Construction Phases	Adjusted schedule based on applicant input
Construction: Off-Road Equipment	Added trenching phase for pipeline installation. Included PDFs that requires equipment >150 hp to have Tier 4 Interim engines and generators under 25 hp to be electric
Construction: Trips and VMT	Rounded one way trips/day up to even numbers. Added vendor trucks to Site Preparation and Grading phases for water transport and on-site trucks for water application. Haul truck 1-mile trip for soil transport b/t sites.
Operations: Vehicle Data	Trip generation based on traffic report, with Unrefrigerated Warehouse-Rail used to estimate trucks and Unrefrigerated Warehouse-No Rail used to estimate employee trips. Truck trip length of 41.02 miles assumed to account for trips from Port and local destinations.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic reports. Unrefrigerated Warehouse-Rail used to estimate trucks and Unrefrigerated Warehouse-No Rail used to estimate employee vehicles.
Operations: Off-Road Equipment	Total of 64 forklifts operating 24 hours per day per applicant input. 10 yard trucks were also assumed. PDF specifies all zero-emission cargo handling equipment.
Construction: Architectural Coatings	Project design feature = building coatings shall be 10 g/L or less VOC
Operations: Energy Use	Per the Project Description, the Project would not use natural gas. Increased the electricity demand compensate. Also accounted for solar required per CALGreen based on the anticipated conditioned space (office/mezzanine) (about 367,382 kWh/yr from solar total for the project)
Operations: Generators + Pumps EF	Accounted for PDF that specifies all stationary source engines shall be Tier 4

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[5] As stated in the "User Changes to Default Data" table, the justification provided for these changes is:

> "Project design feathre = building coatings shall be 10 g/L or less VOC" (Appendix B-1, pp. 102).

The DEIR provides additional information regarding the Project's architectural coating requirements, stating:

> "PDF-CON-7: Architectural Coating Requirements. Architectural and industrial maintenance coatings (e.g., paints) applied on the Project site shall have volatile organic compound levels of less than 10 grams per liter" (p. 3-13).

E-32 cont.

[4] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.
[5] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.

The reductions to the architectural coating emission factors are unsubstantiated. As previously stated, according to the AEP *CEQA Portal Topic Paper*, measures that are not formally included in the MMRP may be eliminated from the Project's design altogether.[6] Although low VOC paints are included as a PDF, they are not formally included as mitigation measures. Therefore, we cannot guarantee that these standards would be implemented, monitored, and enforced on the Project site. Consequently, the model's assumption that the Project will use low VOC paints is unsupported.

E-32 cont.

Unsubstantiated Changes to Construction Trips and Vehicles Miles Travelled ("VMT") Parameters

Review of the CalEEMod output files demonstrates that the "Apple Valley Cordova Complex and Quarry at Pawnee Warehouse" model includes changes to the construction trips and VMT values (see excerpt below) (Appendix B-2, pp. 101, 102).

Screen	Justification
Land Use	Adjusted land use based on applicant input for both sites. Total warehouse split to account for passenger vs truck trips. Added area to graded/paved for off-site improvements.
Construction: Construction Phases	Adjusted schedule based on applicant input
Construction: Off-Road Equipment	Added trenching phase for pipeline installation. Included PDFs that requires equipment >150 hp to have Tier 4 Interim engines and generators under 25 hp to be electric
Construction: Trips and VMT	Rounded one way trips/day up to even numbers. Added vendor trucks to Site Preparation and Grading phases for water transport and on-site trucks for water application. Haul truck 1-mile trip for soil transport b/t sites.
Operations: Vehicle Data	Trip generation based on traffic report, with Unrefrigerated Warehouse-Rail used to estimate trucks and Unrefrigerated Warehouse-No Rail used to estimate employee trips. Truck trip length of 41.02 miles assumed to account for trips from Port and local destinations.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic reports. Unrefrigerated Warehouse-Rail used to estimate trucks and Unrefrigerated Warehouse-No Rail used to estimate employee vehicles.
Operations: Off-Road Equipment	Total of 64 forklifts operating 24 hours per day per applicant input. 10 yard trucks were also assumed. PDF specifies all zero-emission cargo handling equipment.
Construction: Architectural Coatings	Project design feature = building coatings shall be 10 g/L or less VOC
Operations: Energy Use	Per the Project Description, the Project would not use natural gas. Increased the electricity demand compensate. Also accounted for solar required per CALGreen based on the anticipated conditioned space (office/mezzanine) (about 367,382 kWh/yr from solar total for the project)
Operations: Generators + Pumps EF	Accounted for PDF that specifies all stationary source engines shall be Tier 4

E-33

The CalEEMod User's Guide requires any changes to model defaults be justified.[7] As demonstrated above, the justification provided in the "User Changes to Default Data" table is:

> "Rounded one way trips/day up to even numbers. Added vendor trucks to Site Preparation and Grading phases for water transport and on-site trucks for water application. Haul truck 1-mile trip for soil transport b/t sites" (Appendix B-1, pp. 101, 102).

The DEIR includes additional information regarding construction-related vehicle trips (see excerpt below) (p. 4.2-22, Table 4.2-5):

[6] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.
[7] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 2, 9

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	Average One-Way Vehicle Trips Per Day				Equipment		
	Worker Trips	Vendor Truck Trips	Haul Truck Trips	On-Site Truck Trips	Equipment Type	Quantity	Daily Usage Hours
Site Preparation	18	4	0	4	Rubber Tired Dozers	3	8
					Tractors/Loaders/Backhoes	4	8
Grading	26	4	200	4	Excavators	2	8
					Graders	1	8
					Rubber Tired Dozers	1	8
					Scrapers	2	8
					Tractors/Loaders/Backhoes	2	8
Building Construction	616	240	0	0	Cranes	1	7
					Forklifts	3	8
					Generator Sets	1	8
					Tractors/Loaders/Backhoes	3	7
					Welders	1	8
Paving	16	0	0	0	Pavers	2	8
					Paving equipment	2	8
					Rollers	2	8
Architectural Coating	124	0	0	0	Air Compressors	1	6
Utilities/Off-Site Improvements	16	0	0	0	Trenchers	1	8
					Cranes	1	8
					Tractors/Loaders/Backhoes	1	8
					Pavers	1	8
					Paving Equipment	1	8
					Rollers	1	8

Source: Appendix B-1.

E-33 cont.

The source for the construction schedule is the CalEEMod output files themselves. This is unsupported, as the Project documents should substantiate the changes included in the CalEEMod model, not vice versa.[8] As the DEIR fails to provide an adequate source for the revised construction trips and VMT values, we cannot verify the changes as accurate.

CalEEMod uses the trips and VMT values to estimate the construction-related emissions associated with on-road vehicles.[9] By including unsubstantiated changes to the construction trips and VMT values, the model may underestimate the Project's mobile-source construction-related emissions and should not be relied upon to determine Project significance.

Diesel Particulate Matter Emissions Inadequately Evaluated

E-34

The DEIR concludes that the proposed Project would result in a less-than-significant health risk impact based on a quantified construction and mobile-source operational Health Risk Analysis ("HRA"). the DEIR

[8] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 13, 14.

[9] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 34.

estimates that the maximum incremental cancer risk posed to nearby, existing residential sensitive receptors associated with exposure to diesel particulate matter ("DPM") emissions during Project construction and operation would be 1.77 and 6.98 in one million, which would not exceed the MDAQMD significance threshold of 10 in one million (see excerpt below) (p. 4.2-36, Table 4.2-10; p. 4.2-31, Table 4.2-11):

Table 4.2-10. Construction Health Risk Assessment Results - Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	1.77	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0017	1.0	Less than Significant

Source: Appendix B-2.
Note: CEQA = California Environmental Quality Act.
Risk estimates account for implementation of Tier 4 interim engines for equipment greater than 150 horsepower and electric generators less than 25 horsepower (PDF-CON-1).

Table 4.2-11. Operational Health Risk Assessment Results - Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	6.98	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0016	1.0	Less than Significant

Source: Appendix B-2.
Note: CEQA = California Environmental Quality Act.
Risk estimates account for implementation of zero emission cargo handling and landscaping equipment (PDF-OP-1) and Tier 4 interim fire pump engines (PDF-OP-11).

E-34 cont.

The DEIR's evaluation of the Project's potential health risk impacts may be underestimated, for two reasons. First, the DEIR's construction HRA relies upon emissions estimates from an air model that used inputs that are inconsistent with the CalEEMod User's Guide (p. 4.2-36, Table 4.2-10; p. 4.2-31, Table 4.2-11). When we reviewed the Project's CalEEMod output files, provided in the AQ & GHG Report, we found that several of the values inputted into the models are not consistent with information disclosed in the DEIR. The HRA consequently utilizes an underestimated DPM concentration to calculate the health risk associated with Project construction. The DEIR's construction HRA and resulting cancer risk should not be relied upon to determine Project significance.

Second, the DEIR fails to mention or provide the exposure assumptions for the HRA, such as the age sensitivity factors ("ASF") or fraction of time at home ("FAH") values, whatsoever. Until the DEIR substantiates the use of correct exposure assumptions, the HRA may underestimate the cancer risk posed to nearby, existing sensitive receptors because of Project construction. Furthermore, according to the *Risk Assessment Guidelines* provided by the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, the DEIR's model should have used the following equation:[10]

[10] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-7 Equation 8.2.4.

A. Equation 8.2.4 A: $RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$

7. $RISK_{inh\text{-}res}$ = Residential inhalation cancer risk
8. $DOSE_{air}$ = Daily inhalation dose (mg/kg-day)
9. CPF = Inhalation cancer potency factor (mg/kg-day^{-1})
10. ASF = Age sensitivity factor for a specified age group (unitless)
11. ED = Exposure duration (in years) for a specified age group
12. AT = Averaging time for lifetime cancer risk (years)
13. FAH = Fraction of time spent at home (unitless)

E-34 cont.

The DEIR and associated documents fail to include a dose and risk equation to calculate the Project's construction cancer risks. As such, we cannot verify that the DEIR's HRA is accurate, and the Project's cancer risks may be underestimated.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR estimates that the Project would result in net annual GHG emissions of 50,693.99-metric tons of carbon dioxide equivalents per year ("MT CO_2e/year"), which exceeds the SCAQMD GHG threshold of 3,000 MT CO_2e/year (see excerpt below) (p. 4.6-26, Table 4.6-6).

Table 4.6-6. Estimated Annual Operational Greenhouse Gas Emissions - Mitigated

Emission Source	CO_2	CH_4	N_2O	R	CO_2e
	metric tons per year				
Mobile	47,192.88	0.33	5.35	60.59	48,855.39
Area[1]	0.00	0.00	0.00	–	0.00
Energy[1]	0.00	0.00	0.00	–	0.00
Water	697.34	18.24	0.44	–	1,283.87
Waste	126.75	12.67	0.00	–	443.44
Off-Road[1]	0.00	0.00	0.00	–	0.00
Stationary	7.62	<0.01	<0.01	0.00	7.64
Total	**48,024.58**	**31.24**	**5.79**	**60.59**	**50,590.33**
				Amortized Construction Emissions	*103.66*
				Operational Emissions plus Amortized Construction Emissions	**50,693.99**

Source: Appendix B-1
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R=refrigerants; CO_2e = carbon dioxide equivalent; GHG = greenhouse gas. Values of "—" mean that no emissions estimate is provided. Totals may not sum due to rounding.
Emissions estimates account for the all-electric buildings and no natural gas combustion, as well as solar generation per Title 24 requirements. In addition, a 20% indoor/outdoor water conservation strategy, 50% waste diversion, and energy star appliances were assumed for PDF-DES-5, zero emission cargo handling and landscaping equipment per PDF-OP-1, and Tier 4 interim fire pump engines per PDF-OP-11.
[1] The "Energy" source category was zeroed out to account for MM GHG-1 (100% renewable electricity), which also accounts for the electricity requirements to power the all-electric cargo handling and landscaping equipment pursuant to PDF-OP-1.

E-35

The DEIR concludes that, with the addition of specific mitigation measures, the Project would result in a significant-and-unavoidable GHG impact, stating:

> "As depicted in Table 4.6-6, the Project would still exceed the applied threshold of 3,000 MT CO2e per year after mitigation. No feasible mitigation measures beyond those already identified exist that would reduce these emissions to a level that is less than significant. Therefore, even with the incorporation of mitigation, long-term impacts associated with an increase in GHG emissions would be significant and unavoidable" (p. 4.6-26).

While we agree that the Project would result in a significant GHG impact, the DEIR's assertion that this impact is *significant-and-unavoidable* is unsupported. According to CEQA Guidelines § 15096(g)(2):

> "When an updated EIR has been prepared for a project, the Responsible Agency shall not approve the project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment."[11]

An impact can only be labeled as significant-and-unavoidable after all available, feasible mitigation is considered. While the DEIR identifies MMGHG-1, it fails to implement *all* feasible and available mitigation measures. To reduce the Project's GHG impacts to the maximum extent possible, additional feasible mitigation measures should be incorporated, such as those suggested in the section of this letter titled "Feasible Mitigation Measures Available to Reduce Emissions." The Project should not be approved until a revised EIR is prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

E-35 cont.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

As previously stated, according to CEQA Guidelines § 15096(g)(2), an impact can only be labeled as significant-and-unavoidable after *all* available, feasible mitigation is considered.[12] The DEIR is consequently required under CEQA to implement all feasible mitigation to reduce the Project's potential impacts. As demonstrated in the sections above, the Project would result in potentially significant air quality and GHG impacts that should be mitigated further.

First, in order to reduce the VOC emissions associated with Project construction, we recommend the DEIR consider incorporating the following mitigation measure from the California Department of Justice ("DOJ"):[13]

[11] "Cal. Code Regs. tit. 14 § 15096." California Legislature, *available at:* https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-7-eir-process/section-15096-process-for-a-responsible-agency.

[12] "Cal. Code Regs. tit. 14 § 15096." California Legislature, *available at:* https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-7-eir-process/section-15096-process-for-a-responsible-agency.

[13] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, September 2022, *available at*: https://oag.ca.gov/system/files/media/warehouse-best-practices.pdf, p. 8 – 10.

- Require the use of super compliant, low-VOC paints less than 10 g/L during the architectural coating construction phase and during Project maintenance.

Furthermore, Los Angeles County recommends:[14]

- If paints and coatings with VOC content of 0 grams/liter to less than 10 grams/liter cannot be utilized, the developer shall avoid application of architectural coatings during the peak smog season: July, August, and September.

Second, in order to reduce the GHG emissions associated with the Project, we recommend several mitigation measures (see list below).

SCAG's 2020 RTP/SCS PEIR's Greenhouse Gas Project Level Mitigation Measures ("PMM-GHG-1") recommends:

- Measures that encourage transit use, carpooling, bike-share and car-share programs, active transportation, and parking strategies, including, but not limited to the following:
    - Promote transit-active transportation coordinated strategies;
    - Increase bicycle carrying capacity on transit and rail vehicles;
    - Improve or increase access to transit;
    - Increase access to common goods and services, such as groceries, schools, and day care;
    - Incorporate the neighborhood electric vehicle network;
    - Orient the project toward transit, bicycle and pedestrian facilities;
    - Improve pedestrian or bicycle networks, or transit service;
    - Provide traffic calming measures;
    - Provide bicycle parking;
    - Limit or eliminate park supply;
    - Unbundle parking costs;
    - Provide parking cash-out programs;
    - Implement or provide access to commute reduction program;
- Incorporate bicycle and pedestrian facilities into project designs, maintaining these facilities, and providing amenities incentivizing their use; and planning for and building local bicycle projects that connect with the regional network;
- Improving transit access to rail and bus routes by incentives for construction and transit facilities within developments, and/or providing dedicated shuttle service to transit stations; and
- Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles;
- Require at least five percent of all vehicle parking spaces include electric vehicle charging stations, or at a minimum, require the appropriate infrastructure to facilitate sufficient electric charging for passenger vehicles and trucks to plug-in.

E-35 cont.

[14] "Mitigation Monitoring and Reporting Program." Los Angeles County Housing Element Update Program EIR. August 2021, *available at*: https://planning.lacounty.gov/wp-content/uploads/2023/07/Housing_final-peir-mitigation-monitoring.pdf.

- Implement preferential parking permit program
- Implement school pool and bus programs
- Encourage telecommuting and alternative work schedules, such as:
    - Staggered starting times
    - Flexible schedules
    - Compressed work weeks
    - Implement commute trip reduction marketing, such as:
    - New employee orientation of trip reduction and alternative mode options
    - Event promotions
    - Publications
- Price workplace parking, such as:
    - Explicitly charging for parking for its employees;
    - Implementing above market rate pricing;
    - Validating parking only for invited guests;
    - Not providing employee parking and transportation allowances; and
    - Educating employees about available alternatives.
- Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs including but not limited to measures that:
    - Provide car-sharing, bike sharing, and ride-sharing programs;
    - Provide transit passes;
    - Shift single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services;
    - Provide incentives or subsidies that increase that use of modes other than single-occupancy vehicle;
    - Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms;
    - Provide employee transportation coordinators at employment sites;
    - Provide a guaranteed ride home service to users of non-auto modes.

E-35 cont.

The California Air Resources Board ("CARB") recommends: [15]

- Ensuring the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero equipment and tools;
- Requiring all off-road diesel-powered equipment used during construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits, such that, emission reductions achieved are equal to or exceed that of a Tier 4 engine;

[15] "Recommended Air Pollution Emission Reduction Measures for Warehouses and Distribution Centers." CARB, August 2023, *available at*: https://ww2.arb.ca.gov/sites/default/files/2023-08/CARB%20Comments%20-%20NOP%20for%20the%20%20Oak%20Valley%20North%20Project%20DEIR.pdf; Attachment A, p. 5 – 8.

- Requiring all heavy-duty trucks entering the construction site during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-oxides of nitrogen (NOx) standard starting in the year 2022;
- Require all construction equipment and fleets to be in compliance with all current air quality regulations;
- Requiring all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with transport refrigeration units (TRU) or auxiliary power units;
- Requiring all TRUs entering the project-site be plug-in capable;
- Requiring all service equipment (e.g., yard hostlers, yard equipment, forklifts, and pallet jacks) used within the project site to be zero-emission;
- Requiring future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans;
- Including contractual language in tenant lease agreements restricting trucks and support equipment from idling longer than two minutes while on site; and
- Requiring the installing of vegetative walls or other effective barriers that separate loading docks and people living or working nearby.

The DOJ recommends: [16]

- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity that is equal to or greater than the building's projected energy needs, including all electrical chargers.
- Designing all project building roofs to accommodate the maximum future coverage of solar panels and installing the maximum solar power generation capacity feasible.
- Oversizing electrical rooms by 25 percent or providing a secondary electrical room to accommodate future expansion of electric vehicle charging capability.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Designing to LEED green building certification standards.
- Constructing zero-emission truck charging/fueling stations proportional to the number of dock doors at the project.
- Running conduit to designated locations for future electric truck charging stations.
- Constructing and maintaining electric light-duty vehicle charging stations proportional to the number of employee parking spaces (for example, requiring at least 10% of all employee parking spaces to be equipped with electric vehicle charging stations of at least Level 2 charging performance)
- Running conduit to an additional proportion of employee parking spaces for a future increase in the number of electric light-duty charging stations.

E-35 cont.

[16] *Ibid.* p. 9 – 10.

- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB-approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants who own, operate, or hire trucking carriers with more than 100 trucks to use carriers that are SmartWay carriers.
- Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

CEQA Guidelines 15126.4 (c)(3) include "[o]ffsite measures, including offsets that are not otherwise required, to mitigate a project's emissions" as an option for GHG mitigation.[17] An example of this was in the case of the Oakland Sports and Mixed-Use Project, where off-site reduction measures in the neighboring communities were recommended.[18] We recommend consideration of local carbon offset programs to reduce the Project's GHG impacts as a measure of last result.

We have provided several mitigation measures that would reduce Project-related ROG and GHG emissions developed from sources including SCAG, the DOJ, and others. These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently reduce emissions released during Project construction and operation.

A revised EIR should be prepared that includes *all* feasible mitigation measures, as well as updated air quality, health risk and GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to the maximum extent feasible. The revised EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's potentially significant emissions are reduced to the maximum extent possible.

E-35 cont.

Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of

[17] "Cal. Code Regs. tit. 14 § 15126.4." CEQA Guidelines, May 2024, *available at*: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-9-contents-of-environmental-impact-reports/section-151264-consideration-and-discussion-of-mitigation-measures-proposed-to-minimize-significant-effects.

[18] "Cal. Pub. Resources Code § 21168.6.7." 2023, *available at*: https://casetext.com/statute/california-codes/california-public-resources-code/division-13-environmental-quality/chapter-6-limitations/section-2116867-oakland-sports-and-mixed-use-project-conditions-for-approval-certification-of-project-for-streamlining.

care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul E. Rosenfeld, Ph.D.

Attachment A: SWAPE's CalEEMod Output Files
Attachment B: Matt Hagemann CV
Attachment C: Paul Rosenfeld CV

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-Rail	402.00	1000sqft	9.24	402,310.00	0
Other Non-Asphalt Surfaces	34.60	Acre	34.60	0.00	0
Unrefrigerated Warehouse-No Rail	1,158.00	1000sqft	26.58	1,157,640.00	0
Unrefrigerated Warehouse-No Rail	1,085.00	1000sqft	36.50	1,085,200.00	0
Unrefrigerated Warehouse-Rail	377.00	1000sqft	8.66	377,140.00	0
Other Non-Asphalt Surfaces	31.20	Acre	31.20	0.00	0
Other Asphalt Surfaces	14.00	Acre	14.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with DEIR's model.

Land Use - Consistent with DEIR's model.

Construction Phase - Consistent with DEIR's model.

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

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Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Grading - Consistent with DEIR's model.

Trips and VMT - See comment on: "Unsubstantiated Changes to Construction Trips and VMT Parameters".

Architectural Coating - See comment on: "Unsubstantiated Changes to Architectural Coating Emission Factors".

Vehicle Trips - Consistent with DEIR's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	39.00
tblConstructionPhase	NumDays	3,100.00	290.00
tblConstructionPhase	NumDays	310.00	45.00
tblConstructionPhase	NumDays	220.00	24.00
tblConstructionPhase	NumDays	120.00	45.00
tblConstructionPhase	PhaseEndDate	8/24/2040	3/15/2026
tblConstructionPhase	PhaseEndDate	12/17/2038	12/15/2025
tblConstructionPhase	PhaseEndDate	1/29/2027	11/3/2024
tblConstructionPhase	PhaseEndDate	10/21/2039	1/17/2026
tblConstructionPhase	PhaseEndDate	11/21/2025	11/3/2024
tblConstructionPhase	PhaseStartDate	10/22/2039	1/20/2026
tblConstructionPhase	PhaseStartDate	1/30/2027	11/5/2024
tblConstructionPhase	PhaseStartDate	11/22/2025	9/1/2024
tblConstructionPhase	PhaseStartDate	12/18/2038	12/16/2025
tblConstructionPhase	PhaseStartDate	6/7/2025	9/1/2024
tblGrading	MaterialImported	0.00	72,000.00
tblLandUse	LandUseSquareFeet	402,000.00	402,310.00
tblLandUse	LandUseSquareFeet	1,507,176.00	0.00
tblLandUse	LandUseSquareFeet	1,158,000.00	1,157,640.00
tblLandUse	LandUseSquareFeet	1,085,000.00	1,085,200.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LandUseSquareFeet	377,000.00	377,140.00
tblLandUse	LandUseSquareFeet	1,359,072.00	0.00
tblLandUse	LandUseSquareFeet	609,840.00	0.00
tblLandUse	LotAcreage	9.23	9.24
tblLandUse	LotAcreage	24.91	36.50
tblLandUse	LotAcreage	8.65	8.66

2.0 Emissions Summary

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2547	2.4718	2.2716	8.4400e-003	0.9949	0.0782	1.0731	0.4034	0.0725	0.4759	0.0000	786.6924	786.6924	0.0929	0.0626	807.6549
2025	0.6502	4.2269	6.4500	0.0249	1.6850	0.0911	1.7761	0.4570	0.0858	0.5428	0.0000	2,321.7683	2,321.7683	0.1251	0.1867	2,380.5406
2026	35.0506	0.0812	0.2260	5.1000e-004	0.0406	3.7000e-003	0.0443	0.0108	3.4800e-003	0.0143	0.0000	45.6659	45.6659	4.9000e-003	7.6000e-004	46.0154
Maximum	**35.0506**	**4.2269**	**6.4500**	**0.0249**	**1.6850**	**0.0911**	**1.7761**	**0.4570**	**0.0858**	**0.5428**	**0.0000**	**2,321.7683**	**2,321.7683**	**0.1251**	**0.1867**	**2,380.5406**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2547	2.4718	2.2716	8.4400e-003	0.9949	0.0782	1.0731	0.4034	0.0725	0.4759	0.0000	786.6921	786.6921	0.0929	0.0626	807.6546
2025	0.6502	4.2269	6.4500	0.0249	1.6850	0.0911	1.7761	0.4570	0.0858	0.5428	0.0000	2,321.7679	2,321.7679	0.1251	0.1867	2,380.5403
2026	35.0506	0.0812	0.2260	5.1000e-004	0.0406	3.7000e-003	0.0443	0.0108	3.4800e-003	0.0143	0.0000	45.6659	45.6659	4.9000e-003	7.6000e-004	46.0154
Maximum	**35.0506**	**4.2269**	**6.4500**	**0.0249**	**1.6850**	**0.0911**	**1.7761**	**0.4570**	**0.0858**	**0.5428**	**0.0000**	**2,321.7679**	**2,321.7679**	**0.1251**	**0.1867**	**2,380.5403**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2024**	**11-30-2024**	2.2948	2.2948
2	**12-1-2024**	**2-28-2025**	1.2671	1.2671
3	**3-1-2025**	**5-31-2025**	1.2573	1.2573
4	**6-1-2025**	**8-31-2025**	1.2478	1.2478
5	**9-1-2025**	**11-30-2025**	1.2530	1.2530
6	**12-1-2025**	**2-28-2026**	26.0281	26.0281
7	**3-1-2026**	**5-31-2026**	9.6335	9.6335
		Highest	26.0281	26.0281

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	15.3083	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0554	0.0554	1.4000e-004	0.0000	0.0590
Energy	0.0328	0.2978	0.2501	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	1,567.6706	1,567.6706	0.1112	0.0187	1,576.0120
Mobile	2.3157	3.4518	23.0252	0.0520	5.7877	0.0413	5.8290	1.5459	0.0386	1.5845	0.0000	4,815.8332	4,815.8332	0.2799	0.2468	4,896.3866
Waste						0.0000	0.0000		0.0000	0.0000	576.6324	0.0000	576.6324	34.0780	0.0000	1,428.5823
Water						0.0000	0.0000		0.0000	0.0000	221.7089	1,613.7670	1,835.4759	22.9078	0.5542	2,573.3227
Total	**17.6567**	**3.7499**	**23.3038**	**0.0538**	**5.7877**	**0.0640**	**5.8517**	**1.5459**	**0.0614**	**1.6072**	**798.3413**	**7,997.3263**	**8,795.6675**	**57.3771**	**0.8197**	**10,474.3626**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	15.3083	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0554	0.0554	1.4000e-004	0.0000	0.0590
Energy	0.0328	0.2978	0.2501	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	1,567.6706	1,567.6706	0.1112	0.0187	1,576.0120
Mobile	2.3157	3.4518	23.0252	0.0520	5.7877	0.0413	5.8290	1.5459	0.0386	1.5845	0.0000	4,815.8332	4,815.8332	0.2799	0.2468	4,896.3866
Waste						0.0000	0.0000		0.0000	0.0000	576.6324	0.0000	576.6324	34.0780	0.0000	1,428.5823
Water						0.0000	0.0000		0.0000	0.0000	221.7089	1,613.7670	1,835.4759	22.9078	0.5542	2,573.3227
Total	**17.6567**	**3.7499**	**23.3038**	**0.0538**	**5.7877**	**0.0640**	**5.8517**	**1.5459**	**0.0614**	**1.6072**	**798.3413**	**7,997.3263**	**8,795.6675**	**57.3771**	**0.8197**	**10,474.3626**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2024	11/3/2024	5	45	
2	Grading	Grading	9/1/2024	11/3/2024	5	45	
3	Utilities/Off-Site Improvements	Trenching	11/5/2024	12/15/2025	5	290	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	11/5/2024	12/15/2025	5	290	
5	Paving	Paving	12/16/2025	1/17/2026	5	24	
6	Architectural Coating	Architectural Coating	1/20/2026	3/15/2026	5	39	

Acres of Grading (Site Preparation Phase): 67.5

Acres of Grading (Grading Phase): 135

Acres of Paving: 79.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 4,533,435; Non-Residential Outdoor: 1,511,145; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Utilities/Off-Site Improvements			0.00	0.00	10.80	7.30				
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7,119.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,269.00	495.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	254.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4423	0.0000	0.4423	0.2273	0.0000	0.2273	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0599	0.6115	0.4126	8.6000e-004		0.0277	0.0277		0.0255	0.0255	0.0000	75.2784	75.2784	0.0244	0.0000	75.8871
Total	**0.0599**	**0.6115**	**0.4126**	**8.6000e-004**	**0.4423**	**0.0277**	**0.4699**	**0.2273**	**0.0255**	**0.2528**	**0.0000**	**75.2784**	**75.2784**	**0.0244**	**0.0000**	**75.8871**

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3.2 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	7.4000e-004	9.5300e-003	3.0000e-005	3.2600e-003	2.0000e-005	3.2800e-003	8.7000e-004	1.0000e-005	8.8000e-004	0.0000	2.4617	2.4617	7.0000e-005	7.0000e-005	2.4843
Total	**1.0900e-003**	**7.4000e-004**	**9.5300e-003**	**3.0000e-005**	**3.2600e-003**	**2.0000e-005**	**3.2800e-003**	**8.7000e-004**	**1.0000e-005**	**8.8000e-004**	**0.0000**	**2.4617**	**2.4617**	**7.0000e-005**	**7.0000e-005**	**2.4843**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4423	0.0000	0.4423	0.2273	0.0000	0.2273	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0599	0.6115	0.4126	8.6000e-004		0.0277	0.0277		0.0255	0.0255	0.0000	75.2783	75.2783	0.0244	0.0000	75.8870
Total	**0.0599**	**0.6115**	**0.4126**	**8.6000e-004**	**0.4423**	**0.0277**	**0.4699**	**0.2273**	**0.0255**	**0.2528**	**0.0000**	**75.2783**	**75.2783**	**0.0244**	**0.0000**	**75.8870**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	7.4000e-004	9.5300e-003	3.0000e-005	3.2600e-003	2.0000e-005	3.2800e-003	8.7000e-004	1.0000e-005	8.8000e-004	0.0000	2.4617	2.4617	7.0000e-005	7.0000e-005	2.4843
Total	**1.0900e-003**	**7.4000e-004**	**9.5300e-003**	**3.0000e-005**	**3.2600e-003**	**2.0000e-005**	**3.2800e-003**	**8.7000e-004**	**1.0000e-005**	**8.8000e-004**	**0.0000**	**2.4617**	**2.4617**	**7.0000e-005**	**7.0000e-005**	**2.4843**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2071	0.0000	0.2071	0.0822	0.0000	0.0822	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0724	0.7285	0.6238	1.4000e-003		0.0301	0.0301		0.0276	0.0276	0.0000	122.6689	122.6689	0.0397	0.0000	123.6608
Total	**0.0724**	**0.7285**	**0.6238**	**1.4000e-003**	**0.2071**	**0.0301**	**0.2371**	**0.0822**	**0.0276**	**0.1099**	**0.0000**	**122.6689**	**122.6689**	**0.0397**	**0.0000**	**123.6608**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.2300e-003	0.4154	0.1204	1.9700e-003	0.0613	4.0700e-003	0.0654	0.0168	3.8900e-003	0.0207	0.0000	194.3685	194.3685	8.1800e-003	0.0308	203.7536
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	8.2000e-004	0.0106	3.0000e-005	3.6300e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.7352	2.7352	8.0000e-005	8.0000e-005	2.7603
Total	**9.4500e-003**	**0.4162**	**0.1310**	**2.0000e-003**	**0.0649**	**4.0900e-003**	**0.0690**	**0.0178**	**3.9100e-003**	**0.0217**	**0.0000**	**197.1037**	**197.1037**	**8.2600e-003**	**0.0309**	**206.5139**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2071	0.0000	0.2071	0.0822	0.0000	0.0822	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0724	0.7285	0.6238	1.4000e-003		0.0301	0.0301		0.0276	0.0276	0.0000	122.6688	122.6688	0.0397	0.0000	123.6606
Total	**0.0724**	**0.7285**	**0.6238**	**1.4000e-003**	**0.2071**	**0.0301**	**0.2371**	**0.0822**	**0.0276**	**0.1099**	**0.0000**	**122.6688**	**122.6688**	**0.0397**	**0.0000**	**123.6606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.2300e-003	0.4154	0.1204	1.9700e-003	0.0613	4.0700e-003	0.0654	0.0168	3.8900e-003	0.0207	0.0000	194.3685	194.3685	8.1800e-003	0.0308	203.7536
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	8.2000e-004	0.0106	3.0000e-005	3.6300e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.7352	2.7352	8.0000e-005	8.0000e-005	2.7603
Total	**9.4500e-003**	**0.4162**	**0.1310**	**2.0000e-003**	**0.0649**	**4.0900e-003**	**0.0690**	**0.0178**	**3.9100e-003**	**0.0217**	**0.0000**	**197.1037**	**197.1037**	**8.2600e-003**	**0.0309**	**206.5139**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0302	0.2756	0.3314	5.5000e-004		0.0126	0.0126		0.0118	0.0118	0.0000	47.5291	47.5291	0.0112	0.0000	47.8101
Total	**0.0302**	**0.2756**	**0.3314**	**5.5000e-004**		**0.0126**	**0.0126**		**0.0118**	**0.0118**	**0.0000**	**47.5291**	**47.5291**	**0.0112**	**0.0000**	**47.8101**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.3920	0.1513	1.8900e-003	0.0677	2.7900e-003	0.0705	0.0195	2.6700e-003	0.0222	0.0000	183.5305	183.5305	4.6900e-003	0.0271	191.7255
Worker	0.0703	0.0473	0.6121	1.7200e-003	0.2096	1.0400e-003	0.2107	0.0557	9.6000e-004	0.0566	0.0000	158.1202	158.1202	4.6600e-003	4.4900e-003	159.5734
Total	**0.0817**	**0.4393**	**0.7633**	**3.6100e-003**	**0.2773**	**3.8300e-003**	**0.2812**	**0.0752**	**3.6300e-003**	**0.0788**	**0.0000**	**341.6507**	**341.6507**	**9.3500e-003**	**0.0316**	**351.2989**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0302	0.2756	0.3314	5.5000e-004		0.0126	0.0126		0.0118	0.0118	0.0000	47.5290	47.5290	0.0112	0.0000	47.8100
Total	**0.0302**	**0.2756**	**0.3314**	**5.5000e-004**		**0.0126**	**0.0126**		**0.0118**	**0.0118**	**0.0000**	**47.5290**	**47.5290**	**0.0112**	**0.0000**	**47.8100**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.3920	0.1513	1.8900e-003	0.0677	2.7900e-003	0.0705	0.0195	2.6700e-003	0.0222	0.0000	183.5305	183.5305	4.6900e-003	0.0271	191.7255
Worker	0.0703	0.0473	0.6121	1.7200e-003	0.2096	1.0400e-003	0.2107	0.0557	9.6000e-004	0.0566	0.0000	158.1202	158.1202	4.6600e-003	4.4900e-003	159.5734
Total	**0.0817**	**0.4393**	**0.7633**	**3.6100e-003**	**0.2773**	**3.8300e-003**	**0.2812**	**0.0752**	**3.6300e-003**	**0.0788**	**0.0000**	**341.6507**	**341.6507**	**9.3500e-003**	**0.0316**	**351.2989**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.5525	2.0025	3.3600e-003		0.0657	0.0657		0.0618	0.0618	0.0000	288.7397	288.7397	0.0679	0.0000	290.4366
Total	**0.1702**	**1.5525**	**2.0025**	**3.3600e-003**		**0.0657**	**0.0657**		**0.0618**	**0.0618**	**0.0000**	**288.7397**	**288.7397**	**0.0679**	**0.0000**	**290.4366**

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3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0678	2.3658	0.9042	0.0112	0.4111	0.0169	0.4280	0.1186	0.0162	0.1348	0.0000	1,092.9476	1,092.9476	0.0277	0.1613	1,141.7145
Worker	0.3972	0.2569	3.4539	0.0101	1.2731	6.0000e-003	1.2791	0.3382	5.5200e-003	0.3437	0.0000	927.5410	927.5410	0.0256	0.0254	935.7479
Total	**0.4651**	**2.6228**	**4.3580**	**0.0214**	**1.6842**	**0.0229**	**1.7071**	**0.4568**	**0.0217**	**0.4785**	**0.0000**	**2,020.4886**	**2,020.4886**	**0.0533**	**0.1867**	**2,077.4624**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.5525	2.0025	3.3600e-003		0.0657	0.0657		0.0618	0.0618	0.0000	288.7394	288.7394	0.0679	0.0000	290.4362
Total	**0.1702**	**1.5525**	**2.0025**	**3.3600e-003**		**0.0657**	**0.0657**		**0.0618**	**0.0618**	**0.0000**	**288.7394**	**288.7394**	**0.0679**	**0.0000**	**290.4362**

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3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0678	2.3658	0.9042	0.0112	0.4111	0.0169	0.4280	0.1186	0.0162	0.1348	0.0000	1,092.9476	1,092.9476	0.0277	0.1613	1,141.7145
Worker	0.3972	0.2569	3.4539	0.0101	1.2731	6.0000e-003	1.2791	0.3382	5.5200e-003	0.3437	0.0000	927.5410	927.5410	0.0256	0.0254	935.7479
Total	**0.4651**	**2.6228**	**4.3580**	**0.0214**	**1.6842**	**0.0229**	**1.7071**	**0.4568**	**0.0217**	**0.4785**	**0.0000**	**2,020.4886**	**2,020.4886**	**0.0533**	**0.1867**	**2,077.4624**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4900e-003	0.0515	0.0875	1.4000e-004		2.5100e-003	2.5100e-003		2.3100e-003	2.3100e-003	0.0000	12.0116	12.0116	3.8800e-003	0.0000	12.1087
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0147**	**0.0515**	**0.0875**	**1.4000e-004**		**2.5100e-003**	**2.5100e-003**		**2.3100e-003**	**2.3100e-003**	**0.0000**	**12.0116**	**12.0116**	**3.8800e-003**	**0.0000**	**12.1087**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.9700e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5284	0.5284	1.0000e-005	1.0000e-005	0.5331
Total	**2.3000e-004**	**1.5000e-004**	**1.9700e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5284**	**0.5284**	**1.0000e-005**	**1.0000e-005**	**0.5331**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4900e-003	0.0515	0.0875	1.4000e-004		2.5100e-003	2.5100e-003		2.3100e-003	2.3100e-003	0.0000	12.0115	12.0115	3.8800e-003	0.0000	12.1087
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0147**	**0.0515**	**0.0875**	**1.4000e-004**		**2.5100e-003**	**2.5100e-003**		**2.3100e-003**	**2.3100e-003**	**0.0000**	**12.0115**	**12.0115**	**3.8800e-003**	**0.0000**	**12.1087**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.9700e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5284	0.5284	1.0000e-005	1.0000e-005	0.5331
Total	**2.3000e-004**	**1.5000e-004**	**1.9700e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5284**	**0.5284**	**1.0000e-005**	**1.0000e-005**	**0.5331**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4900e-003	0.0515	0.0875	1.4000e-004		2.5100e-003	2.5100e-003		2.3100e-003	2.3100e-003	0.0000	12.0116	12.0116	3.8800e-003	0.0000	12.1087
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0147**	**0.0515**	**0.0875**	**1.4000e-004**		**2.5100e-003**	**2.5100e-003**		**2.3100e-003**	**2.3100e-003**	**0.0000**	**12.0116**	**12.0116**	**3.8800e-003**	**0.0000**	**12.1087**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.3000e-004	1.8400e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5118	0.5118	1.0000e-005	1.0000e-005	0.5161
Total	**2.1000e-004**	**1.3000e-004**	**1.8400e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5118**	**0.5118**	**1.0000e-005**	**1.0000e-005**	**0.5161**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4900e-003	0.0515	0.0875	1.4000e-004		2.5100e-003	2.5100e-003		2.3100e-003	2.3100e-003	0.0000	12.0115	12.0115	3.8800e-003	0.0000	12.1087
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0147**	**0.0515**	**0.0875**	**1.4000e-004**		**2.5100e-003**	**2.5100e-003**		**2.3100e-003**	**2.3100e-003**	**0.0000**	**12.0115**	**12.0115**	**3.8800e-003**	**0.0000**	**12.1087**

3.6 Paving - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.3000e-004	1.8400e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5118	0.5118	1.0000e-005	1.0000e-005	0.5161
Total	**2.1000e-004**	**1.3000e-004**	**1.8400e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5118**	**0.5118**	**1.0000e-005**	**1.0000e-005**	**0.5161**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	35.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3300e-003	0.0223	0.0353	6.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	4.9788	4.9788	2.7000e-004	0.0000	4.9856
Total	**35.0241**	**0.0223**	**0.0353**	**6.0000e-005**		**1.0000e-003**	**1.0000e-003**		**1.0000e-003**	**1.0000e-003**	**0.0000**	**4.9788**	**4.9788**	**2.7000e-004**	**0.0000**	**4.9856**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0116	7.2700e-003	0.1014	3.1000e-004	0.0399	1.8000e-004	0.0401	0.0106	1.6000e-004	0.0108	0.0000	28.1637	28.1637	7.3000e-004	7.5000e-004	28.4049
Total	**0.0116**	**7.2700e-003**	**0.1014**	**3.1000e-004**	**0.0399**	**1.8000e-004**	**0.0401**	**0.0106**	**1.6000e-004**	**0.0108**	**0.0000**	**28.1637**	**28.1637**	**7.3000e-004**	**7.5000e-004**	**28.4049**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	35.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3300e-003	0.0223	0.0353	6.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	4.9788	4.9788	2.7000e-004	0.0000	4.9856
Total	**35.0241**	**0.0223**	**0.0353**	**6.0000e-005**		**1.0000e-003**	**1.0000e-003**		**1.0000e-003**	**1.0000e-003**	**0.0000**	**4.9788**	**4.9788**	**2.7000e-004**	**0.0000**	**4.9856**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0116	7.2700e-003	0.1014	3.1000e-004	0.0399	1.8000e-004	0.0401	0.0106	1.6000e-004	0.0108	0.0000	28.1637	28.1637	7.3000e-004	7.5000e-004	28.4049
Total	**0.0116**	**7.2700e-003**	**0.1014**	**3.1000e-004**	**0.0399**	**1.8000e-004**	**0.0401**	**0.0106**	**1.6000e-004**	**0.0108**	**0.0000**	**28.1637**	**28.1637**	**7.3000e-004**	**7.5000e-004**	**28.4049**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3157	3.4518	23.0252	0.0520	5.7877	0.0413	5.8290	1.5459	0.0386	1.5845	0.0000	4,815.8332	4,815.8332	0.2799	0.2468	4,896.3866
Unmitigated	2.3157	3.4518	23.0252	0.0520	5.7877	0.0413	5.8290	1.5459	0.0386	1.5845	0.0000	4,815.8332	4,815.8332	0.2799	0.2468	4,896.3866

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-Rail	699.48	699.48	699.48	2,042,140	2,042,140
Unrefrigerated Warehouse-Rail	655.98	655.98	655.98	1,915,141	1,915,141
Unrefrigerated Warehouse-No Rail	2,014.92	2,014.92	2014.92	5,882,581	5,882,581
Unrefrigerated Warehouse-No Rail	1,887.90	1,887.90	1887.90	5,511,745	5,511,745
Total	5,258.28	5,258.28	5,258.28	15,351,607	15,351,607

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Other Non-Asphalt Surfaces	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Unrefrigerated Warehouse-No Rail	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Unrefrigerated Warehouse-Rail	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,243.4960	1,243.4960	0.1050	0.0127	1,249.9110
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,243.4960	1,243.4960	0.1050	0.0127	1,249.9110
NaturalGas Mitigated	0.0328	0.2978	0.2501	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	324.1746	324.1746	6.2100e-003	5.9400e-003	326.1010
NaturalGas Unmitigated	0.0328	0.2978	0.2501	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	324.1746	324.1746	6.2100e-003	5.9400e-003	326.1010

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.18125e+006	0.0118	0.1069	0.0898	6.4000e-004		8.1300e-003	8.1300e-003		8.1300e-003	8.1300e-003	0.0000	116.3999	116.3999	2.2300e-003	2.1300e-003	117.0916
Unrefrigerated Warehouse-No Rail	2.32686e+006	0.0126	0.1141	0.0958	6.8000e-004		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003	0.0000	124.1699	124.1699	2.3800e-003	2.2800e-003	124.9078
Unrefrigerated Warehouse-Rail	758051	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.4525	40.4525	7.8000e-004	7.4000e-004	40.6929
Unrefrigerated Warehouse-Rail	808643	4.3600e-003	0.0396	0.0333	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	43.1523	43.1523	8.3000e-004	7.9000e-004	43.4087
Total		**0.0328**	**0.2978**	**0.2501**	**1.7800e-003**		**0.0226**	**0.0226**		**0.0226**	**0.0226**	**0.0000**	**324.1746**	**324.1746**	**6.2200e-003**	**5.9400e-003**	**326.1010**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.18125e+006	0.0118	0.1069	0.0898	6.4000e-004		8.1300e-003	8.1300e-003		8.1300e-003	8.1300e-003	0.0000	116.3999	116.3999	2.2300e-003	2.1300e-003	117.0916
Unrefrigerated Warehouse-No Rail	2.32686e+006	0.0126	0.1141	0.0958	6.8000e-004		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003	0.0000	124.1699	124.1699	2.3800e-003	2.2800e-003	124.9078
Unrefrigerated Warehouse-Rail	758051	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003	0.0000	40.4525	40.4525	7.8000e-004	7.4000e-004	40.6929
Unrefrigerated Warehouse-Rail	808643	4.3600e-003	0.0396	0.0333	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	43.1523	43.1523	8.3000e-004	7.9000e-004	43.4087
Total		**0.0328**	**0.2978**	**0.2501**	**1.7800e-003**		**0.0226**	**0.0226**		**0.0226**	**0.0226**	**0.0000**	**324.1746**	**324.1746**	**6.2200e-003**	**5.9400e-003**	**326.1010**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.51766e+006	446.4965	0.0377	4.5700e-003	448.7999
Unrefrigerated Warehouse-No Rail	2.68572e+006	476.3013	0.0402	4.8700e-003	478.7585
Unrefrigerated Warehouse-Rail	874965	155.1711	0.0131	1.5900e-003	155.9716
Unrefrigerated Warehouse-Rail	933359	165.5271	0.0140	1.6900e-003	166.3810
Total		**1,243.4960**	**0.1050**	**0.0127**	**1,249.9110**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.51766e+006	446.4965	0.0377	4.5700e-003	448.7999
Unrefrigerated Warehouse-No Rail	2.68572e+006	476.3013	0.0402	4.8700e-003	478.7585
Unrefrigerated Warehouse-Rail	874965	155.1711	0.0131	1.5900e-003	155.9716
Unrefrigerated Warehouse-Rail	933359	165.5271	0.0140	1.6900e-003	166.3810
Total		**1,243.4960**	**0.1050**	**0.0127**	**1,249.9110**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.3083	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0554	0.0554	1.4000e-004	0.0000	0.0590
Unmitigated	15.3083	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0554	0.0554	1.4000e-004	0.0000	0.0590

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.5021					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	11.8036					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0554	0.0554	1.4000e-004	0.0000	0.0590
Total	**15.3083**	**2.6000e-004**	**0.0284**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0554**	**0.0554**	**1.4000e-004**	**0.0000**	**0.0590**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.5021					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	11.8036					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0554	0.0554	1.4000e-004	0.0000	0.0590
Total	**15.3083**	**2.6000e-004**	**0.0284**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0554**	**0.0554**	**1.4000e-004**	**0.0000**	**0.0590**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,835.4759	22.9078	0.5542	2,573.3227
Unmitigated	1,835.4759	22.9078	0.5542	2,573.3227

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	518.694 / 0	1,362.3337	17.0027	0.4113	1,909.9810
Unrefrigerated Warehouse-Rail	180.144 / 0	473.1422	5.9051	0.1429	663.3416
Total		**1,835.4759**	**22.9078**	**0.5542**	**2,573.3227**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	518.694 / 0	1,362.3337	17.0027	0.4113	1,909.9810
Unrefrigerated Warehouse-Rail	180.144 / 0	473.1422	5.9051	0.1429	663.3416
Total		**1,835.4759**	**22.9078**	**0.5542**	**2,573.3227**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	576.6324	34.0780	0.0000	1,428.5823
Unmitigated	576.6324	34.0780	0.0000	1,428.5823

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2108.42	427.9902	25.2935	0.0000	1,060.3276
Unrefrigerated Warehouse-Rail	732.26	148.6422	8.7845	0.0000	368.2547
Total		**576.6324**	**34.0780**	**0.0000**	**1,428.5823**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2108.42	427.9902	25.2935	0.0000	1,060.3276
Unrefrigerated Warehouse-Rail	732.26	148.6422	8.7845	0.0000	368.2547
Total		**576.6324**	**34.0780**	**0.0000**	**1,428.5823**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number

11.0 Vegetation

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-Rail	402.00	1000sqft	9.24	402,310.00	0
Other Non-Asphalt Surfaces	34.60	Acre	34.60	0.00	0
Unrefrigerated Warehouse-No Rail	1,158.00	1000sqft	26.58	1,157,640.00	0
Unrefrigerated Warehouse-No Rail	1,085.00	1000sqft	36.50	1,085,200.00	0
Unrefrigerated Warehouse-Rail	377.00	1000sqft	8.66	377,140.00	0
Other Non-Asphalt Surfaces	31.20	Acre	31.20	0.00	0
Other Asphalt Surfaces	14.00	Acre	14.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with DEIR's model.

Land Use - Consistent with DEIR's model.

Construction Phase - Consistent with DEIR's model.

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Grading - Consistent with DEIR's model.

Trips and VMT - See comment on: "Unsubstantiated Changes to Construction Trips and VMT Parameters".

Architectural Coating - See comment on: "Unsubstantiated Changes to Architectural Coating Emission Factors".

Vehicle Trips - Consistent with DEIR's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	39.00
tblConstructionPhase	NumDays	3,100.00	290.00
tblConstructionPhase	NumDays	310.00	45.00
tblConstructionPhase	NumDays	220.00	24.00
tblConstructionPhase	NumDays	120.00	45.00
tblConstructionPhase	PhaseEndDate	8/24/2040	3/15/2026
tblConstructionPhase	PhaseEndDate	12/17/2038	12/15/2025
tblConstructionPhase	PhaseEndDate	1/29/2027	11/3/2024
tblConstructionPhase	PhaseEndDate	10/21/2039	1/17/2026
tblConstructionPhase	PhaseEndDate	11/21/2025	11/3/2024
tblConstructionPhase	PhaseStartDate	10/22/2039	1/20/2026
tblConstructionPhase	PhaseStartDate	1/30/2027	11/5/2024
tblConstructionPhase	PhaseStartDate	11/22/2025	9/1/2024
tblConstructionPhase	PhaseStartDate	12/18/2038	12/16/2025
tblConstructionPhase	PhaseStartDate	6/7/2025	9/1/2024
tblGrading	MaterialImported	0.00	72,000.00
tblLandUse	LandUseSquareFeet	402,000.00	402,310.00
tblLandUse	LandUseSquareFeet	1,507,176.00	0.00
tblLandUse	LandUseSquareFeet	1,158,000.00	1,157,640.00
tblLandUse	LandUseSquareFeet	1,085,000.00	1,085,200.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LandUseSquareFeet	377,000.00	377,140.00
tblLandUse	LandUseSquareFeet	1,359,072.00	0.00
tblLandUse	LandUseSquareFeet	609,840.00	0.00
tblLandUse	LotAcreage	9.23	9.24
tblLandUse	LotAcreage	24.91	36.50
tblLandUse	LotAcreage	8.65	8.66

2.0 Emissions Summary

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	6.3739	77.0734	57.4745	0.2099	31.9431	2.7469	34.6900	14.5986	2.5338	17.1324	0.0000	21,611.2537	21,611.2537	3.5449	1.6819	22,139.9046
2025	5.5691	32.4072	54.8148	0.2050	13.7789	0.7113	14.4902	3.7309	0.6703	4.4011	0.0000	21,104.9617	21,104.9617	1.0641	1.6375	21,619.5278
2026	1,796.7884	8.6017	14.9269	0.0238	2.0866	0.4191	2.1472	0.5535	0.3855	0.6134	0.0000	2,308.4062	2,308.4062	0.7160	0.0398	2,327.0073
Maximum	**1,796.7884**	**77.0734**	**57.4745**	**0.2099**	**31.9431**	**2.7469**	**34.6900**	**14.5986**	**2.5338**	**17.1324**	**0.0000**	**21,611.2537**	**21,611.2537**	**3.5449**	**1.6819**	**22,139.9046**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	6.3739	77.0734	57.4745	0.2099	31.9431	2.7469	34.6900	14.5986	2.5338	17.1324	0.0000	21,611.2537	21,611.2537	3.5449	1.6819	22,139.9046
2025	5.5691	32.4072	54.8148	0.2050	13.7789	0.7113	14.4902	3.7309	0.6703	4.4011	0.0000	21,104.9617	21,104.9617	1.0641	1.6375	21,619.5278
2026	1,796.7884	8.6017	14.9269	0.0238	2.0866	0.4191	2.1472	0.5535	0.3855	0.6134	0.0000	2,308.4062	2,308.4062	0.7160	0.0398	2,327.0073
Maximum	**1,796.7884**	**77.0734**	**57.4745**	**0.2099**	**31.9431**	**2.7469**	**34.6900**	**14.5986**	**2.5338**	**17.1324**	**0.0000**	**21,611.2537**	**21,611.2537**	**3.5449**	**1.6819**	**22,139.9046**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Energy	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704
Mobile	14.8893	17.5307	134.7002	0.3038	32.4118	0.2270	32.6388	8.6438	0.2125	8.8562		30,981.4545	30,981.4545	1.6317	1.4409	31,451.6371
Total	**98.9643**	**19.1652**	**136.3867**	**0.3136**	**32.4118**	**0.3521**	**32.7639**	**8.6438**	**0.3376**	**8.9814**		**32,940.1681**	**32,940.1681**	**1.6710**	**1.4768**	**33,422.0305**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Energy	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704
Mobile	14.8893	17.5307	134.7002	0.3038	32.4118	0.2270	32.6388	8.6438	0.2125	8.8562		30,981.4545	30,981.4545	1.6317	1.4409	31,451.6371
Total	**98.9643**	**19.1652**	**136.3867**	**0.3136**	**32.4118**	**0.3521**	**32.7639**	**8.6438**	**0.3376**	**8.9814**		**32,940.1681**	**32,940.1681**	**1.6710**	**1.4768**	**33,422.0305**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2024	11/3/2024	5	45	
2	Grading	Grading	9/1/2024	11/3/2024	5	45	
3	Utilities/Off-Site Improvements	Trenching	11/5/2024	12/15/2025	5	290	
4	Building Construction	Building Construction	11/5/2024	12/15/2025	5	290	
5	Paving	Paving	12/16/2025	1/17/2026	5	24	
6	Architectural Coating	Architectural Coating	1/20/2026	3/15/2026	5	39	

Acres of Grading (Site Preparation Phase): 67.5

Acres of Grading (Grading Phase): 135

Acres of Paving: 79.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 4,533,435; Non-Residential Outdoor: 1,511,145; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Utilities/Off-Site Improvements			0.00	0.00	10.80	7.30				
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7,119.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,269.00	495.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	254.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**		**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0555	0.0298	0.4828	1.2900e-003	0.1479	7.2000e-004	0.1486	0.0392	6.6000e-004	0.0399		130.4472	130.4472	3.4200e-003	3.2200e-003	131.4909
Total	**0.0555**	**0.0298**	**0.4828**	**1.2900e-003**	**0.1479**	**7.2000e-004**	**0.1486**	**0.0392**	**6.6000e-004**	**0.0399**		**130.4472**	**130.4472**	**3.4200e-003**	**3.2200e-003**	**131.4909**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**	**0.0000**	**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0555	0.0298	0.4828	1.2900e-003	0.1479	7.2000e-004	0.1486	0.0392	6.6000e-004	0.0399		130.4472	130.4472	3.4200e-003	3.2200e-003	131.4909
Total	**0.0555**	**0.0298**	**0.4828**	**1.2900e-003**	**0.1479**	**7.2000e-004**	**0.1486**	**0.0392**	**6.6000e-004**	**0.0399**		**130.4472**	**130.4472**	**3.4200e-003**	**3.2200e-003**	**131.4909**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3777	17.4576	5.3132	0.0873	2.7703	0.1806	2.9509	0.7596	0.1728	0.9324		9,516.3531	9,516.3531	0.4012	1.5083	9,975.8668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0331	0.5364	1.4300e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		144.9413	144.9413	3.8000e-003	3.5700e-003	146.1010
Total	**0.4394**	**17.4906**	**5.8496**	**0.0888**	**2.9346**	**0.1814**	**3.1160**	**0.8032**	**0.1735**	**0.9768**		**9,661.2944**	**9,661.2944**	**0.4050**	**1.5119**	**10,121.9677**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3777	17.4576	5.3132	0.0873	2.7703	0.1806	2.9509	0.7596	0.1728	0.9324		9,516.3531	9,516.3531	0.4012	1.5083	9,975.8668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0616	0.0331	0.5364	1.4300e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		144.9413	144.9413	3.8000e-003	3.5700e-003	146.1010
Total	**0.4394**	**17.4906**	**5.8496**	**0.0888**	**2.9346**	**0.1814**	**3.1160**	**0.8032**	**0.1735**	**0.9768**		**9,661.2944**	**9,661.2944**	**0.4050**	**1.5119**	**10,121.9677**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

3.4 Utilities/Off-Site Improvements - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5768	18.1692	7.2733	0.0919	3.3544	0.1357	3.4901	0.9658	0.1298	1.0957		9,859.0298	9,859.0298	0.2531	1.4551	10,298.9894
Worker	3.9111	2.0993	34.0344	0.0910	10.4245	0.0508	10.4753	2.7651	0.0467	2.8118		9,196.5250	9,196.5250	0.2409	0.2267	9,270.1076
Total	**4.4879**	**20.2685**	**41.3077**	**0.1829**	**13.7789**	**0.1865**	**13.9654**	**3.7309**	**0.1765**	**3.9074**		**19,055.5548**	**19,055.5548**	**0.4941**	**1.6819**	**19,569.0970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5768	18.1692	7.2733	0.0919	3.3544	0.1357	3.4901	0.9658	0.1298	1.0957		9,859.0298	9,859.0298	0.2531	1.4551	10,298.9894
Worker	3.9111	2.0993	34.0344	0.0910	10.4245	0.0508	10.4753	2.7651	0.0467	2.8118		9,196.5250	9,196.5250	0.2409	0.2267	9,270.1076
Total	**4.4879**	**20.2685**	**41.3077**	**0.1829**	**13.7789**	**0.1865**	**13.9654**	**3.7309**	**0.1765**	**3.9074**		**19,055.5548**	**19,055.5548**	**0.4941**	**1.6819**	**19,569.0970**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5655	18.0597	7.1566	0.0902	3.3544	0.1355	3.4899	0.9658	0.1297	1.0955		9,667.3121	9,667.3121	0.2459	1.4260	10,098.4182
Worker	3.6362	1.8779	31.5735	0.0879	10.4245	0.0482	10.4727	2.7651	0.0443	2.8094		8,881.1753	8,881.1753	0.2173	0.2114	8,949.6115
Total	**4.2017**	**19.9375**	**38.7301**	**0.1780**	**13.7789**	**0.1837**	**13.9626**	**3.7309**	**0.1740**	**3.9049**		**18,548.4874**	**18,548.4874**	**0.4632**	**1.6375**	**19,048.0297**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5655	18.0597	7.1566	0.0902	3.3544	0.1355	3.4899	0.9658	0.1297	1.0955		9,667.3121	9,667.3121	0.2459	1.4260	10,098.4182
Worker	3.6362	1.8779	31.5735	0.0879	10.4245	0.0482	10.4727	2.7651	0.0443	2.8094		8,881.1753	8,881.1753	0.2173	0.2114	8,949.6115
Total	**4.2017**	**19.9375**	**38.7301**	**0.1780**	**13.7789**	**0.1837**	**13.9626**	**3.7309**	**0.1740**	**3.9049**		**18,548.4874**	**18,548.4874**	**0.4632**	**1.6375**	**19,048.0297**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0430	0.0222	0.3732	1.0400e-003	0.1232	5.7000e-004	0.1238	0.0327	5.2000e-004	0.0332		104.9784	104.9784	2.5700e-003	2.5000e-003	105.7874
Total	**0.0430**	**0.0222**	**0.3732**	**1.0400e-003**	**0.1232**	**5.7000e-004**	**0.1238**	**0.0327**	**5.2000e-004**	**0.0332**		**104.9784**	**104.9784**	**2.5700e-003**	**2.5000e-003**	**105.7874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0430	0.0222	0.3732	1.0400e-003	0.1232	5.7000e-004	0.1238	0.0327	5.2000e-004	0.0332		104.9784	104.9784	2.5700e-003	2.5000e-003	105.7874
Total	**0.0430**	**0.0222**	**0.3732**	**1.0400e-003**	**0.1232**	**5.7000e-004**	**0.1238**	**0.0327**	**5.2000e-004**	**0.0332**		**104.9784**	**104.9784**	**2.5700e-003**	**2.5000e-003**	**105.7874**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0402	0.0201	0.3490	1.0100e-003	0.1232	5.4000e-004	0.1238	0.0327	5.0000e-004	0.0332		101.6610	101.6610	2.3300e-003	2.3500e-003	102.4195
Total	**0.0402**	**0.0201**	**0.3490**	**1.0100e-003**	**0.1232**	**5.4000e-004**	**0.1238**	**0.0327**	**5.0000e-004**	**0.0332**		**101.6610**	**101.6610**	**2.3300e-003**	**2.3500e-003**	**102.4195**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0402	0.0201	0.3490	1.0100e-003	0.1232	5.4000e-004	0.1238	0.0327	5.0000e-004	0.0332		101.6610	101.6610	2.3300e-003	2.3500e-003	102.4195
Total	**0.0402**	**0.0201**	**0.3490**	**1.0100e-003**	**0.1232**	**5.4000e-004**	**0.1238**	**0.0327**	**5.0000e-004**	**0.0332**		**101.6610**	**101.6610**	**2.3300e-003**	**2.3500e-003**	**102.4195**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,795.9377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**1,796.1086**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.7 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.6798	0.3396	5.9092	0.0170	2.0866	9.1400e-003	2.0957	0.5535	8.4100e-003	0.5619		1,721.4603	1,721.4603	0.0395	0.0398	1,734.3040
Total	**0.6798**	**0.3396**	**5.9092**	**0.0170**	**2.0866**	**9.1400e-003**	**2.0957**	**0.5535**	**8.4100e-003**	**0.5619**		**1,721.4603**	**1,721.4603**	**0.0395**	**0.0398**	**1,734.3040**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,795.9377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**1,796.1086**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.6798	0.3396	5.9092	0.0170	2.0866	9.1400e-003	2.0957	0.5535	8.4100e-003	0.5619		1,721.4603	1,721.4603	0.0395	0.0398	1,734.3040
Total	**0.6798**	**0.3396**	**5.9092**	**0.0170**	**2.0866**	**9.1400e-003**	**2.0957**	**0.5535**	**8.4100e-003**	**0.5619**		**1,721.4603**	**1,721.4603**	**0.0395**	**0.0398**	**1,734.3040**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.8893	17.5307	134.7002	0.3038	32.4118	0.2270	32.6388	8.6438	0.2125	8.8562		30,981.4545	30,981.4545	1.6317	1.4409	31,451.6371
Unmitigated	14.8893	17.5307	134.7002	0.3038	32.4118	0.2270	32.6388	8.6438	0.2125	8.8562		30,981.4545	30,981.4545	1.6317	1.4409	31,451.6371

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-Rail	699.48	699.48	699.48	2,042,140	2,042,140
Unrefrigerated Warehouse-Rail	655.98	655.98	655.98	1,915,141	1,915,141
Unrefrigerated Warehouse-No Rail	2,014.92	2,014.92	2014.92	5,882,581	5,882,581
Unrefrigerated Warehouse-No Rail	1,887.90	1,887.90	1887.90	5,511,745	5,511,745
Total	5,258.28	5,258.28	5,258.28	15,351,607	15,351,607

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Other Non-Asphalt Surfaces	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Unrefrigerated Warehouse-No Rail	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Unrefrigerated Warehouse-Rail	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704
NaturalGas Unmitigated	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5976.03	0.0645	0.5859	0.4921	3.5200e-003		0.0445	0.0445		0.0445	0.0445		703.0627	703.0627	0.0135	0.0129	707.2406
Unrefrigerated Warehouse-No Rail	6374.95	0.0688	0.6250	0.5250	3.7500e-003		0.0475	0.0475		0.0475	0.0475		749.9940	749.9940	0.0144	0.0138	754.4508
Unrefrigerated Warehouse-Rail	2076.85	0.0224	0.2036	0.1710	1.2200e-003		0.0155	0.0155		0.0155	0.0155		244.3357	244.3357	4.6800e-003	4.4800e-003	245.7876
Unrefrigerated Warehouse-Rail	2215.46	0.0239	0.2172	0.1825	1.3000e-003		0.0165	0.0165		0.0165	0.0165		260.6424	260.6424	5.0000e-003	4.7800e-003	262.1913
Total		**0.1795**	**1.6317**	**1.3706**	**9.7900e-003**		**0.1240**	**0.1240**		**0.1240**	**0.1240**		**1,958.0348**	**1,958.0348**	**0.0375**	**0.0359**	**1,969.6704**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.97603	0.0645	0.5859	0.4921	3.5200e-003		0.0445	0.0445		0.0445	0.0445		703.0627	703.0627	0.0135	0.0129	707.2406
Unrefrigerated Warehouse-No Rail	6.37495	0.0688	0.6250	0.5250	3.7500e-003		0.0475	0.0475		0.0475	0.0475		749.9940	749.9940	0.0144	0.0138	754.4508
Unrefrigerated Warehouse-Rail	2.07685	0.0224	0.2036	0.1710	1.2200e-003		0.0155	0.0155		0.0155	0.0155		244.3357	244.3357	4.6800e-003	4.4800e-003	245.7876
Unrefrigerated Warehouse-Rail	2.21546	0.0239	0.2172	0.1825	1.3000e-003		0.0165	0.0165		0.0165	0.0165		260.6424	260.6424	5.0000e-003	4.7800e-003	262.1913
Total		**0.1795**	**1.6317**	**1.3706**	**9.7900e-003**		**0.1240**	**0.1240**		**0.1240**	**0.1240**		**1,958.0348**	**1,958.0348**	**0.0375**	**0.0359**	**1,969.6704**

6.0 Area Detail

6.1 Mitigation Measures Area

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Unmitigated	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	19.1895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.6770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0291	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Total	**83.8956**	**2.8600e-003**	**0.3159**	**2.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.1200e-003**	**1.1200e-003**		**0.6788**	**0.6788**	**1.7700e-003**		**0.7230**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	19.1895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.6770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0291	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Total	**83.8956**	**2.8600e-003**	**0.3159**	**2.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.1200e-003**	**1.1200e-003**		**0.6788**	**0.6788**	**1.7700e-003**		**0.7230**

7.0 Water Detail

7.1 Mitigation Measures Water

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,158.00	1000sqft	26.58	1,157,640.00	0
Unrefrigerated Warehouse-No Rail	1,085.00	1000sqft	36.50	1,085,200.00	0
Unrefrigerated Warehouse-Rail	402.00	1000sqft	9.24	402,310.00	0
Unrefrigerated Warehouse-Rail	377.00	1000sqft	8.66	377,140.00	0
Other Asphalt Surfaces	14.00	Acre	14.00	0.00	0
Other Non-Asphalt Surfaces	34.60	Acre	34.60	0.00	0
Other Non-Asphalt Surfaces	31.20	Acre	31.20	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with DEIR's model.

Land Use - Consistent with DEIR's model.

Construction Phase - Consistent with DEIR's model.

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Off-road Equipment - See comment on: "Unsubstantiated Changes to Off-Road Equipment Input Parameters".

Trips and VMT - See comment on: "Unsubstantiated Changes to Construction Trips and VMT Parameters".

Grading - Consistent with DEIR's model.

Architectural Coating - See comment on: "Unsubstantiated Changes to Architectural Coating Emission Factors".

Vehicle Trips - Consistent with DEIR's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	39.00
tblConstructionPhase	NumDays	3,100.00	290.00
tblConstructionPhase	NumDays	310.00	45.00
tblConstructionPhase	NumDays	220.00	24.00
tblConstructionPhase	NumDays	120.00	45.00
tblGrading	MaterialImported	0.00	72,000.00
tblLandUse	LandUseSquareFeet	1,085,000.00	1,085,200.00
tblLandUse	LandUseSquareFeet	1,158,000.00	1,157,640.00
tblLandUse	LandUseSquareFeet	377,000.00	377,140.00
tblLandUse	LandUseSquareFeet	402,000.00	402,310.00
tblLandUse	LandUseSquareFeet	609,840.00	0.00
tblLandUse	LandUseSquareFeet	1,359,072.00	0.00
tblLandUse	LandUseSquareFeet	1,507,176.00	0.00
tblLandUse	LotAcreage	24.91	36.50
tblLandUse	LotAcreage	8.65	8.66
tblLandUse	LotAcreage	9.23	9.24

2.0 Emissions Summary

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	6.3385	78.0216	52.3213	0.2016	31.9431	2.7472	34.6903	14.5986	2.5340	17.1327	0.0000	20,775.7256	20,775.7256	3.5437	1.6936	21,307.9839
2025	5.3258	33.5121	49.9776	0.1970	13.7789	0.7118	14.4907	3.7309	0.6707	4.4016	0.0000	20,300.6005	20,300.6005	1.0687	1.6485	20,818.5816
2026	1,796.7517	8.6027	14.8714	0.0237	2.0866	0.4191	2.1472	0.5535	0.3855	0.6134	0.0000	2,298.9568	2,298.9568	0.7161	0.0411	2,317.5825
Maximum	**1,796.7517**	**78.0216**	**52.3213**	**0.2016**	**31.9431**	**2.7472**	**34.6903**	**14.5986**	**2.5340**	**17.1327**	**0.0000**	**20,775.7256**	**20,775.7256**	**3.5437**	**1.6936**	**21,307.9839**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	6.3385	78.0216	52.3213	0.2016	31.9431	2.7472	34.6903	14.5986	2.5340	17.1327	0.0000	20,775.7256	20,775.7256	3.5437	1.6936	21,307.9839
2025	5.3258	33.5121	49.9776	0.1970	13.7789	0.7118	14.4907	3.7309	0.6707	4.4016	0.0000	20,300.6005	20,300.6005	1.0687	1.6485	20,818.5816
2026	1,796.7517	8.6027	14.8714	0.0237	2.0866	0.4191	2.1472	0.5535	0.3855	0.6134	0.0000	2,298.9568	2,298.9568	0.7161	0.0411	2,317.5825
Maximum	**1,796.7517**	**78.0216**	**52.3213**	**0.2016**	**31.9431**	**2.7472**	**34.6903**	**14.5986**	**2.5340**	**17.1327**	**0.0000**	**20,775.7256**	**20,775.7256**	**3.5437**	**1.6936**	**21,307.9839**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Energy	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704
Mobile	12.8398	18.6393	121.6130	0.2820	32.4118	0.2272	32.6389	8.6438	0.2126	8.8564		28,781.8659	28,781.8659	1.6786	1.4765	29,263.8405
Total	**96.9148**	**20.2739**	**123.2995**	**0.2918**	**32.4118**	**0.3523**	**32.7641**	**8.6438**	**0.3378**	**8.9815**		**30,740.5795**	**30,740.5795**	**1.7179**	**1.5124**	**31,234.2339**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Energy	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704
Mobile	12.8398	18.6393	121.6130	0.2820	32.4118	0.2272	32.6389	8.6438	0.2126	8.8564		28,781.8659	28,781.8659	1.6786	1.4765	29,263.8405
Total	**96.9148**	**20.2739**	**123.2995**	**0.2918**	**32.4118**	**0.3523**	**32.7641**	**8.6438**	**0.3378**	**8.9815**		**30,740.5795**	**30,740.5795**	**1.7179**	**1.5124**	**31,234.2339**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2024	11/3/2024	5	45	
2	Grading	Grading	9/1/2024	11/3/2024	5	45	
3	Utilities/Off-Site Improvements	Trenching	11/5/2024	12/15/2025	5	290	
4	Building Construction	Building Construction	11/5/2024	12/15/2025	5	290	
5	Paving	Paving	12/16/2025	1/17/2026	5	24	
6	Architectural Coating	Architectural Coating	1/20/2026	3/15/2026	5	39	

Acres of Grading (Site Preparation Phase): 67.5

Acres of Grading (Grading Phase): 135

Acres of Paving: 79.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 4,533,435; Non-Residential Outdoor: 1,511,145; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7,119.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities/Off-Site Improvements			0.00	0.00	10.80	7.30				
Building Construction	9	1,269.00	495.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	254.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**		**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0523	0.0313	0.4047	1.1700e-003	0.1479	7.2000e-004	0.1486	0.0392	6.6000e-004	0.0399		118.2709	118.2709	3.5100e-003	3.3200e-003	119.3484
Total	**0.0523**	**0.0313**	**0.4047**	**1.1700e-003**	**0.1479**	**7.2000e-004**	**0.1486**	**0.0392**	**6.6000e-004**	**0.0399**		**118.2709**	**118.2709**	**3.5100e-003**	**3.3200e-003**	**119.3484**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**	**0.0000**	**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0523	0.0313	0.4047	1.1700e-003	0.1479	7.2000e-004	0.1486	0.0392	6.6000e-004	0.0399		118.2709	118.2709	3.5100e-003	3.3200e-003	119.3484
Total	**0.0523**	**0.0313**	**0.4047**	**1.1700e-003**	**0.1479**	**7.2000e-004**	**0.1486**	**0.0392**	**6.6000e-004**	**0.0399**		**118.2709**	**118.2709**	**3.5100e-003**	**3.3200e-003**	**119.3484**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3491	18.4025	5.4085	0.0875	2.7703	0.1809	2.9512	0.7596	0.1731	0.9327		9,530.8189	9,530.8189	0.3998	1.5106	9,990.9786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0581	0.0348	0.4497	1.3000e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		131.4121	131.4121	3.9000e-003	3.6900e-003	132.6093
Total	**0.4072**	**18.4373**	**5.8581**	**0.0888**	**2.9346**	**0.1817**	**3.1163**	**0.8032**	**0.1738**	**0.9770**		**9,662.2310**	**9,662.2310**	**0.4037**	**1.5143**	**10,123.5879**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3491	18.4025	5.4085	0.0875	2.7703	0.1809	2.9512	0.7596	0.1731	0.9327		9,530.8189	9,530.8189	0.3998	1.5106	9,990.9786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0581	0.0348	0.4497	1.3000e-003	0.1643	8.0000e-004	0.1651	0.0436	7.4000e-004	0.0443		131.4121	131.4121	3.9000e-003	3.6900e-003	132.6093
Total	**0.4072**	**18.4373**	**5.8581**	**0.0888**	**2.9346**	**0.1817**	**3.1163**	**0.8032**	**0.1738**	**0.9770**		**9,662.2310**	**9,662.2310**	**0.4037**	**1.5143**	**10,123.5879**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities/Off-Site Improvements - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5365	19.1828	7.4955	0.0922	3.3544	0.1362	3.4906	0.9658	0.1303	1.0961		9,881.9273	9,881.9273	0.2511	1.4594	10,323.1166
Worker	3.6867	2.2075	28.5324	0.0825	10.4245	0.0508	10.4753	2.7651	0.0467	2.8118		8,338.0994	8,338.0994	0.2475	0.2341	8,414.0596
Total	**4.2232**	**21.3903**	**36.0279**	**0.1746**	**13.7789**	**0.1870**	**13.9659**	**3.7309**	**0.1770**	**3.9079**		**18,220.0267**	**18,220.0267**	**0.4986**	**1.6936**	**18,737.1762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5365	19.1828	7.4955	0.0922	3.3544	0.1362	3.4906	0.9658	0.1303	1.0961		9,881.9273	9,881.9273	0.2511	1.4594	10,323.1166
Worker	3.6867	2.2075	28.5324	0.0825	10.4245	0.0508	10.4753	2.7651	0.0467	2.8118		8,338.0994	8,338.0994	0.2475	0.2341	8,414.0596
Total	**4.2232**	**21.3903**	**36.0279**	**0.1746**	**13.7789**	**0.1870**	**13.9659**	**3.7309**	**0.1770**	**3.9079**		**18,220.0267**	**18,220.0267**	**0.4986**	**1.6936**	**18,737.1762**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5251	19.0682	7.3770	0.0904	3.3544	0.1360	3.4904	0.9658	0.1301	1.0959		9,689.9797	9,689.9797	0.2439	1.4302	10,122.2869
Worker	3.4333	1.9742	26.5159	0.0797	10.4245	0.0482	10.4727	2.7651	0.0443	2.8094		8,054.1464	8,054.1464	0.2239	0.2183	8,124.7967
Total	**3.9584**	**21.0424**	**33.8929**	**0.1700**	**13.7789**	**0.1842**	**13.9631**	**3.7309**	**0.1745**	**3.9053**		**17,744.1261**	**17,744.1261**	**0.4677**	**1.6485**	**18,247.0835**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5251	19.0682	7.3770	0.0904	3.3544	0.1360	3.4904	0.9658	0.1301	1.0959		9,689.9797	9,689.9797	0.2439	1.4302	10,122.2869
Worker	3.4333	1.9742	26.5159	0.0797	10.4245	0.0482	10.4727	2.7651	0.0443	2.8094		8,054.1464	8,054.1464	0.2239	0.2183	8,124.7967
Total	**3.9584**	**21.0424**	**33.8929**	**0.1700**	**13.7789**	**0.1842**	**13.9631**	**3.7309**	**0.1745**	**3.9053**		**17,744.1261**	**17,744.1261**	**0.4677**	**1.6485**	**18,247.0835**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0406	0.0233	0.3134	9.4000e-004	0.1232	5.7000e-004	0.1238	0.0327	5.2000e-004	0.0332		95.2027	95.2027	2.6500e-003	2.5800e-003	96.0378
Total	**0.0406**	**0.0233**	**0.3134**	**9.4000e-004**	**0.1232**	**5.7000e-004**	**0.1238**	**0.0327**	**5.2000e-004**	**0.0332**		**95.2027**	**95.2027**	**2.6500e-003**	**2.5800e-003**	**96.0378**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0406	0.0233	0.3134	9.4000e-004	0.1232	5.7000e-004	0.1238	0.0327	5.2000e-004	0.0332		95.2027	95.2027	2.6500e-003	2.5800e-003	96.0378
Total	**0.0406**	**0.0233**	**0.3134**	**9.4000e-004**	**0.1232**	**5.7000e-004**	**0.1238**	**0.0327**	**5.2000e-004**	**0.0332**		**95.2027**	**95.2027**	**2.6500e-003**	**2.5800e-003**	**96.0378**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0380	0.0211	0.2935	9.1000e-004	0.1232	5.4000e-004	0.1238	0.0327	5.0000e-004	0.0332		92.2117	92.2117	2.4100e-003	2.4300e-003	92.9947
Total	**0.0380**	**0.0211**	**0.2935**	**9.1000e-004**	**0.1232**	**5.4000e-004**	**0.1238**	**0.0327**	**5.0000e-004**	**0.0332**		**92.2117**	**92.2117**	**2.4100e-003**	**2.4300e-003**	**92.9947**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	1.5283					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4435**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0380	0.0211	0.2935	9.1000e-004	0.1232	5.4000e-004	0.1238	0.0327	5.0000e-004	0.0332		92.2117	92.2117	2.4100e-003	2.4300e-003	92.9947
Total	**0.0380**	**0.0211**	**0.2935**	**9.1000e-004**	**0.1232**	**5.4000e-004**	**0.1238**	**0.0327**	**5.0000e-004**	**0.0332**		**92.2117**	**92.2117**	**2.4100e-003**	**2.4300e-003**	**92.9947**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,795.9377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**1,796.1086**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.6431	0.3569	4.9694	0.0155	2.0866	9.1400e-003	2.0957	0.5535	8.4100e-003	0.5619		1,561.4511	1,561.4511	0.0407	0.0411	1,574.7103
Total	**0.6431**	**0.3569**	**4.9694**	**0.0155**	**2.0866**	**9.1400e-003**	**2.0957**	**0.5535**	**8.4100e-003**	**0.5619**		**1,561.4511**	**1,561.4511**	**0.0407**	**0.0411**	**1,574.7103**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,795.9377					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**1,796.1086**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.6431	0.3569	4.9694	0.0155	2.0866	9.1400e-003	2.0957	0.5535	8.4100e-003	0.5619		1,561.4511	1,561.4511	0.0407	0.0411	1,574.7103
Total	**0.6431**	**0.3569**	**4.9694**	**0.0155**	**2.0866**	**9.1400e-003**	**2.0957**	**0.5535**	**8.4100e-003**	**0.5619**		**1,561.4511**	**1,561.4511**	**0.0407**	**0.0411**	**1,574.7103**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.8398	18.6393	121.6130	0.2820	32.4118	0.2272	32.6389	8.6438	0.2126	8.8564		28,781.8659	28,781.8659	1.6786	1.4765	29,263.8405
Unmitigated	12.8398	18.6393	121.6130	0.2820	32.4118	0.2272	32.6389	8.6438	0.2126	8.8564		28,781.8659	28,781.8659	1.6786	1.4765	29,263.8405

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	2,014.92	2,014.92	2014.92	5,882,581	5,882,581
Unrefrigerated Warehouse-No Rail	1,887.90	1,887.90	1887.90	5,511,745	5,511,745
Unrefrigerated Warehouse-Rail	699.48	699.48	699.48	2,042,140	2,042,140
Unrefrigerated Warehouse-Rail	655.98	655.98	655.98	1,915,141	1,915,141
Total	5,258.28	5,258.28	5,258.28	15,351,607	15,351,607

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Other Non-Asphalt Surfaces	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Unrefrigerated Warehouse-No Rail	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391
Unrefrigerated Warehouse-Rail	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	0.000958	0.004391

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704
NaturalGas Unmitigated	0.1795	1.6317	1.3706	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.0348	1,958.0348	0.0375	0.0359	1,969.6704

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5976.03	0.0645	0.5859	0.4921	3.5200e-003		0.0445	0.0445		0.0445	0.0445		703.0627	703.0627	0.0135	0.0129	707.2406
Unrefrigerated Warehouse-No Rail	6374.95	0.0688	0.6250	0.5250	3.7500e-003		0.0475	0.0475		0.0475	0.0475		749.9940	749.9940	0.0144	0.0138	754.4508
Unrefrigerated Warehouse-Rail	2076.85	0.0224	0.2036	0.1710	1.2200e-003		0.0155	0.0155		0.0155	0.0155		244.3357	244.3357	4.6800e-003	4.4800e-003	245.7876
Unrefrigerated Warehouse-Rail	2215.46	0.0239	0.2172	0.1825	1.3000e-003		0.0165	0.0165		0.0165	0.0165		260.6424	260.6424	5.0000e-003	4.7800e-003	262.1913
Total		**0.1795**	**1.6317**	**1.3706**	**9.7900e-003**		**0.1240**	**0.1240**		**0.1240**	**0.1240**		**1,958.0348**	**1,958.0348**	**0.0375**	**0.0359**	**1,969.6704**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.97603	0.0645	0.5859	0.4921	3.5200e-003		0.0445	0.0445		0.0445	0.0445		703.0627	703.0627	0.0135	0.0129	707.2406
Unrefrigerated Warehouse-No Rail	6.37495	0.0688	0.6250	0.5250	3.7500e-003		0.0475	0.0475		0.0475	0.0475		749.9940	749.9940	0.0144	0.0138	754.4508
Unrefrigerated Warehouse-Rail	2.07685	0.0224	0.2036	0.1710	1.2200e-003		0.0155	0.0155		0.0155	0.0155		244.3357	244.3357	4.6800e-003	4.4800e-003	245.7876
Unrefrigerated Warehouse-Rail	2.21546	0.0239	0.2172	0.1825	1.3000e-003		0.0165	0.0165		0.0165	0.0165		260.6424	260.6424	5.0000e-003	4.7800e-003	262.1913
Total		**0.1795**	**1.6317**	**1.3706**	**9.7900e-003**		**0.1240**	**0.1240**		**0.1240**	**0.1240**		**1,958.0348**	**1,958.0348**	**0.0375**	**0.0359**	**1,969.6704**

6.0 Area Detail

6.1 Mitigation Measures Area

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Unmitigated	83.8956	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	19.1895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.6770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0291	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Total	**83.8956**	**2.8600e-003**	**0.3159**	**2.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.1200e-003**	**1.1200e-003**		**0.6788**	**0.6788**	**1.7700e-003**		**0.7230**

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	19.1895					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.6770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0291	2.8600e-003	0.3159	2.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003		0.6788	0.6788	1.7700e-003		0.7230
Total	**83.8956**	**2.8600e-003**	**0.3159**	**2.0000e-005**		**1.1200e-003**	**1.1200e-003**		**1.1200e-003**	**1.1200e-003**		**0.6788**	**0.6788**	**1.7700e-003**		**0.7230**

7.0 Water Detail

7.1 Mitigation Measures Water

Apple Valley Cordova Complex and Quarry at Pawnee Warehouse Project - San Bernardino-Mojave Desert County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Focus on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years of experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, industrial, military and agricultural sources, unconventional oil drilling operations, and locomotive and construction engines. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities. Dr. Rosenfeld has also successfully modeled exposure to contaminants distributed by water systems and via vapor intrusion.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, creosote, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at sites and has testified as an expert witness on numerous cases involving exposure to soil, water and air contaminants from industrial, railroad, agricultural, and military sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Rosenfeld P. E., Spaeth K., Hallman R., Bressler R., Smith, G., (2022) Cancer Risk and Diesel Exhaust Exposure Among Railroad Workers. *Water Air Soil Pollution.* **233,** 171.

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P**., (2015) Modeling the Effect of Refinery Emission On Residential Property Value. Journal of Real Estate Research. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.,** Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution,* 123 (17), 319-327.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities.* Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004.* New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS–6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality.* 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld. (**1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., "The science for Perfluorinated Chemicals (PFAS): What makes remediation so hard?" Law Seminars International, (May 9-10, 2018) 800 Fifth Avenue, Suite 101 Seattle, WA.

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society.* Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution.* Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting.* Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference.* Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference.* Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference.* Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference.* Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conferenc*e. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the Superior Court of the State of California, County of San Bernardino
Billy Wildrick, Plaintiff vs. BNSF Railway Company
Case No. CIVDS1711810
Rosenfeld Deposition 10-17-2022

In the State Court of Bibb County, State of Georgia
Richard Hutcherson, Plaintiff vs Norfolk Southern Railway Company
Case No. 10-SCCV-092007
Rosenfeld Deposition 10-6-2022

In the Civil District Court of the Parish of Orleans, State of Louisiana
Millard Clark, Plaintiff vs. Dixie Carriers, Inc. et al.
Case No. 2020-03891
Rosenfeld Deposition 9-15-2022

In The Circuit Court of Livingston County, State of Missouri, Circuit Civil Division
Shirley Ralls, Plaintiff vs. Canadian Pacific Railway and Soo Line Railroad
Case No. 18-LV-CC0020
Rosenfeld Deposition 9-7-2022

In The Circuit Court of the 13th Judicial Circuit Court, Hillsborough County, Florida Civil Division
Jonny C. Daniels, Plaintiff vs. CSX Transportation Inc.
Case No. 20-CA-5502
Rosenfeld Deposition 9-1-2022

In The Circuit Court of St. Louis County, State of Missouri
Kieth Luke et. al. Plaintiff vs. Monsanto Company et. al.
Case No. 19SL-CC03191
Rosenfeld Deposition 8-25-2022

In The Circuit Court of the 13th Judicial Circuit Court, Hillsborough County, Florida Civil Division
Jeffery S. Lamotte, Plaintiff vs. CSX Transportation Inc.
Case No. NO. 20-CA-0049
Rosenfeld Deposition 8-22-2022

In State of Minnesota District Court, County of St. Louis Sixth Judicial District
Greg Bean, Plaintiff vs. Soo Line Railroad Company
Case No. 69-DU-CV-21-760
Rosenfeld Deposition 8-17-2022

In United States District Court Western District of Washington at Tacoma, Washington
John D. Fitzgerald Plaintiff vs. BNSF
Case No. 3:21-cv-05288-RJB
Rosenfeld Deposition 8-11-2022

In Circuit Court of the Sixth Judicial Circuit, Macon Illinois
Rocky Bennyhoff Plaintiff vs. Norfolk Southern
Case No. 20-L-56
Rosenfeld Deposition 8-3-2022

In Court of Common Pleas, Hamilton County Ohio
Joe Briggins Plaintiff vs. CSX
Case No. A2004464
Rosenfeld Deposition 6-17-2022

In the Superior Court of the State of California, County of Kern
George LaFazia vs. BNSF Railway Company.
Case No. BCV-19-103087
Rosenfeld Deposition 5-17-2022

In the Circuit Court of Cook County Illinois
Bobby Earles vs. Penn Central et. al.
Case No. 2020-L-000550
Rosenfeld Deposition 4-16-2022

In United States District Court Easter District of Florida
Albert Hartman Plaintiff vs. Illinois Central
Case No. 2:20-cv-1633
Rosenfeld Deposition 4-4-2022

In the Circuit Court of the 4th Judicial Circuit, in and For Duval County, Florida
Barbara Steele vs. CSX Transportation
Case No.16-219-Ca-008796
Rosenfeld Deposition 3-15-2022

In United States District Court Easter District of New York
Romano et al. vs. Northrup Grumman Corporation
Case No. 16-cv-5760
Rosenfeld Deposition 3-10-2022

In the Circuit Court of Cook County Illinois
Linda Benjamin vs. Illinois Central
Case No. No. 2019 L 007599
Rosenfeld Deposition 1-26-2022

In the Circuit Court of Cook County Illinois
Donald Smith vs. Illinois Central
Case No. No. 2019 L 003426
Rosenfeld Deposition 1-24-2022

In the Circuit Court of Cook County Illinois
Jan Holeman vs. BNSF
Case No. 2019 L 000675
Rosenfeld Deposition 1-18-2022

In the State Court of Bibb County State of Georgia
Dwayne B. Garrett vs. Norfolk Southern
Case No. 20-SCCV-091232
Rosenfeld Deposition 11-10-2021

In the Circuit Court of Cook County Illinois
Joseph Ruepke vs. BNSF
Case No. 2019 L 007730
Rosenfeld Deposition 11-5-2021

In the United States District Court For the District of Nebraska
Steven Gillett vs. BNSF
Case No. 4:20-cv-03120
Rosenfeld Deposition 10-28-2021

In the Montana Thirteenth District Court of Yellowstone County
James Eadus vs. Soo Line Railroad and BNSF
Case No. DV 19-1056
Rosenfeld Deposition 10-21-2021

In the Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al.cvs. Cerro Flow Products, Inc.
Case No. 0i9-L-2295
Rosenfeld Deposition 5-14-2021
Trial October 8-4-2021

In the Circuit Court of Cook County Illinois
Joseph Rafferty vs. Consolidated Rail Corporation and National Railroad Passenger Corporation d/b/a AMTRAK,
Case No. 18-L-6845
Rosenfeld Deposition 6-28-2021

In the United States District Court For the Northern District of Illinois
Theresa Romcoe vs. Northeast Illinois Regional Commuter Railroad Corporation d/b/a METRA Rail
Case No. 17-cv-8517
Rosenfeld Deposition 5-25-2021

In the Superior Court of the State of Arizona In and For the Cunty of Maricopa
Mary Tryon et al. vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case No. CV20127-094749
Rosenfeld Deposition 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al vs. CNA Insurance Company et al.
Case No. 1:17-cv-000508
Rosenfeld Deposition 3-25-2021

In the Superior Court of the State of California, County of San Bernardino
Gary Garner, Personal Representative for the Estate of Melvin Garner vs. BNSF Railway Company.
Case No. 1720288
Rosenfeld Deposition 2-23-2021

In the Superior Court of the State of California, County of Los Angeles, Spring Street Courthouse
Benny M Rodriguez vs. Union Pacific Railroad, A Corporation, et al.
Case No. 18STCV01162
Rosenfeld Deposition 12-23-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, Plaintiff, vs. Marathon Petroleum, LP, Defendant.
Case No. 1716-CV10006
Rosenfeld Deposition 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, Plaintiffs, vs. United States Metals Refining Company et. al. Defendant.
Case No. 2:17-cv-01624-ES-SCM
Rosenfeld Deposition 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" Defendant.
Case No. 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No. BC615636
Rosenfeld Deposition 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No. BC646857
Rosenfeld Deposition 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiffs vs. The 3M Company et al., Defendants
Case No. 1:16-cv-02531-RBJ
Rosenfeld Deposition 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No. 1923
Rosenfeld Deposition 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintifs vs. Chevron Corporation, et al., Defendants
Cause No. C12-01481
Rosenfeld Deposition 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition 8-23-2017

In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case No. 1:19-cv-00315-RHW
Rosenfeld Deposition 4-22-2020

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No. LC102019 (c/w BC582154)
Rosenfeld Deposition 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., Plaintiffs, vs. Meritor Inc., et al., Defendants
Case No. 4:16-cv-52-DMB-JVM
Rosenfeld Deposition July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No. RG14711115
Rosenfeld Deposition September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No. LALA002187
Rosenfeld Deposition August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action No. 14-C-30000
Rosenfeld Deposition June 2015

In The Iowa District Court for Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No. 4980
Rosenfeld Deposition May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case No. CACE07030358 (26)
Rosenfeld Deposition December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, Plaintiff, vs. Aruba et al, Defendant.
Case No. cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., Plaintiffs, vs. Republic Services, Inc., et al., Defendants
Case No. 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., Plaintiffs, vs. International Paper Company, Defendant.
Civil Action No. 2:09-cv-232-WHA-TFM
Rosenfeld Deposition July 2010, June 2011

In the Circuit Court of Jefferson County Alabama
Jaeanette Moss Anthony, et al., Plaintiffs, vs. Drummond Company Inc., et al., Defendants
Civil Action No. CV 2008-2076
Rosenfeld Deposition September 2010

In the United States District Court, Western District Lafayette Division
Ackle et al., Plaintiffs, vs. Citgo Petroleum Corporation, et al., Defendants.
Case No. 2:07CV1052
Rosenfeld Deposition July 2009

Comment Letter F

United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Palm Springs Fish and Wildlife Office
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262

In Reply Refer to:
2024-0112249-NEPA-001

July 8, 2024
Sent Electronically

Rick Hirsch
Consulting Planner
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, California 92307

Subject: Notice of Availability of a Draft Environmental Impact Report (DEIR) for the Cordova Complex and Quarry at Pawnee Warehouse Project, San Bernardino County, California

Dear Rick Hirsch:

This letter is in response to the referenced notice of availability. The Town of Apple Valley (Town) is considering approval for the construction and operation of two new warehouse buildings totaling approximately 3,022,294 square feet, located on approximately 163 acres of vacant land in Apple Valley (the approximately 87-acre Cordova Complex site and approximately 76-acre Quarry at Pawnee site). The Project site is located in the northern part of Apple Valley, which is within the Victor Valley region of San Bernardino County. We are providing these comments under the authorities of the Federal Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq*), and other authorities of the Department of the Interior. F-1

Desert Tortoise

The proposed project lies within the range of the federally threatened desert tortoise [Mojave Distinct Population Segment (*Gopherus agassizii*); desert tortoise]. Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the U.S. Fish and Wildlife Service (Service) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. F-2

Protocol desert tortoise surveys completed at the project in March 2023, resulted in no observations of desert tortoise burrows, desert tortoise sign (e.g., scat, drink basins, footprints), or individual desert tortoises. The Service agrees with the Applicant's mitigation measure (MM BIO-9) to conduct a pre-disturbance desert tortoise clearance survey within 3 days of

ground disturbance activities to reevaluate the locations of potential desert tortoise burrows within the Project limits so take of desert tortoise can be avoided. If there are any detections of desert tortoises at the project during surveys or incidentally, the Applicant will cease all work and contact the Service. If the Service concludes that take of desert tortoise is reasonably certain to occur as a result of the project, we recommend that the Applicant apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act. F-2 cont.

Common Ravens

The construction and operation of the warehouse facilities would likely lead to a local increase in the number of common ravens (*Corvus corax*); these birds are highly attracted to human activity and the proposed project would provide subsidies to them in the form of food, water, and sites for shade, nesting, roosting, and perching that are not currently present on the proposed project sites. Common ravens prey on desert tortoises and, for this reason, any local increase in the number of common ravens may have detrimental effects on the desert tortoise, both near and distant, from the proposed warehouse facilities, as these birds travel large distances on a daily basis between areas that provide them with food, water, and shelter.

We recommend that the DEIR include consideration of the potential effects of the proposed action on desert tortoises as a result of the provision of additional subsidies to common ravens and other desert tortoise predators [e.g., coyote (*Canis latrans*)]. The DEIR currently includes mitigation measures that, in part, address these effects (i.e., MM BIO-5 *Education Program* and MM BIO-8 *Mitigation for Indirect Effects*); however, we recommend that the Town require the Applicant to expand these measures to further reduce the attractiveness of the proposed project and activities to common ravens. These measures include but are not limited to: F-3

1. Incorporating information in the Worker Environmental Awareness Program to educate workers about common ravens and the importance of reducing food and water subsidies, as well as the requirement for the project to secure trash during operations of the warehouse facilities.

2. Reducing as much as possible standing water at the project during construction from which common ravens can drink.

3. Designing structures in a manner that reduces the opportunities for nesting and perching by common ravens and/or installing anti-perching and anti-nesting devices on structures.

4. Removing inactive nests of common ravens.

5. Properly disposing of any wildlife carcasses (i.e., roadkill) that are killed during construction and operation.

6. Reporting common raven nesting and any evidence of predation of desert tortoises to the Service.

We recommend that the Town requires the Applicant to implement all appropriate measures to reduce the attractiveness of the proposed warehouse facilities to common ravens. Even with the implementation of all such measures, we anticipate that at least some common ravens will obtain some form of food, water, or shelter from the warehouse facilities. To mitigate these residual effects, the Service recommends that the Town also require the Applicant to contribute funding to the regional management program for common ravens. The current recommended funding amount is no less than $105/acre for the total area of permanent impacts at a project; this measure is commonly required of various types of projects that will provide subsidies to common ravens and other predators within the range of the desert tortoise in southern California. This program is managed by the Desert Managers Group and includes wide-scale surveys for common ravens, monitoring of the effectiveness of management actions, outreach to control subsidies, and increased levels of population control when necessary.

F-3 cont.

We appreciate the opportunity to provide input into your planning process. If you have any questions, please contact Brooke Su[1] of my staff.

Sincerely,

PETER SANZENBACHER

Digitally signed by PETER SANZENBACHER
Date: 2024.07.08 16:13:17 -07'00'

for Jane Hendron
Acting Assistant Field Supervisor

[1] brooke_su@fws.gov.

Comment Letter G

CARECA

July 10, 2024

Daniel Alcayaga, AICP, Planning Manager
Town of Apple Valley
14955 Dale Evans Pkwy,
Apple Valley, CA 92307
dalcayaga@applevalley.org

Support Letter: The Cordova Complex and Quarry at Pawnee Warehouse Project

Dear Mr. Alcayaga,

Californians Allied for a Responsible Economy ("CARE CA") is pleased to submit this letter in support of the proposed Cordova Complex and Quarry at Pawnee Warehouse project ("Project"). The proposed Project includes the construction and operation of two warehouse buildings, including the 1,559,952-square-foot Cordova Complex warehouse building and 1,462,342-square-foot Quarry at Pawnee warehouse building and associated improvements.

We are a nonprofit organization working to ensure a sustainable construction industry in Southern California, over the long-term, by supporting projects that offer genuine economic and employment benefits, and which minimize adverse environmental and other impacts on local communities.

Given these interests, we strongly support the Project because it aligns with our mission. This project will provide critical employment opportunities for the town and create many high-quality construction jobs for the local skilled workforce. We applaud the developer for pursuing this opportunity to invest in the local economy while proposing an environmentally sensitive and sustainable design, and for partnering with the construction trades to build the Project.

In addition, the Applicant worked with us and other community groups to propose a truly community-oriented project. The project is designed to contribute to the local community and enrich the Town of Apple Valley.

For these reasons, we respectfully and enthusiastically support the approval of all entitlements requested to turn the Project into actual community benefits.

G-1

Sincerely,

Jeff Modrzejewski
Executive Director

July 19, 2024

Advocates for the Environment

A non-profit public-interest law firm
and environmental advocacy organization

Richard Hirsch
Consulting Planner
City of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

Via U.S. Mail and email to rhirsch@interwestgrp.com

Re: Comments on Draft Environmental Impact Report for Cordova Complex and Quarry at Pawnee Warehouse Project, SCH No. 2023090009

Dear Mr. Hirsch:

Advocates for the Environment submits the comments in this letter regarding the Draft Environmental Impact Report (**DEIR**) for the Cordova Complex and Quarry at Pawnee Warehouse Project (**Project**). The Cordova Complex Project site is located near Cordova Road, Navajo Road, Johnson Road, and Dachshund Avenue while the Quarry at Pawnee site is located near Quarry Road and Flint Road in the town of Apple Valley (**City**). The Project proposes to develop the combined 163-acre Project Site by constructing industrial warehouse buildings on two sites: Cordova Complex site, which would be 1,559,952 square feet with 266 loading docks; and the Quarry at Pawnee site, which would be 1,462,342 square feet with 235 loading docks. We have reviewed the DEIR prepared in May 2024 and submit comments regarding the sufficiency of the DEIR's Greenhouse-Gas (**GHG**) analysis under the California Environmental Quality Act (**CEQA**). H-1

The City Should Require the Project to be Net-Zero

Given the current regulatory context and technological advancements, a net-zero significance threshold is feasible and extensively supportable. GHG emissions from buildings, including indirect emissions from offsite generation of electricity, direct emissions produced onsite, and from construction with cement and steel, amounted to 21% of global GHG emissions in 2019. (IPCC Sixth Assessment Report, Climate Change 2022, WGIII, Mitigation of Climate Change, p. 9-4.) This is a considerable portion of global GHG emissions. It is much more affordable to construct new building projects to be net-zero than to obtain the same level of GHG reductions by expensively retrofitting older buildings to comply with climate change regulations. Climate damages will keep increasing until we reach net zero GHG emissions, and there is a California state policy requiring the state to be net-zero by 2045. It therefore is economically unsound to construct new buildings that are not net-zero. H-2

Environmental groups have achieved tremendous outcomes by litigation under CEQA. Two of the largest mixed-use development projects in the history of California, Newhall Ranch (now FivePoint Valencia), and Centennial (part of Tejon Ranch) decided to move forward as net-zero communities after losing CEQA lawsuits to environmental groups. The ability for these large projects to become net-zero indicates that it is achievable, even for large-scale developments. The Applicant for this Project should do the same.

We urge the City to adopt net-zero as the GHG significance threshold for this project. This threshold is well-supported by plans for the reduction of GHG emissions in California, and particularly the CARB Climate Change Scoping Plans. The CARB 2017 Scoping Plan states that "achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." (CARB 2017 Scoping Plan, p. 101.) Additionally, the CARB 2022 Scoping Plan reaffirms the necessity of a net zero target by expressing: "it is clear that California must transition away from fossil fuels to zero-emission technologies with all possible speed … in order to meet our GHG and air quality targets." (CARB 2022 Scoping Plan, p. 184.) CARB further encourages a net-zero threshold in its strategies for local actions in Appendix D to the 2022 Scoping Plan. (CARB 2022 Scoping Plan, Appendix D p. 24-26.)

Moving this Project forward as a net-zero project would not only be the right thing for the City to do, but also would also help protect the City and the Applicant from CEQA GHG litigation.

H-2 cont.

GHG Mitigation is Insufficient under CEQA

The calculated project-related emissions amount to 50,693.99 metric tons of carbon dioxide equivalent (**MTCO2e**) per year (DEIR, p. 4.6-26). The City adopted a significance threshold based on Appendix G of the CEQA Guidelines. Based on this threshold, City concluded the Project would have significant GHG emissions. To reduce this identified significant GHG impact, the GHG Analysis offered GHG Mitigation Measures (**MM GHG**) 1. (DEIR, p. 4.6-34.)

The DEIR did not provide evidence that there was no further feasible mitigation, stating the following: "No feasible mitigation measures beyond those already identified exist that would reduce these emissions to a level that is less than significant." (DEIR, p. 4.6-26.) The City did not provide any rationale why, in this instance, existing regulations and the adopted mitigation measures would be the only feasible mitigation for this Project. Despite the availability of other GHG mitigation measure, the DEIR declared that the Project's mitigated emissions were unavoidable. However, because this conclusion is not supported by substantial evidence, the DEIR should have included more mitigation to reduce the Project's GHG emissions to the extent required by CEQA.

H-3

Infeasibility Finding Lacks Substantial Evidence

The conclusion that the Project will not be able to achieve any mitigation beyond which was identified in MM GHG-1 is not supported with substantial evidence. The DEIR should have proposed more mitigation measures to be applied to the maximum feasible extent to justify the conclusion that the Project's GHG impact would be unavoidable due to lack of feasibility of further mitigation. While the proposed mitigation measures is a good start, the City did not demonstrate that these actions would represent the maximum feasible mitigation to support a finding that the Project's impact would be significant and unavoidable.

CEQA requires that the lead agency identifies specific reasons for infeasibility of further mitigation when concluding significant and unavoidable impact. The City did not attempt to specify any infeasible mitigation measures when concluding that the Project's GHG impact would be unavoidable, nor did it provide any reasoning that the identified mitigation measures represent the maximum feasible mitigation.

Thus, the conclusion that further mitigation is infeasible was not supported by substantial evidence; there are other readily available mitigation measures, especially considering that 96%[1] of the Project's GHG impact originates from mobile emissions which the mitigation measures were not focused on reducing. (DEIR, p. 4.6-26.) The City and Applicant together can commit to design and technology specifications that reduce emissions, especially in the heavy-duty truck and transportation vehicle fleet.

H-3 cont.

The Project's GHG Impacts Must be Fully Mitigated

CEQA requires that the Project include fair-share mitigation for all significant cumulative impacts. (*Napa Citizens for Honest Gov't v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342, 364.) Here, this means mitigation of the full extent of the Project's GHG impacts. The DEIR claims that no other mitigation measures are feasible, beyond the identified mitigation measures. But that conclusion is incorrect, and not supported by substantial evidence.

The amount of GHG emissions that comprises the Project's fair share is clear. The reasonable lifespan this Project is approximately 30 years as indicated by the amortization of construction emissions. (DEIR, p. 4.6-24.) Therefore, the Project would likely contribute 1,520,819 MTCO2e during its entire lifespan.[2] This would be a good starting point from which to subtract the effect of additional non-offset mitigation measures, before implementing offset purchases.

H-4

[1] $\left(\frac{48{,}855.39\ \text{MTCO2e}}{50{,}693.99\ \text{MTCO2e}}\right) \times 100 = 96.37\%$

[2] 50,693.99 MTCO2e per year × 30 years = 1,520,819.7 MTCO2e

The DEIR notes that mobile emissions are not controllable, making them infeasible to mitigate because of the limited ability to address vehicle emissions. (DEIR, p. 4.6-25.) However, the City could require the Applicant to enter into an agreement for a zero-emission heavy-duty truck fleet to the extent feasible and as soon as practicable. While PDF-DES-3 and PDF-DES-4 specify the installation of the minimum number of charging stations required by Title 24, there is no evidence that it would be infeasible to install more charging stations beyond the minimum requirement. H-5

CEQA does not distinguish between mobile and non-mobile sources of GHG emissions; the lead agency can mitigate cumulative GHG impacts through any measure. Several on-site mitigation measures are feasible, including solar water heaters and automatic light switches, among many other mitigation strategies that can be incorporated into the project as design features or as mitigation measures. Such features could be adopted individually or as part of a comprehensive goal of sustainable building certification, such as achieving higher levels of Leadership and Energy and Environmental Design (**LEED**) certification, beyond the Silver level and extending further beyond CALGreen requirements. H-6

Overall, there are more options available to mitigate emissions to the full extent of project emissions.

Carbon Offsets are Feasible as Mitigation Measures

After requiring operational emissions reductions to the maximum feasible extent, the City could also require the Applicant to purchase offsets for the Project's remaining GHG emissions. The City did not provide any evidence for why offsets would be infeasible. Overall, there are more options available to mitigate emissions to the full extent of project emissions, and the City failed to acknowledge or implement many mitigation measures that are feasible and could help reduce the Project's GHG impact to the fair share extent. H-7

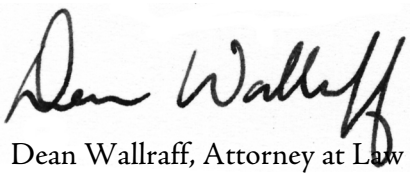
Offsets are acceptable mitigation measures under CEQA (CEQA Guidelines § 15126.4 (c)(3).) Many offset projects are currently operating in California, including projects that are relevant to the Project's operations such as the Truck Stop Electrification project in California (Project ID ACR133), and those that reduce industrial process emissions such as the reclaimed hydrofluorocarbon project by Anew Environmental, LLC (Project ID ACR777), among others.[3] Such offset programs are just examples of which the City could consider as feasible carbon offsets to reduce the Project's GHG impact.

[3] American Carbon Registry (ACR), list of offset projects, available at https://acr2.apx.com/myModule/rpt/myrpt.asp?r=111 (Accessed June 26, 2024).

Conclusion

The DEIR fails to require all feasible mitigation, despite concluding that the significant GHG impact will be unavoidable. The lead agency has not met its burden of showing that such measures are infeasible, and therefore the DEIR should be amended to reflect all feasible mitigation to the fair-share extent. Please put me on the interest list to receive updates about the progress of this Project. We make this request under Public Resources Code, section 21092.2. H-8

Sincerely,



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