Appendix A

Public Review Comment Letters

Comment Letter A

Mojave Desert Air Quality Management District
Brad Poiriez, *Executive Director*
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September 25, 2023

Daniel Alcayaga, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

Project: Apple Valley 1M Warehouse Project DEIR

Dear Mr. Alcayaga:

The Mojave Desert Air Quality Management District (District) has received a request for comments on the Draft Environmental Impact Report (EIR) for the proposed 1M warehouse Project in Apple Valley. The Project includes the construction of a single 1,080,125 square foot industrial/warehouse building and associated improvements on 67.3 acres of vacant land. This approximately 67.3-acre Project site is located in the northern part of the Town, which is within the Victor Valley Region of San Bernardino County. In total, the Project would provide approximately 224 loading dock positions, approximately 317 tractor-trailer stalls, and approximately 1,262 passenger vehicle parking spaces. A-1

The District has reviewed the DEIR and is concerned that the air quality analysis has ignored impacts to sensitive receptors, despite having received concerned comments from those same sensitive receptors. The DEIR claims that "the nearest sensitive receptor to the Project site is a fire center approximately 600 feet to the south, as it could potentially contain sleeping quarters". While this the fire center is considered a sensitive receptor, it is not the only one near the proposed project site. There is also a single-family residence within 650 ft of the eastern boundary which will be equally exposed to emissions from the both construction and operational phases of the warehouse. Furthermore, the residence in question has submitted written correspondence which was noted in the scoping period comments but never addressed in the DEIR. The MDAQMD requests that the Final EIR officially recognize this residence as a sensitive receptor impacted by this project and include it in the final air quality analysis. A-2

The District requirse that the following dust mitigation measures be required for the construction portion of the development (enforceable by the District AND by the land use agency) should the project be approved:

- Prepare and submit to the MDAQMD, prior to commencing earth-moving activity, a dust control plan that describes all applicable dust control measures that will be implemented at the project; A-3

- Signage compliant with Rule 403 Attachment B shall be erected at each project site entrance not later than the commencement of construction. A-4

- 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. A-5

- 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. A-6

- 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. A-7

- 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 50 brake horsepower. A-8

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,

Chris Anderson
Planning and Air Monitoring Supervisor

CA/bg Apple Valley 1M Warehouse Project 2023 Sep 21

Comment Letter B

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Via Email

October 24, 2023

Mr. Daniel Alcayaga
Town of Apple Valley
Planning Department
14955 Dale Evans Parkway
Apple Valley, California 92307
dalcayaga@applevalley.org

Re: Comment on Draft Environmental Impact Report, 1M Warehouse Project (SCH 2023020285)

Dear Mr. Alcayaga:

This comment is submitted on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Draft Environmental Impact Report ("DEIR") prepared for the 1M Warehouse Project (SCH 2023020285), which proposes the construction of a 1,080,125-square-foot industrial/warehouse building on approximately 67.3 acres, located at the intersection of Central Road and Lafayette Street in the City of Apple Valley ("Project").

B-1

SAFER is concerned that the DEIR fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project's impacts. SAFER requests that the Planning Department address these shortcomings in a revised draft environmental impact report ("RDEIR") and recirculate the RDEIR prior to considering approvals for the Project.

SAFER reserves the right to supplement these comments during the administrative process. *Galante Vineyards v. Monterey Peninsula Water Management Dist*., 60 Cal. App. 4th 1109, 1121 (1997).

Sincerely,

Brian B. Flynn
Lozeau Drury LLP

Comment Letter C

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LOS ANGELES, CALIFORNIA 90017 (213) 572-0400

October 27, 2023

Daniel Alcayaga, Planning Manager
City of Commerce
14955 Dale Evans Parkway
Apple Valley, CA 92307

VIA EMAIL TO:
dalcayaga@applevalley.org

Subject*: COMMENTS ON 1M WAREHOUSE EIR (SCH NO. 2023020285*)

Dear Mr. Alcayaga,

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the proposed 1M 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. C-1

1.0 Summary

The project proposes the construction and operation of one 1,080,125 square feet warehouse building on an approximately 67.3 acre vacant site. The building includes 15,000 square feet of office space. The building is designed as a cross-dock fulfillment center warehouse that includes 224 truck/trailer loading dock doors (112 dock doors each on the east and west sides of the building), 317 truck/trailer parking spaces, and 1,262 passenger car parking spaces. A tenant for the proposed industrial warehouse building has not yet been identified, but the EIR analyzes project would operate as an unrefrigerated warehouse and/or distribution facility C-2

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. Additionally, the site plan provided in Figure 3-10 has been edited to remove pertinent information from public view. For example, it does not C-3

provide any detailed information such as earthwork quantity notes, floor area ratio calculation, or project analysis in accordance with development standard requirements. Providing the grading plan and earthwork quantity notes is vital as the EIR states that "For onsite and off-site development, it was assumed that approximately 152,288 cubic yards of soil would be exported. After the modeling was completed, a new grading plan was released that stated the project would result in a net import of 13,400 cubic yards of material. Because the new grading plan results in the transport of significantly less material, and therefore fewer haul trucks, the modeling is conservative and has not been changed for this analysis." The EIR has not provided any method for the public to verify the claims made in this statement. The EIR references multiple versions of the grading plan, and no grading plans are included for public review. 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 (all versions discussed in the EIR), elevations, and project narrative for public review.

C-3 Cont.

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

Please refer to attachments from SWAPE for a complete technical commentary and analysis.

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[1], CalEPA's screening tool that ranks each census tract in the state for pollution and socioeconomic vulnerability, the proposed project's census tract (6071012104) 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 89th percentile for ozone burden, which is attributed to heavy vehicular traffic and truck activity in the area. Ozone can cause lung irritation, inflammation, and worsening of existing chronic health conditions, even at low levels of exposure[2].

C-4

The census tract also bears more impacts from cleanup sites than 96% 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[3]. The census tract ranks in the 93rd percentile for solid waste facility impacts. Solid waste facilities can expose people to hazardous chemicals, release toxic gases into the air

C-5

[1] CalEnviroScreen 4.0 https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[2] OEHHA Ozone https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone
[3] OEHHA Cleanup Sites https://oehha.ca.gov/calenviroscreen/indicator/cleanup-sites

(even after these facilites are closed), and chemicals can leach into soil around the facility and pose a health risk to nearby populations[4].

The census tract also ranks in the 79th percentile for drinking water, which indicates that it ranks with the worst quality drinking water in the state. Poor communities and people in rural areas are exposed to contaminants in their drinking water more often than people in other parts of the state[5].

Further, the census tract is a diverse community including 29% Hispanic and 6% African-American residents, whom are especially vulnerable to the impacts of pollution. The community has a high rate of low educational attainment, meaning 64% of the census tract over age 25 has not attained a high school diploma, which is an indication that they may lack health insurance or access to medical care. The community also has a high rate of poverty, meaning 64% 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[6]. Poor communities are often located in areas with high levels of pollution[7]. Poverty can cause stress that weakens the immune system and causes people to become ill from pollution[8]. 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 96th percentile for incidence of cardiovascular disease and 90th percentile for incidence of asthma.

C-6

California's Building Energy Code Compliance Software (CBECC) is the State's only approved energy compliance modeling software for non-residential buildings in compliance with Title 24[9]. 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 the approved software (CBECC) must be 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 the approved software.

C-7

[4] OEHHA Solid Waste Facilities https://oehha.ca.gov/calenviroscreen/indicator/solid-waste-sites-and-facilities
[5] OEHHA Drinking Water https://oehha.ca.gov/calenviroscreen/drinking-water
[6] OEHHA Poverty https://oehha.ca.gov/calenviroscreen/indicator/poverty
[7] Ibid.
[8] Ibid.
[9] 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

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:

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. 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.

8. 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

C-8

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.

9. 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.

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 by approximately 18,170 metric tons of CO2e. 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.

C-9

Appendix J: Transportation Impact Analysis determined the following Caltrans jurisdiction is identified to experience significant and unavoidable impacts resulting from the project:

1. (Intersection #5) I-15 NB Ramps - Outer I-15/Stoddard Wells Road – LOS F during AM and PM peak hours

Any improvements constructed or in-lieu fees/fair share fees paid for the I-15 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 required are not part of an existing DIF/TUMF program and therefore are not planned to occur at all or by any certain date, whether by Apple Valley or Caltrans. Any improvements recommended or fees paid to mitigate impacts for the I-15 are beyond the control of the lead agency and evidence that these improvements will be completed or approved by Caltrans has not been provided. The EIR must be revised and recirculated to include the LOS analysis as cumulatively considerable significant impact as the project conflicts with Transportation Impact Threshold A and Land Use and Planning Impact Threshold B because it is not consistent with the following General Plan policy:

C-10

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.

C-10 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[10] 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 proposed project will have 36.9% building coverage of the site, 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[11] that was constructed at 29% building coverage of the site, the Development at Dale Evans and Lafayette[12] that was proposed at 35% building coverage of the site, and GTS Cold Storage[13] that was proposed at 49.9% 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 prepared to include this analysis in order to provide an adequate and accurate environmental analysis.

C-11

Table III-41: Preferred Alternative General Plan Land Use Designation Build Out Summary: Town & Unincorporated Lands of the General Plan EIR[14] states that the Industrial Specific Plan land use designation will have a buildout of 36,938,445 total square feet. The proposed project's 1,080,125 square feet represents 2.9% 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[15]), GTS Cold Storage (385,004 square feet of industrial/warehouse space[16]), and The Development at Dale

C-12

[10] North Apple Valley Industrial Specific Plan
https://www.applevalley.org/home/showpublisheddocument/18587/636149111285930000
[11] Project Jupiter Distribution Warehouse https://ceqanet.opr.ca.gov/2016041058
[12] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[13] GTS Cold Storage https://ceqanet.opr.ca.gov/2023080221
[14] Apple Valley General Plan EIR
https://www.applevalley.org/home/showpublisheddocument/24331/636552384686570000
[15] Project Jupiter Distribution Warehouse https://ceqanet.opr.ca.gov/2016041058
[16] GTS Cold Storage https://ceqanet.opr.ca.gov/2023080221

Evans and Lafayette (1,207,544 square feet of industrial/warehouse space[17]) cumulatively with the proposed project generate 4,033,548 square feet of industrial/warehouse space, which is 10.9% of the General Plan buildout capacity accounted for by only four recent industrial projects. A revised EIR must be prepared to include this analysis in order to provide an adequate and accurate environmental analysis.

C-12 Cont.

Table 4.9-2: Consistency 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 Greenhouse Gas Emissions and Transportation (hazardous queueing and VMT), 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.

C-13

4.12 Transportation

Appendix J: Transportation Impact Analysis determined the following Caltrans jurisdiction is identified to experience significant and unavoidable impacts resulting from the project:

1. (Intersection #5) I-15 NB Ramps - Outer I-15/Stoddard Wells Road – LOS F during AM and PM peak hours

Any improvements constructed or in-lieu fees/fair share fees paid for the I-15 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 required are not part of an existing DIF/TUMF program and therefore are not planned to occur at all or by any certain date, whether by Apple Valley or Caltrans. Any improvements recommended or fees paid to mitigate impacts for the I-15 are beyond the control of the lead agency and evidence that these improvements will be completed or approved by Caltrans has not been provided. The EIR must be revised and recirculated to include the LOS analysis as cumulatively considerable significant

C-14

[17] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2

impact as the project conflicts with Transportation Impact Threshold A and Land Use and Planning Impact Threshold B 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

C-14 Cont.

Although the EIR concludes the project would result in significant and unavoidable impacts due to an increase in hazardous conditions (queuing at I-15 NB ramps and Stoddard Wells Rd.), the EIR has not fully analyzed the project's impacts within this threshold. 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 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, truck/trailer parking stalls are adjacent to the truck/trailer loading docks on the east and west sides of the building. These parking stalls that may be in use at any time and further restrict truck/trailer movement on the site. Additionally, heavy truck/trailers that enter the site from Johnson Road that need to utilize the loading docks on the west side of the building must utilize a windy road that traverses the passenger car parking area and creates further possibility of conflict between onsite vehicles. There are also no exhibits depicting emergency vehicle access. The EIR also states 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," which is deferred mitigation to after the CEQA public review process. 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.

C-15

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

C-16

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.

C-16 Cont.

5.6 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 "the Project's temporary and permanent employment requirements could *likely* be met by the *Town's* existing labor force without people needing to relocate into the Project *region.*" The EIR specifically states that the *Town's* existing labor force will accommodate the 2,108 jobs generated by the proposed project but only cites that the "unemployment rate for San Bernardino County is at 5%." 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.

C-17

SCAG's Connect SoCal Demographics and Growth Forecast[18] states that Apple Valley will add 12,200 jobs between 2016 - 2045. Utilizing the EIR's calculation of 904 employees, the project represents 7.4% of Apple Valley's employment growth from 2016 - 2045. A single project 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 and projects "in the pipeline" to determine if the project will exceed SCAG'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[19]), Apple Valley Commercial Project (49,995 square feet commercial space; 75 employees[20]), and The Development at Dale Evans and Lafayette (1,207,544 square feet of industrial/warehouse space; 1,172 employees[21]) combined with the proposed project will cumulatively generate 4,259 employees, which is 35% of Apple Valley's employment growth

[18] 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
[19] Apple Valley 143 https://ceqanet.opr.ca.gov/2022070019
[20] Apple Valley Commercial Project https://ceqanet.opr.ca.gov/2021100585
[21] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2

forecast over 29 years accounted for by only four recent 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 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.

C-17 Cont.

6.1 Growth Inducing Impacts and 6.2 Significant Irreversible Changes

The EIR has not provided an adequate or accurate cumulative analysis discussion here to demonstrate the impact of the proposed project in a cumulative setting. 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[22] 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 proposed project will have 36.9% building coverage of the site, 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[23] that was constructed at 29% building coverage of the site, the Development at Dale Evans and Lafayette[24] that was proposed at 35% building coverage of the site, and GTS Cold Storage[25] that was proposed at 49.9% 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 prepared to include this analysis in order to provide an adequate and accurate environmental analysis.

C-18

Further, employment generation has not been adequately analyzed as other recent projects such as Apple Valley 143 (2,520,000 square feet of industrial/warehouse space; 2,108 employees[26]), Apple Valley Commercial Project (49,995 square feet commercial space; 75 employees[27]), and The Development at Dale Evans and Lafayette (1,207,544 square feet of industrial/warehouse space;

C-19

[22] North Apple Valley Industrial Specific Plan https://www.applevalley.org/home/showpublisheddocument/18587/636149111285930000
[23] Project Jupiter Distribution Warehouse https://ceqanet.opr.ca.gov/2016041058
[24] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2
[25] GTS Cold Storage https://ceqanet.opr.ca.gov/2023080221
[26] Apple Valley 143 https://ceqanet.opr.ca.gov/2022070019
[27] Apple Valley Commercial Project https://ceqanet.opr.ca.gov/2021100585

1,172 employees[28]) combined with the proposed project will cumulatively generate 4,259 employees, which is 35% of Apple Valley's employment growth forecast over 29 years accounted for by only four recent 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 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.

C-19 Cont.

6.2 Significant Irreversible Changes

The EIR is erroneous and internally inconsistent in stating that, "According to the Town of Apple Valley General Plan and the Apple Valley Municipal Code, the land use and zoning designations for the Project site are Regional Commercial (C-R) with a Warehouse Distribution Regional Commercial Overlay." This information conflicts with the Project Description and several other portions of analysis within the EIR that state the project is located within the Industrial area of the NAVISP. The EIR must be revised and recirculated to include accurate information and accordingly update the analysis.

C-20

7.0 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" alternative and only two others - Other Development Project Alternative and Reduced Development Intensity Alternative. The EIR does not evaluate a reasonable range of alternatives as only two alternatives beyond the required No Project alternative is analyzed. The EIR does not include an alternatives that meets the project objectives and also 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 less than significant levels, and a mixed-use project that provides affordable housing and local-serving commercial uses that may reduce VMT, GHG emissions, and improve Air Quality.

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[28] The Development at Dale Evans and Lafayette https://ceqanet.opr.ca.gov/2022120356/2

Conclusion

For the foregoing reasons, GSEJA believes the EIR is flawed and a revised EIR must be prepared for the proposed project and circulated for public review. Golden State Environmental Justice Alliance 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.

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Sincerely,

Gary Ho
Blum, Collins & Ho LLP

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October 27, 2023

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

Subject: Comments on the 1M Warehouse Project (SCH No. 2023020285)

Dear Mr. Ho,

We have reviewed the September 2023 Draft Environmental Impact Report ("DEIR") for the 1M Warehouse Project ("Project") located in the City of Apple Valley ("City"). The Project proposes to construct 1,080,125-square-feet ("SF") of warehouse space, 15,000-SF of office space, and 1,579 parking spaces on the 67.3-acre site.

Our review concludes that the DEIR fails to adequately evaluate the Project's 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. An Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the environment.

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Air Quality

Failure to Provide Complete CalEEMod Output Files

Land use development projects under the California Environmental Quality Act ("CEQA") typically evaluate air quality impacts and calculate potential criteria air pollutant emissions using the California Emissions Estimator Model ("CalEEMod").[1] 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

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

can change the default values and input project-specific values, but 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 to the reader what parameters are used in calculating the Project's air pollutant emissions and demonstrate which default values are changed. Justifications are provided for the selected values.

C-24 Cont.

According to the DEIR, the Project's construction-related and operational emissions were calculated using CalEEMod Version 2022.1 (p. 4.2-21). However, this poses a problem as the currently available version is a soft-release which fails to provide complete output files.[2] Specifically, the "User Changes to Default Data" table no longer provides the quantitative counterparts to the changes to the default values (see excerpt below) (Appendix B-1, pp. 91, 180, 181, 237):

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction schedule adjusted according to project description and assumptions discussed with the PM.
Construction: Off-Road Equipment	CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.
Construction: Trips and VMT	Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively
Operations: Vehicle Data	Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic report. Unrefrigerated Warehouse-Rail used to estimate passenger vehicles and Unrefrigerated Warehouse-No Rail used to estimate trucks.
Operations: Water and Waste Water	No outdoor water use expected for parking lot.
Operations: Off-Road Equipment	Forklifts and yard truck calcs based on attached Excel spreadsheet.
Operations: Refrigerants	Warehouse is unrefrigerated.
Construction: Architectural Coatings	PDF that all arc coatings do not exceed 10 g/L
Operations: Architectural Coatings	PDF that all arc coatings are 10 g/L or less
Construction: Dust From Material Movement	Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

However, previous versions of CalEEMod, such as 2020.4.0, display the specific numeric changes to the model's default values (see example excerpt below):

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[2] "CalEEMod California Emissions Estimator Model Soft Release." California Air Pollution Control Officers Association (CAPCOA), 2022, *available at:* https://caleemod.com/.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	167.00
tblConstructionPhase	PhaseEndDate	11/22/2023	8/25/2023
tblConstructionPhase	PhaseEndDate	9/27/2023	6/30/2023
tblConstructionPhase	PhaseEndDate	10/25/2023	7/28/2023
tblConstructionPhase	PhaseStartDate	10/26/2023	7/29/2023
tblConstructionPhase	PhaseStartDate	9/28/2023	7/1/2023
tblLandUse	LandUseSquareFeet	160,000.00	160,371.00
tblLandUse	LandUseSquareFeet	119,000.00	41,155.00
tblLandUse	LotAcreage	3.67	3.68
tblLandUse	LotAcreage	2.73	2.74

C-24 Cont.

The output files associated with CalEEMod Version 2022.1 fail to divulge the exact parameters used to calculate Project emissions. To remedy this issue, the DEIR should have provided access to the model's ".JSON" output files, which allow third parties to review the model's revised input parameters.[3] Without access to the complete output files, including the specific numeric changes to the default values, we cannot verify that the DEIR's air modeling and subsequent analysis is an accurate reflection of the proposed Project. As a result, a revised EIR should be prepared to include an updated air quality analysis that correctly provides the complete output files for CalEEMod Version 2022.1 or includes an updated air model using an older release of CalEEMod.[4]

Unsubstantiated Changes to Individual Construction Phase Lengths

C-25

Review of the CalEEMod output files demonstrates that the "1M Warehouse – Mitigated Detailed Report" model include several changes to the default individual construction phase lengths (see excerpt below) (Appendix B-1, pp. 91, 180, 237).

[3] "Video Tutorials for CalEEMod Version 2022.1." California Air Pollution Control Officers Association (CAPCOA), May 2022, *available at:* https://www.caleemod.com/tutorials.
[4] "CalEEMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* http://www.aqmd.gov/caleemod/download-model.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction schedule adjusted according to project description and assumptions discussed with the PM.
Construction: Off-Road Equipment	CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.
Construction: Trips and VMT	Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively
Operations: Vehicle Data	Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic report. Unrefrigerated Warehouse-Rail used to estimate passenger vehicles and Unrefrigerated Warehouse-No Rail used to estimate trucks.
Operations: Water and Waste Water	No outdoor water use expected for parking lot.
Operations: Off-Road Equipment	Forklifts and yard truck calcs based on attached Excel spreadsheet.
Operations: Refrigerants	Warehouse is unrefrigerated.
Construction: Architectural Coatings	PDF that all arc coatings do not exceed 10 g/L
Operations: Architectural Coatings	PDF that all arc coatings are 10 g/L or less
Construction: Dust From Material Movement	Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

As a result of these changes, the model includes the following construction schedule (see excerpt below) (Appendix B-1, pp. 73, 162, 223):

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase
Site Preparation	Site Preparation	12/4/2023	1/12/2024	5.00	30.0
Grading	Grading	1/13/2024	3/15/2024	5.00	45.0
Building Construction	Building Construction	8/31/2024	5/2/2025	5.00	175
Paving	Paving	5/3/2025	7/18/2025	5.00	55.0
Architectural Coating	Architectural Coating	7/19/2025	10/3/2025	5.00	55.0
Pipeline Installation	Trenching	3/16/2024	8/30/2024	5.00	120

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

> "Construction schedule adjusted according to project description and assumptions discussed with the PM" (Appendix B-1, pp. 91, 180, 181, 237).

Regarding the Project's anticipated construction duration, the DEIR states:

> "Based on information provided by the Project Applicant, it is assumed that construction of the Project would begin December 2023 and would conclude towards the end of October 2025, lasting approximately 22 months" (p. 3-14).

Additionally, the DEIR includes the following schedule regarding the duration of construction phase lengths (p. 3-14):

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[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.

- Site preparation: December 2023 – January 2024
- Grading: January 2024 – March 2024
- Pipeline installation: March 2024 – August 2024
- Building construction: September 2024 – May 2025
- Paving: May 2025 – July 2025
- Architectural coating: July 2025 – October 2025

However, the changes to the individual construction phase lengths remain unsubstantiated. While the DEIR justifies a total length of Project construction of 22 months, the DEIR fails to provide a source for the individual construction phase lengths outlined above. Until a proper source is provided, the model should have included proportionately altered individual phase lengths to match the proposed construction duration of 22 months.[6]

The construction schedule included in the model presents an issue, as the construction emissions are improperly spread out over a longer period of time for some phases, but not for others. According to the CalEEMod User's Guide, each construction phase is associated with different emissions activities (see excerpt below).[7]

> ***Demolition*** involves removing buildings or structures.
>
> ***Site Preparation*** involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.
>
> ***Grading*** involves the cut and fill of land to ensure that the proper base and slope is created for the foundation.
>
> ***Building Construction*** involves the construction of the foundation, structures and buildings.
>
> ***Architectural Coating*** involves the application of coatings to both the interior and exterior of buildings or structures, the painting of parking lot or parking garage striping, associated signage and curbs, and the painting of the walls or other components such as stair railings inside parking structures.
>
> ***Paving*** involves the laying of concrete or asphalt such as in parking lots, roads, driveways, or sidewalks.

By disproportionately altering and extending some of the individual construction phase lengths without proper justification, the model assumes there are a greater number of days to complete the construction activities required by the prolonged phases. As a result, there will be less construction activities required per day and, consequently, less pollutants emitted per day. Until we are able to verify the revised construction schedule, the model may underestimate the peak daily emissions associated with some phases of construction and should not be relied upon to determine Project significance.

C-25 Cont.

[6] See Attachment A for proportionately altered construction schedule.
[7] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 32.

Unsubstantiated Changes to Operational Vehicle Fleet Mix

Review of the CalEEMod output files demonstrates that the "1M Warehouse – Mitigated Detailed Report" model includes changes to the default operational vehicle fleet mix percentages (see excerpt below) (Appendix B-1, pp. 91, 180, 237).

Screen	Justification
Construction: Construction Phases	Construction schedule adjusted according to project description and assumptions discussed with the PM.
Construction: Off-Road Equipment	CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.
Construction: Trips and VMT	Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively
Operations: Vehicle Data	Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic report. Unrefrigerated Warehouse-Rail used to estimate passenger vehicles and Unrefrigerated Warehouse-No Rail used to estimate trucks.
Operations: Water and Waste Water	No outdoor water use expected for parking lot.
Operations: Off-Road Equipment	Mitigation = all electric cargo equipment
Operations: Refrigerants	Warehouse is unrefrigerated.
Construction: Architectural Coatings	PDF that all arc coatings do not exceed 10 g/L
Operations: Architectural Coatings	PDF that all arc coatings are 10 g/L or less
Construction: Dust From Material Movement	Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

Regarding fleet mix percentages, the DEIR includes the following table (see excerpt below) (Appendix J, pp. 31, Table 2):

Table 2. Project Trip Generation

Land Use	ITE Code	Size/ Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
High-Cube Fulfillment Center Warehouse	155 (non-sort)	TSF	1.81	0.12	0.03	0.15	0.06	0.10	0.16
Trip Generation									
1M Warehouse	155	1080.125 TSF	1,955	131	31	162	67	105	173
Trip Generation (by Vehicle Classification)									
Vehicle Mix[2]									
Passenger Vehicles	72.5%		1,417	95	22	117	49	76	125
2-Axle Trucks	4.6%		90	6	1	7	3	5	8
3-Axle Trucks	5.7%		111	7	2	9	4	6	10
4+-Axle Trucks	17.2%		336	23	5	28	12	18	30
Total Trip Generation (non-PCE)			1,955	131	31	162	67	105	173
Vehicle Mix[2]	PCE Factor[3]								
Passenger Vehicles	1.0		1,417	95	22	117	49	76	125

However, these changes remain unsubstantiated. As previously discussed, the output files for CalEEMod 2022.1 do not present the numeric changes to any model defaults. Upon further review of the output files, the model's fleet mix percentages are not provided whatsoever. Until the DEIR verifies that the

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model includes the correct breakdown of every vehicle type that will access the Project site during operations, we cannot verify that the values included in the model are accurate.[8]

These unsubstantiated changes present an issue, as CalEEMod uses operational vehicle fleet mix percentages to calculate the Project's operational emissions associated with on-road vehicles.[9] By including several unsubstantiated changes to the default operational vehicle fleet mix percentages, the model may underestimate the Project's mobile-source operational emissions and should not be relied upon to determine Project significance.

C-26 Cont.

Unsubstantiated Changes to Operational Wastewater Values

Review of the CalEEMod output files demonstrates that "1M Warehouse – Mitigated Detailed Report" model includes changes to the default operational water and wastewater values (see excerpt below) (AQ & GHG Study, (Appendix B-1, pp. 91, 180, 237).

Screen	Justification
Construction: Construction Phases	Construction schedule adjusted according to project description and assumptions discussed with the PM.
Construction: Off-Road Equipment	CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.
Construction: Trips and VMT	Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively
Operations: Vehicle Data	Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic report. Unrefrigerated Warehouse-Rail used to estimate passenger vehicles and Unrefrigerated Warehouse-No Rail used to estimate trucks.
Operations: Water and Waste Water	No outdoor water use expected for parking lot.
Operations: Off-Road Equipment	Mitigation = all electric cargo equipment
Operations: Refrigerants	Warehouse is unrefrigerated.
Construction: Architectural Coatings	PDF that all arc coatings do not exceed 10 g/L
Operations: Architectural Coatings	PDF that all arc coatings are 10 g/L or less
Construction: Dust From Material Movement	Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

C-27

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[10] As demonstrated above in the "User Changes to Default Data" table, the justification provided for these changes is:

> "No outdoor water use expected for parking lot" (AQ & GHG Study, Appendix B-1, pp. 91, 180, 181, 237).

However, this justification is insufficient, as the DEIR and associated documents fail to mention or corroborate this claim. As previously discussed, the CalEEMod User's Guide requires changes to be supported by substantial evidence.[11] As the DEIR and associated documents fail to provide substantial

[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. 38.
[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. 36.
[10] "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.
[11] "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.

evidence to support the assumption that no outdoor water use is expected to be of use in the parking lot, we cannot verify the changes.

Furthermore, additional review demonstrates that CalEEMod version 2022.1 fails to display the wastewater treatment values and percentages. As such, we cannot verify these changes.

These unsubstantiated changes present an issue, as each type of wastewater treatment system is associated with different GHG emission factors, which are used by CalEEMod to calculate the Project's total GHG emissions.[12] By including unsubstantiated changes to the default wastewater treatment system percentages, the model may underestimate the Project's GHG emissions and should not be relied upon to determine Project significance.

C-27 Cont.

Unsubstantiated Reductions to Architectural Coating Emission Factors

Review of the CalEEMod output files demonstrates that the "1M Warehouse – Mitigated Detailed Report" model includes changes to the default architectural coating emission factors (see excerpt below) (Appendix B-1, pp. 91, 180, 237).

Screen	Justification
Construction: Construction Phases	Construction schedule adjusted according to project description and assumptions discussed with the PM.
Construction: Off-Road Equipment	CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.
Construction: Trips and VMT	Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively
Operations: Vehicle Data	Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.
Operations: Fleet Mix	Fleetmix adjusted based on vehicle type split provided in traffic report. Unrefrigerated Warehouse-Rail used to estimate passenger vehicles and Unrefrigerated Warehouse-No Rail used to estimate trucks.
Operations: Water and Waste Water	No outdoor water use expected for parking lot.
Operations: Off-Road Equipment	Mitigation = all electric cargo equipment
Operations: Refrigerants	Warehouse is unrefrigerated.
Construction: Architectural Coatings	PDF that all arc coatings do not exceed 10 g/L
Operations: Architectural Coatings	PDF that all arc coatings are 10 g/L or less
Construction: Dust From Material Movement	Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

C-28

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[13] As demonstrated above in the "User Changes to Default Data" table, the justification provided for these changes is:

> "PDF that all arc coatings do not exceed 10 g/L" (Appendix B-1, pp. 91, 180, 181, 237).

Furthermore, regarding the architectural coatings for to the proposed project, the DEIR states:

[12] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 45.
[13] "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.

> "PDF-AQ-1: 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 (g/L)" (p. 4.2-22).

However, the reductions to the architectural coating emission factors remain unsubstantiated as the DEIR fails to explicitly require this Project Design Feature ("PDF") through formal mitigation measures. This is incorrect, 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."[14]

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As demonstrated in the excerpt above, measures that are not formally included in the mitigation monitoring and reporting program ("MMRP") may be eliminated from the Project's design altogether. As the use of architectural coating requirements are not formally included as mitigation measures, we cannot guarantee that these standards would be implemented, monitored, and enforced on the Project site.

These unsubstantiated reductions present an issue, as CalEEMod uses the architectural coating emission factors to calculate the Project's reactive organic gas/volatile organic compound ("ROG"/"VOC") emissions.[15] By including unsubstantiated reductions to the default architectural coating emission factors, the model may underestimate the Project's construction-related ROG/VOC emissions and should not be relied upon to determine Project significance.

Updated Analysis Indicates a Potentially Significant Air Quality Impact

In an effort to more accurately estimate the Project's emissions we prepared an updated CalEEMod model, using the Project-specific information provided by the DEIR. In our updated model, we omitted the unsubstantiated changes to the operational vehicle fleet mix values, wastewater values, and architectural coating emission factors; additionally, we proportionately altered the construction phase lengths to match the total construction duration of 22 months.[16]

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[14] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.
[15] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 35, 40.
[16] See Attachment A for updated CalEEMod model.

Our updated analysis estimates that the VOC emissions associated with Project construction exceed the applicable MDAQMD threshold of 137 pounds per day ("lbs/day"), as referenced by the DEIR (p. 4.2-32, Table 4.2-9) (see table below).[17]

SWAPE Criteria Air Pollutant Emissions	
Construction	**VOC** (lbs/day)
DEIR	20.52
SWAPE	1,001.79
% Increase	4,782%
MDAQMD Threshold	**137**
Exceeds?	***Yes***

C-29 Cont.

As demonstrated above, construction-related ROG emissions, as estimated by SWAPE, increase by approximately 4,782% and exceed the applicable MDAQMD significance threshold. Our updated modeling demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed by the DEIR. As a result, a revised EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the environment.

Diesel Particulate Matter Emissions Inadequately Evaluated

The DEIR conducts a health risk analysis ("HRA") evaluating impacts from exposure to diesel particulate matter ("DPM") emissions during Project construction and operation. Specifically, the DEIR estimates that the maximum cancer risk posed to nearby, existing residential sensitive receptors as a result of Project construction and operation would be 3.65 and 2.95 in one million, respectively (see tables below) (p. 4.2-39, Table 4.2-12); p. 4.2-40, Table 4.2-14).

C-30

Table 4.2-12. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	3.65	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0023	1.0	Less than Significant

[17] "California Environmental Quality Act (CEQA) And Federal Conformity Guidelines." MDAQMD, August 2016, *available at*: https://www.mdaqmd.ca.gov/home/showdocument?id=192#:~:text=Significance%20Thresholds,-Any%20project%20is&text=Exposes%20sensitive%20receptors%20to%20substantial,than%20or%20equal%20to%201, p. 10.

Table 4.2-14. Operational Health Risk Assessment Results - Mitigated

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	2.95	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0008	1.0	Less than Significant

However, the DEIR's evaluation of the Project's potential health risks, as well as the subsequent less-than-significant impact conclusion, is unreliable for two reasons.

First, the DEIR's HRAs are unreliable, as they rely upon emissions estimates from a flawed air model, as discussed above in the section titled "Unsubstantiated Input Parameters Used to Estimate Project Emissions." As such, the HRAs are based on potentially underestimated DPM concentrations to calculate the health risk associated with Project construction. As a result, the DEIR's HRAs and resulting cancer risk should not be relied upon to determine Project significance.

Second, the DEIR fails to provide the HRA's exposure assumptions, such as Age Sensitivity Factors ("ASF") and Fraction of Time at Home ("FAH") values mentioned in the excerpt above. As a result, we cannot verify the calculation of the Project's construction cancer risk is accurate. Additionally, the DEIR and associated documents fail to include the dose and risk equations used to calculate the Project's construction and operational cancer risks. 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 models should have used the following equation:[18]

C-30 Cont.

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 ($mg/kg\text{-}day^{-1}$)
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)

However, 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.

[18] "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.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR estimates that the Project would result in net annual mitigated greenhouse gas ("GHG") emissions of 21,169.5-metric tons of carbon dioxide equivalents per year ("MT CO_2e/year") (p. 4.6-31, Table 4.6-6).

Table 4.6-6. Estimated Annual Operation Greenhouse Gas Emissions – Mitigated

Emissions Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Mobile	15,788	0.12	1.57	16,282
Area	15.8	< 0.005	< 0.005	15.8
Energy	3,993	0.37	0.04	4,013
Water	246	6.52	0.16	455
Waste	90.9	9.05	0.00	317
Refrigerants	0.00	0.00	0.00	0.00
Off-Road Equipment	0.00	0.00	0.00	0.00
Stationary	11.4	< 0.005	< 0.005	11.5
Total	20,145	16.10	1.77	21,095
			Amortized Construction Emissions	*74.5*
			Operations with Amortized Construction GHG Emissions	21,169.5

As such, the DEIR concludes that the Project would exceed the SCAQMD bright-line threshold of 3,000 MT CO_2e/year and 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 by approximately 18,170 MT CO2e. No feasible mitigation measures beyond those already identified 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 increase in GHG emissions would be significant and unavoidable" (p. 4.6-31).

However, 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 incorrect. 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."[19]

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[19] "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.

As indicated above, an impact can only be labeled as significant-and-unavoidable after all available, feasible mitigation is considered. Here, while the EIR implements MM-GHG-1 through MM-GHG-3, the DEIR fails to implement *all* feasible mitigation (p. 4.6-40). Therefore, the DEIR's conclusion that Project's GHG emissions would be significant-and-unavoidable is unsubstantiated. 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.

C-31 Cont.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant air quality, health risk, and GHG impacts that should be mitigated further. In an effort to reduce emissions, the Project should consider the implementation of the following mitigation measures found in the California Department of Justice Warehouse Project Best Practices document.[20]

- Requiring off-road construction equipment to be hybrid electric-diesel or zero emission, where available, and all diesel-fueled off-road construction equipment to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Using electric-powered hand tools, forklifts, and pressure washers, and providing electrical hook ups to the power grid rather than use of diesel-fueled generators to supply their power.
- Designating an area in the construction site where electric-powered construction vehicles and equipment can charge.
- Limiting the amount of daily grading disturbance area.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
- Forbidding idling of heavy equipment for more than three minutes.
- Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
- Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.

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[20] "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.

- Using paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L.
- Providing information on transit and ridesharing programs and services to construction employees.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.
- Requiring all heavy-duty vehicles engaged in drayage to or from the project site to be zero-emission beginning in 2030.
- Requiring all on-site motorized operational equipment, such as forklifts and yard trucks, to be zero-emission with the necessary charging or fueling stations provided.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
- Forbidding trucks from idling for more than three minutes and requiring operators to turn off engines when not in use.
- Posting both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the local air district, and the building manager.
- 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.
- 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.
- Unless the owner of the facility records a covenant on the title of the underlying property ensuring that the property cannot be used to provide refrigerated warehouse space, constructing electric plugs for electric transport refrigeration units at every dock door and requiring truck operators with transport refrigeration units to use the electric plugs when at loading docks.
- Oversizing electrical rooms by 25 percent or providing a secondary electrical room to accommodate future expansion of electric vehicle charging capability.
- 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.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.

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Cont.

- Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- 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.
- 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.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- 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.

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These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduces emissions released during Project construction and operation.

As it is policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045, we emphasize the applicability of incorporating solar power system into the Project design. Until the feasibility of incorporating on-site renewable energy production is considered, the Project should not be approved.

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A revised EIR should be prepared to include all feasible mitigation measures, as well as include updated air quality, health risk, and GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The revised EIR should also demonstrate a

commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

C-33 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 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.

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Sincerely,

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

Paul E. Rosenfeld, Ph.D.

Attachment A: Updated Construction Schedule
Attachment B: Updated CalEEMod Output Files
Attachment C: Matt Hagemann CV
Attachment D: Paul Rosenfeld CV

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Attachment A

Construction Schedule Calculations					
Phase	Default Phase Length	Construction Duration	%	Construction Duration	Revised Phase Length
site prep	30	1334	0.0225	595	13
Grading	75	1334	0.0562	595	33
Building Construction	740	1334	0.5547	595	330
Paving	55	1334	0.0412	595	25
Architectural Coating	55	1334	0.0412	595	25
Pipeline Installation	120	1334	0.0900	595	54

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	Total Default Construction Duration	Revised Construction Duration
Start Date	12/4/2023	12/4/2023
End Date	7/30/2027	7/21/2025
Total Days	1334	595

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

1M Warehouse

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	297.00	1000sqft	6.82	297,034.00	0
Unrefrigerated Warehouse-Rail	783.00	1000sqft	18.00	783,091.00	0
Parking Lot	1,023.00	1000sqft	23.50	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**	2025
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with EIR's Model.

Land Use - Consistent with EIR's Model.

Construction Phase - Consistent with Comment on: "Unsubstantiated Changes to Individual Construction Phase Lengths".

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.

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

Trips and VMT - Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively.

Grading - Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

Architectural Coating - See Comment on: "Unsubstantiated Changes to Architectural Coating Values".

Vehicle Trips - Consistent with EIR's Model.

Vehicle Emission Factors - Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Area Coating - PDF that all arc coatings are 10 g/L or less.

Energy Use -

Water And Wastewater - See Comment on: "Unsubstantiated Changes to Operational Wastewater Values".

Solid Waste -

Construction Off-road Equipment Mitigation - Consistent with EIR's Model.

Operational Off-Road Equipment - Forklifts and yard truck calcs based on attached Excel spreadsheet.

Fleet Mix - See Comment on: "Unsubstantiated Changes to Operational Vehicle Fleet Mix".

Stationary Sources - Emergency Generators and Fire Pumps - Consistent with EIR's Model.

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Cont.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblAreaCoating	Area_Parking	0	61380
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	55.00	25.00
tblConstructionPhase	NumDays	740.00	330.00
tblConstructionPhase	NumDays	75.00	33.00
tblConstructionPhase	NumDays	55.00	25.00

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

tblConstructionPhase	NumDays	30.00	13.00
tblGrading	AcresOfGrading	99.00	135.00
tblGrading	AcresOfGrading	19.50	45.00
tblGrading	MaterialExported	0.00	152,288.00
tblLandUse	LandUseSquareFeet	297,000.00	297,034.00
tblLandUse	LandUseSquareFeet	783,000.00	783,091.00
tblLandUse	LandUseSquareFeet	1,023,000.00	0.00
tblLandUse	LotAcreage	17.98	18.00
tblLandUse	LotAcreage	23.48	23.50
tblOffRoadEquipment	HorsePower	78.00	37.00
tblOffRoadEquipment	HorsePower	231.00	367.00
tblOffRoadEquipment	HorsePower	158.00	36.00
tblOffRoadEquipment	HorsePower	89.00	82.00
tblOffRoadEquipment	HorsePower	84.00	14.00
tblOffRoadEquipment	HorsePower	187.00	148.00
tblOffRoadEquipment	HorsePower	130.00	81.00
tblOffRoadEquipment	HorsePower	132.00	89.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	247.00	367.00
tblOffRoadEquipment	HorsePower	247.00	367.00
tblOffRoadEquipment	HorsePower	367.00	423.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	78.00	37.00
tblOffRoadEquipment	HorsePower	81.00	33.00
tblOffRoadEquipment	HorsePower	158.00	36.00
tblOffRoadEquipment	HorsePower	89.00	82.00
tblOffRoadEquipment	HorsePower	130.00	81.00

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Cont.

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

tblOffRoadEquipment	HorsePower	132.00	89.00
tblOffRoadEquipment	HorsePower	84.00	11.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	LoadFactor	0.48	0.38
tblOffRoadEquipment	LoadFactor	0.73	0.48
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	89.00	82.00
tblOperationalOffRoadEquipment	OperHorsePower	89.00	82.00
tblOperationalOffRoadEquipment	OperHorsePower	89.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	98.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	32.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	300.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	8.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	15,057.00	418.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripNumber	0.00	4.00

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Cont.

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

tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	177.00	178.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripNumber	23.00	24.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	91.00	92.00
tblVehicleTrips	ST_TR	1.74	538.00
tblVehicleTrips	ST_TR	1.74	1,417.00
tblVehicleTrips	SU_TR	1.74	538.00
tblVehicleTrips	SU_TR	1.74	1,417.00
tblVehicleTrips	WD_TR	1.74	538.00
tblVehicleTrips	WD_TR	1.74	1,417.00

2.0 Emissions Summary

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Cont.

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					
2023	0.0404	0.4003	0.3624	5.9000e-004	0.2377	0.0178	0.2555	0.0874	0.0164	0.1039	0.0000	52.3546	52.3546	0.0154	5.9000e-004	52.9141
2024	0.3808	2.7432	3.8165	0.0124	0.8875	0.0903	0.9779	0.2502	0.0841	0.3343	0.0000	1,134.5610	1,134.5610	0.1058	0.0716	1,158.5392
2025	12.7902	1.6551	2.5429	9.0000e-003	0.6620	0.0473	0.7093	0.1775	0.0441	0.2216	0.0000	830.8209	830.8209	0.0630	0.0555	848.9327
Maximum	**12.7902**	**2.7432**	**3.8165**	**0.0124**	**0.8875**	**0.0903**	**0.9779**	**0.2502**	**0.0841**	**0.3343**	**0.0000**	**1,134.5610**	**1,134.5610**	**0.1058**	**0.0716**	**1,158.5392**

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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					
2023	0.0404	0.4003	0.3624	5.9000e-004	0.1090	0.0178	0.1268	0.0399	0.0164	0.0563	0.0000	52.3546	52.3546	0.0154	5.9000e-004	52.9140
2024	0.3808	2.7432	3.8165	0.0124	0.8051	0.0903	0.8954	0.2223	0.0841	0.3064	0.0000	1,134.5607	1,134.5607	0.1058	0.0716	1,158.5388
2025	12.7902	1.6551	2.5429	9.0000e-003	0.6620	0.0473	0.7093	0.1775	0.0441	0.2216	0.0000	830.8207	830.8207	0.0630	0.0555	848.9325
Maximum	**12.7902**	**2.7432**	**3.8165**	**0.0124**	**0.8051**	**0.0903**	**0.8954**	**0.2223**	**0.0841**	**0.3064**	**0.0000**	**1,134.5607**	**1,134.5607**	**0.1058**	**0.0716**	**1,158.5388**

1M Warehouse - 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	11.81	0.00	10.87	14.65	0.00	11.44	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	12-4-2023	3-3-2024	1.0832	1.0832
2	3-4-2024	6-3-2024	0.5894	0.5894
3	6-4-2024	9-3-2024	0.8093	0.8093
4	9-4-2024	12-3-2024	0.8109	0.8109
5	12-4-2024	3-3-2025	0.7785	0.7785
6	3-4-2025	6-3-2025	0.7726	0.7726
7	6-4-2025	9-3-2025	2.3748	2.3748
8	9-4-2025	9-30-2025	9.6724	9.6724
		Highest	9.6724	9.6724

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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	5.4718	1.7000e-004	0.0193	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0376	0.0376	1.0000e-004	0.0000	0.0400
Energy	0.0117	0.1064	0.0894	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	115.8556	115.8556	2.2200e-003	2.1200e-003	116.5440
Mobile	584.6050	882.2586	5,812.1894	12.9597	1,397.1932	10.3950	1,407.5881	373.1964	9.7282	382.9246	0.0000	1,199,630.3181	1,199,630.3181	70.7668	61.8208	1,219,822.0887
Offroad	1.9145	44.7482	350.9945	0.0768		1.2202	1.2202		1.1749	1.1749	0.0000	8,191.8224	8,191.8224	2.6494	0.0000	8,258.0574
Stationary	0.0123	0.0344	0.0314	6.0000e-005		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	5.7120	5.7120	8.0000e-004	0.0000	5.7320
Waste						0.0000	0.0000		0.0000	0.0000	206.0764	0.0000	206.0764	12.1788	0.0000	510.5456
Water						0.0000	0.0000		0.0000	0.0000	79.2342	0.0000	79.2342	8.1381	0.1922	339.9500
Total	**592.0153**	**927.1478**	**6,163.3239**	**13.0372**	**1,397.1932**	**11.6251**	**1,408.8183**	**373.1964**	**10.9131**	**384.1095**	**285.3106**	**1,207,943.7456**	**1,208,229.0562**	**93.7362**	**62.0151**	**1,229,052.9578**

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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

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	5.4718	1.7000e-004	0.0193	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0376	0.0376	1.0000e-004	0.0000	0.0400
Energy	0.0117	0.1064	0.0894	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	115.8556	115.8556	2.2200e-003	2.1200e-003	116.5440
Mobile	584.6050	882.2586	5,812.1894	12.9597	1,397.1932	10.3950	1,407.5881	373.1964	9.7282	382.9246	0.0000	1,199,630.3181	1,199,630.3181	70.7668	61.8208	1,219,822.0887
Offroad	1.9145	44.7482	350.9945	0.0768		1.2202	1.2202		1.1749	1.1749	0.0000	8,191.8224	8,191.8224	2.6494	0.0000	8,258.0574
Stationary	0.0123	0.0344	0.0314	6.0000e-005		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	5.7120	5.7120	8.0000e-004	0.0000	5.7320
Waste						0.0000	0.0000		0.0000	0.0000	206.0764	0.0000	206.0764	12.1788	0.0000	510.5456
Water						0.0000	0.0000		0.0000	0.0000	79.2342	0.0000	79.2342	8.1381	0.1922	339.9500
Total	**592.0153**	**927.1478**	**6,163.3239**	**13.0372**	**1,397.1932**	**11.6251**	**1,408.8183**	**373.1964**	**10.9131**	**384.1095**	**285.3106**	**1,207,943.7456**	**1,208,229.0562**	**93.7362**	**62.0151**	**1,229,052.9578**

	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

C-35 Cont.

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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	site preparation	Site Preparation	12/4/2023	12/20/2023	5	13	
2	Grading	Grading	12/21/2023	2/5/2024	5	33	
3	Pipeline Installation	Trenching	2/6/2024	4/19/2024	5	54	
4	Building Construction	Building Construction	4/20/2024	7/25/2025	5	330	
5	Paving	Paving	7/26/2025	8/29/2025	5	25	
6	Architectural Coating	Architectural Coating	8/30/2025	10/3/2025	5	25	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 135

Acres of Paving: 23.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,620,188; Non-Residential Outdoor: 540,063; Striped Parking Area: 0 (Architectural Coating – sqft)

C-35 Cont.

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
site preparation	Rubber Tired Dozers	3	8.00	367	0.40
site preparation	Tractors/Loaders/Backhoes	4	8.00	84	0.37
Grading	Excavators	2	8.00	36	0.38
Grading	Graders	1	8.00	148	0.41
Grading	Rubber Tired Dozers	1	8.00	367	0.40
Grading	Scrapers	2	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	84	0.37
Pipeline Installation	Air Compressors	1	8.00	37	0.38
Pipeline Installation	Concrete/Industrial Saws	1	8.00	33	0.48
Pipeline Installation	Excavators	1	8.00	36	0.38
Pipeline Installation	Forklifts	1	8.00	82	0.20
Pipeline Installation	Pavers	1	8.00	81	0.42

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

Pipeline Installation	Paving Equipment	1	8.00	89	0.36
Pipeline Installation	Pumps	1	8.00	11	0.74
Pipeline Installation	Rollers	1	8.00	36	0.38
Pipeline Installation	Tractors/Loaders/Backhoes	1	8.00	84	0.37
Building Construction	Cranes	1	7.00	367	0.29
Building Construction	Forklifts	3	8.00	82	0.20
Building Construction	Generator Sets	1	8.00	14	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	84	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	81	0.42
Paving	Paving Equipment	2	8.00	89	0.36
Paving	Rollers	2	8.00	36	0.38
Architectural Coating	Air Compressors	1	6.00	37	0.48

C-35 Cont.

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	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	4.00	418.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	9	24.00	4.00	2.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	454.00	178.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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

3.2 site preparation - 2023

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					0.1413	0.0000	0.1413	0.0671	0.0000	0.0671	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0260	0.2571	0.2364	3.2000e-004		0.0119	0.0119		0.0109	0.0109	0.0000	28.1203	28.1203	9.0900e-003	0.0000	28.3477
Total	**0.0260**	**0.2571**	**0.2364**	**3.2000e-004**	**0.1413**	**0.0119**	**0.1532**	**0.0671**	**0.0109**	**0.0781**	**0.0000**	**28.1203**	**28.1203**	**9.0900e-003**	**0.0000**	**28.3477**

C-35 Cont.

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	3.0000e-005	1.2600e-003	4.4000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.6484	0.6484	2.0000e-005	1.0000e-004	0.6773
Worker	4.7000e-004	3.7000e-004	4.6200e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2401	1.2401	3.0000e-005	3.0000e-005	1.2505
Total	**5.0000e-004**	**1.6300e-003**	**5.0600e-003**	**2.0000e-005**	**1.8500e-003**	**2.0000e-005**	**1.8700e-003**	**5.0000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**1.8885**	**1.8885**	**5.0000e-005**	**1.3000e-004**	**1.9278**

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

3.2 site preparation - 2023

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					0.0636	0.0000	0.0636	0.0302	0.0000	0.0302	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0260	0.2571	0.2364	3.2000e-004		0.0119	0.0119		0.0109	0.0109	0.0000	28.1203	28.1203	9.0900e-003	0.0000	28.3476
Total	**0.0260**	**0.2571**	**0.2364**	**3.2000e-004**	**0.0636**	**0.0119**	**0.0755**	**0.0302**	**0.0109**	**0.0411**	**0.0000**	**28.1203**	**28.1203**	**9.0900e-003**	**0.0000**	**28.3476**

C-35 Cont.

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	3.0000e-005	1.2600e-003	4.4000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.6484	0.6484	2.0000e-005	1.0000e-004	0.6773
Worker	4.7000e-004	3.7000e-004	4.6200e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2401	1.2401	3.0000e-005	3.0000e-005	1.2505
Total	**5.0000e-004**	**1.6300e-003**	**5.0600e-003**	**2.0000e-005**	**1.8500e-003**	**2.0000e-005**	**1.8700e-003**	**5.0000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**1.8885**	**1.8885**	**5.0000e-005**	**1.3000e-004**	**1.9278**

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

3.3 Grading - 2023

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					0.0927	0.0000	0.0927	0.0193	0.0000	0.0193	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0135	0.1355	0.1165	2.1000e-004		5.8700e-003	5.8700e-003		5.4000e-003	5.4000e-003	0.0000	18.7912	18.7912	6.0800e-003	0.0000	18.9432
Total	**0.0135**	**0.1355**	**0.1165**	**2.1000e-004**	**0.0927**	**5.8700e-003**	**0.0985**	**0.0193**	**5.4000e-003**	**0.0247**	**0.0000**	**18.7912**	**18.7912**	**6.0800e-003**	**0.0000**	**18.9432**

C-35 Cont.

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	1.0000e-004	5.1600e-003	1.5000e-003	2.0000e-005	7.6000e-004	5.0000e-005	8.1000e-004	2.1000e-004	5.0000e-005	2.6000e-004	0.0000	2.4636	2.4636	1.0000e-004	3.9000e-004	2.5826
Vendor	2.0000e-005	6.8000e-004	2.4000e-004	0.0000	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3491	0.3491	1.0000e-005	5.0000e-005	0.3647
Worker	2.8000e-004	2.2000e-004	2.7600e-003	1.0000e-005	9.7000e-004	0.0000	9.7000e-004	2.6000e-004	0.0000	2.6000e-004	0.0000	0.7419	0.7419	2.0000e-005	2.0000e-005	0.7482
Total	**4.0000e-004**	**6.0600e-003**	**4.5000e-003**	**3.0000e-005**	**1.8600e-003**	**6.0000e-005**	**1.9200e-003**	**5.1000e-004**	**6.0000e-005**	**5.6000e-004**	**0.0000**	**3.5547**	**3.5547**	**1.3000e-004**	**4.6000e-004**	**3.6955**

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

3.3 Grading - 2023

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					0.0417	0.0000	0.0417	8.6900e-003	0.0000	8.6900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0135	0.1355	0.1165	2.1000e-004		5.8700e-003	5.8700e-003		5.4000e-003	5.4000e-003	0.0000	18.7912	18.7912	6.0800e-003	0.0000	18.9431
Total	**0.0135**	**0.1355**	**0.1165**	**2.1000e-004**	**0.0417**	**5.8700e-003**	**0.0476**	**8.6900e-003**	**5.4000e-003**	**0.0141**	**0.0000**	**18.7912**	**18.7912**	**6.0800e-003**	**0.0000**	**18.9431**

C-35 Cont.

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	1.0000e-004	5.1600e-003	1.5000e-003	2.0000e-005	7.6000e-004	5.0000e-005	8.1000e-004	2.1000e-004	5.0000e-005	2.6000e-004	0.0000	2.4636	2.4636	1.0000e-004	3.9000e-004	2.5826
Vendor	2.0000e-005	6.8000e-004	2.4000e-004	0.0000	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3491	0.3491	1.0000e-005	5.0000e-005	0.3647
Worker	2.8000e-004	2.2000e-004	2.7600e-003	1.0000e-005	9.7000e-004	0.0000	9.7000e-004	2.6000e-004	0.0000	2.6000e-004	0.0000	0.7419	0.7419	2.0000e-005	2.0000e-005	0.7482
Total	**4.0000e-004**	**6.0600e-003**	**4.5000e-003**	**3.0000e-005**	**1.8600e-003**	**6.0000e-005**	**1.9200e-003**	**5.1000e-004**	**6.0000e-005**	**5.6000e-004**	**0.0000**	**3.5547**	**3.5547**	**1.3000e-004**	**4.6000e-004**	**3.6955**

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	tons/yr										MT/yr					
Fugitive Dust					0.1499	0.0000	0.1499	0.0508	0.0000	0.0508	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.4654	0.4197	7.9000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	69.7731	69.7731	0.0226	0.0000	70.3373
Total	**0.0477**	**0.4654**	**0.4197**	**7.9000e-004**	**0.1499**	**0.0200**	**0.1698**	**0.0508**	**0.0184**	**0.0691**	**0.0000**	**69.7731**	**69.7731**	**0.0226**	**0.0000**	**70.3373**

C-35 Cont.

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	3.8000e-004	0.0192	5.5700e-003	9.0000e-005	2.8400e-003	1.9000e-004	3.0200e-003	7.8000e-004	1.8000e-004	9.6000e-004	0.0000	8.9917	8.9917	3.8000e-004	1.4300e-003	9.4259
Vendor	7.0000e-005	2.5400e-003	8.6000e-004	1.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.2790	1.2790	3.0000e-005	1.9000e-004	1.3360
Worker	9.8000e-004	7.2000e-004	9.5400e-003	3.0000e-005	3.5900e-003	2.0000e-005	3.6000e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.6758	2.6758	6.0000e-005	7.0000e-005	2.6972
Total	**1.4300e-003**	**0.0225**	**0.0160**	**1.3000e-004**	**6.9100e-003**	**2.3000e-004**	**7.1200e-003**	**1.8700e-003**	**2.2000e-004**	**2.0900e-003**	**0.0000**	**12.9465**	**12.9465**	**4.7000e-004**	**1.6900e-003**	**13.4590**

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	tons/yr										MT/yr					
Fugitive Dust					0.0674	0.0000	0.0674	0.0228	0.0000	0.0228	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.4654	0.4197	7.9000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	69.7730	69.7730	0.0226	0.0000	70.3372
Total	**0.0477**	**0.4654**	**0.4197**	**7.9000e-004**	**0.0674**	**0.0200**	**0.0874**	**0.0228**	**0.0184**	**0.0412**	**0.0000**	**69.7730**	**69.7730**	**0.0226**	**0.0000**	**70.3372**

C-35 Cont.

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	3.8000e-004	0.0192	5.5700e-003	9.0000e-005	2.8400e-003	1.9000e-004	3.0200e-003	7.8000e-004	1.8000e-004	9.6000e-004	0.0000	8.9917	8.9917	3.8000e-004	1.4300e-003	9.4259
Vendor	7.0000e-005	2.5400e-003	8.6000e-004	1.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.2790	1.2790	3.0000e-005	1.9000e-004	1.3360
Worker	9.8000e-004	7.2000e-004	9.5400e-003	3.0000e-005	3.5900e-003	2.0000e-005	3.6000e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.6758	2.6758	6.0000e-005	7.0000e-005	2.6972
Total	**1.4300e-003**	**0.0225**	**0.0160**	**1.3000e-004**	**6.9100e-003**	**2.3000e-004**	**7.1200e-003**	**1.8700e-003**	**2.2000e-004**	**2.0900e-003**	**0.0000**	**12.9465**	**12.9465**	**4.7000e-004**	**1.6900e-003**	**13.4590**

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

3.4 Pipeline Installation - 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	0.0335	0.2680	0.3246	4.7000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	38.7574	38.7574	0.0105	0.0000	39.0188
Total	**0.0335**	**0.2680**	**0.3246**	**4.7000e-004**		**0.0129**	**0.0129**		**0.0120**	**0.0120**	**0.0000**	**38.7574**	**38.7574**	**0.0105**	**0.0000**	**39.0188**

C-35 Cont.

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	1.2000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0546	0.0546	0.0000	1.0000e-005	0.0572
Vendor	1.4000e-004	5.2700e-003	1.7800e-003	3.0000e-005	1.0100e-003	4.0000e-005	1.0500e-003	2.9000e-004	4.0000e-005	3.3000e-004	0.0000	2.6564	2.6564	7.0000e-005	3.9000e-004	2.7748
Worker	2.4400e-003	1.8000e-003	0.0238	7.0000e-005	8.9400e-003	4.0000e-005	8.9800e-003	2.3700e-003	4.0000e-005	2.4100e-003	0.0000	6.6688	6.6688	1.5000e-004	1.7000e-004	6.7221
Total	**2.5800e-003**	**7.1900e-003**	**0.0256**	**1.0000e-004**	**9.9700e-003**	**8.0000e-005**	**0.0101**	**2.6600e-003**	**8.0000e-005**	**2.7500e-003**	**0.0000**	**9.3798**	**9.3798**	**2.2000e-004**	**5.7000e-004**	**9.5541**

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

3.4 Pipeline Installation - 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	tons/yr										MT/yr					
Off-Road	0.0335	0.2680	0.3246	4.7000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	38.7573	38.7573	0.0105	0.0000	39.0187
Total	**0.0335**	**0.2680**	**0.3246**	**4.7000e-004**		**0.0129**	**0.0129**		**0.0120**	**0.0120**	**0.0000**	**38.7573**	**38.7573**	**0.0105**	**0.0000**	**39.0187**

C-35 Cont.

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	1.2000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0546	0.0546	0.0000	1.0000e-005	0.0572
Vendor	1.4000e-004	5.2700e-003	1.7800e-003	3.0000e-005	1.0100e-003	4.0000e-005	1.0500e-003	2.9000e-004	4.0000e-005	3.3000e-004	0.0000	2.6564	2.6564	7.0000e-005	3.9000e-004	2.7748
Worker	2.4400e-003	1.8000e-003	0.0238	7.0000e-005	8.9400e-003	4.0000e-005	8.9800e-003	2.3700e-003	4.0000e-005	2.4100e-003	0.0000	6.6688	6.6688	1.5000e-004	1.7000e-004	6.7221
Total	**2.5800e-003**	**7.1900e-003**	**0.0256**	**1.0000e-004**	**9.9700e-003**	**8.0000e-005**	**0.0101**	**2.6600e-003**	**8.0000e-005**	**2.7500e-003**	**0.0000**	**9.3798**	**9.3798**	**2.2000e-004**	**5.7000e-004**	**9.5541**

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 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	0.1196	1.0752	1.2475	2.1200e-003		0.0483	0.0483		0.0450	0.0450	0.0000	180.1166	180.1166	0.0525	0.0000	181.4296
Total	**0.1196**	**1.0752**	**1.2475**	**2.1200e-003**		**0.0483**	**0.0483**		**0.0450**	**0.0450**	**0.0000**	**180.1166**	**180.1166**	**0.0525**	**0.0000**	**181.4296**

C-35 Cont.

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	0.0207	0.7902	0.2672	4.0900e-003	0.1508	6.1700e-003	0.1570	0.0435	5.9000e-003	0.0494	0.0000	398.4097	398.4097	0.0102	0.0587	416.1631
Worker	0.1553	0.1148	1.5161	4.6400e-003	0.5700	2.7000e-003	0.5727	0.1514	2.4800e-003	0.1539	0.0000	425.1779	425.1779	9.4100e-003	0.0106	428.5773
Total	**0.1760**	**0.9049**	**1.7833**	**8.7300e-003**	**0.7208**	**8.8700e-003**	**0.7297**	**0.1949**	**8.3800e-003**	**0.2033**	**0.0000**	**823.5876**	**823.5876**	**0.0196**	**0.0693**	**844.7404**

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 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	0.1196	1.0752	1.2475	2.1200e-003		0.0483	0.0483		0.0450	0.0450	0.0000	180.1164	180.1164	0.0525	0.0000	181.4294
Total	**0.1196**	**1.0752**	**1.2475**	**2.1200e-003**		**0.0483**	**0.0483**		**0.0450**	**0.0450**	**0.0000**	**180.1164**	**180.1164**	**0.0525**	**0.0000**	**181.4294**

C-35 Cont.

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	0.0207	0.7902	0.2672	4.0900e-003	0.1508	6.1700e-003	0.1570	0.0435	5.9000e-003	0.0494	0.0000	398.4097	398.4097	0.0102	0.0587	416.1631
Worker	0.1553	0.1148	1.5161	4.6400e-003	0.5700	2.7000e-003	0.5727	0.1514	2.4800e-003	0.1539	0.0000	425.1779	425.1779	9.4100e-003	0.0106	428.5773
Total	**0.1760**	**0.9049**	**1.7833**	**8.7300e-003**	**0.7208**	**8.8700e-003**	**0.7297**	**0.1949**	**8.3800e-003**	**0.2033**	**0.0000**	**823.5876**	**823.5876**	**0.0196**	**0.0693**	**844.7404**

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 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	0.0910	0.8109	0.9993	1.7300e-003		0.0342	0.0342		0.0319	0.0319	0.0000	146.5016	146.5016	0.0426	0.0000	147.5668
Total	**0.0910**	**0.8109**	**0.9993**	**1.7300e-003**		**0.0342**	**0.0342**		**0.0319**	**0.0319**	**0.0000**	**146.5016**	**146.5016**	**0.0426**	**0.0000**	**147.5668**

C-35 Cont.

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	0.0165	0.6384	0.2133	3.2700e-003	0.1226	5.0100e-003	0.1276	0.0354	4.7900e-003	0.0402	0.0000	317.6763	317.6763	8.0200e-003	0.0468	331.8215
Worker	0.1176	0.0831	1.1421	3.6400e-003	0.4635	2.0800e-003	0.4656	0.1231	1.9200e-003	0.1250	0.0000	333.9569	333.9569	6.8800e-003	8.0200e-003	336.5200
Total	**0.1341**	**0.7215**	**1.3554**	**6.9100e-003**	**0.5861**	**7.0900e-003**	**0.5932**	**0.1585**	**6.7100e-003**	**0.1652**	**0.0000**	**651.6333**	**651.6333**	**0.0149**	**0.0548**	**668.3414**

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 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	0.0910	0.8109	0.9993	1.7300e-003		0.0342	0.0342		0.0319	0.0319	0.0000	146.5015	146.5015	0.0426	0.0000	147.5667
Total	**0.0910**	**0.8109**	**0.9993**	**1.7300e-003**		**0.0342**	**0.0342**		**0.0319**	**0.0319**	**0.0000**	**146.5015**	**146.5015**	**0.0426**	**0.0000**	**147.5667**

C-35 Cont.

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	0.0165	0.6384	0.2133	3.2700e-003	0.1226	5.0100e-003	0.1276	0.0354	4.7900e-003	0.0402	0.0000	317.6763	317.6763	8.0200e-003	0.0468	331.8215
Worker	0.1176	0.0831	1.1421	3.6400e-003	0.4635	2.0800e-003	0.4656	0.1231	1.9200e-003	0.1250	0.0000	333.9569	333.9569	6.8800e-003	8.0200e-003	336.5200
Total	**0.1341**	**0.7215**	**1.3554**	**6.9100e-003**	**0.5861**	**7.0900e-003**	**0.5932**	**0.1585**	**6.7100e-003**	**0.1652**	**0.0000**	**651.6333**	**651.6333**	**0.0149**	**0.0548**	**668.3414**

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 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	0.0116	0.1035	0.1265	1.7000e-004		5.5300e-003	5.5300e-003		5.0900e-003	5.0900e-003	0.0000	15.3408	15.3408	4.9600e-003	0.0000	15.4649
Paving	0.0308					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0423**	**0.1035**	**0.1265**	**1.7000e-004**		**5.5300e-003**	**5.5300e-003**		**5.0900e-003**	**5.0900e-003**	**0.0000**	**15.3408**	**15.3408**	**4.9600e-003**	**0.0000**	**15.4649**

C-35 Cont.

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	6.0000e-005	2.4200e-003	8.1000e-004	1.0000e-005	4.7000e-004	2.0000e-005	4.8000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.2059	1.2059	3.0000e-005	1.8000e-004	1.2596
Worker	7.0000e-004	4.9000e-004	6.8000e-003	2.0000e-005	2.7600e-003	1.0000e-005	2.7700e-003	7.3000e-004	1.0000e-005	7.4000e-004	0.0000	1.9881	1.9881	4.0000e-005	5.0000e-005	2.0033
Total	**7.6000e-004**	**2.9100e-003**	**7.6100e-003**	**3.0000e-005**	**3.2300e-003**	**3.0000e-005**	**3.2500e-003**	**8.6000e-004**	**3.0000e-005**	**8.9000e-004**	**0.0000**	**3.1940**	**3.1940**	**7.0000e-005**	**2.3000e-004**	**3.2629**

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 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	0.0116	0.1035	0.1265	1.7000e-004		5.5300e-003	5.5300e-003		5.0900e-003	5.0900e-003	0.0000	15.3408	15.3408	4.9600e-003	0.0000	15.4648
Paving	0.0308					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0423**	**0.1035**	**0.1265**	**1.7000e-004**		**5.5300e-003**	**5.5300e-003**		**5.0900e-003**	**5.0900e-003**	**0.0000**	**15.3408**	**15.3408**	**4.9600e-003**	**0.0000**	**15.4648**

C-35 Cont.

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	6.0000e-005	2.4200e-003	8.1000e-004	1.0000e-005	4.7000e-004	2.0000e-005	4.8000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.2059	1.2059	3.0000e-005	1.8000e-004	1.2596
Worker	7.0000e-004	4.9000e-004	6.8000e-003	2.0000e-005	2.7600e-003	1.0000e-005	2.7700e-003	7.3000e-004	1.0000e-005	7.4000e-004	0.0000	1.9881	1.9881	4.0000e-005	5.0000e-005	2.0033
Total	**7.6000e-004**	**2.9100e-003**	**7.6100e-003**	**3.0000e-005**	**3.2300e-003**	**3.0000e-005**	**3.2500e-003**	**8.6000e-004**	**3.0000e-005**	**8.9000e-004**	**0.0000**	**3.1940**	**3.1940**	**7.0000e-005**	**2.3000e-004**	**3.2629**

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

3.7 Architectural Coating - 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					
Archit. Coating	12.5160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0110	0.0143	2.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	1.5140	1.5140	1.6000e-004	0.0000	1.5179
Total	**12.5179**	**0.0110**	**0.0143**	**2.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**	**0.0000**	**1.5140**	**1.5140**	**1.6000e-004**	**0.0000**	**1.5179**

C-35 Cont.

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	6.0000e-005	2.4200e-003	8.1000e-004	1.0000e-005	1.7800e-003	2.0000e-005	1.8000e-003	4.6000e-004	2.0000e-005	4.8000e-004	0.0000	1.2059	1.2059	3.0000e-005	1.8000e-004	1.2596
Worker	4.0300e-003	2.8400e-003	0.0391	1.2000e-004	0.0709	7.0000e-005	0.0710	0.0177	7.0000e-005	0.0178	0.0000	11.4314	11.4314	2.4000e-004	2.7000e-004	11.5192
Total	**4.0900e-003**	**5.2600e-003**	**0.0399**	**1.3000e-004**	**0.0727**	**9.0000e-005**	**0.0728**	**0.0182**	**9.0000e-005**	**0.0183**	**0.0000**	**12.6373**	**12.6373**	**2.7000e-004**	**4.5000e-004**	**12.7787**

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

3.7 Architectural Coating - 2025

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	12.5160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0110	0.0143	2.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	1.5140	1.5140	1.6000e-004	0.0000	1.5179
Total	**12.5179**	**0.0110**	**0.0143**	**2.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**	**0.0000**	**1.5140**	**1.5140**	**1.6000e-004**	**0.0000**	**1.5179**

C-35 Cont.

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	6.0000e-005	2.4200e-003	8.1000e-004	1.0000e-005	1.7800e-003	2.0000e-005	1.8000e-003	4.6000e-004	2.0000e-005	4.8000e-004	0.0000	1.2059	1.2059	3.0000e-005	1.8000e-004	1.2596
Worker	4.0300e-003	2.8400e-003	0.0391	1.2000e-004	0.0709	7.0000e-005	0.0710	0.0177	7.0000e-005	0.0178	0.0000	11.4314	11.4314	2.4000e-004	2.7000e-004	11.5192
Total	**4.0900e-003**	**5.2600e-003**	**0.0399**	**1.3000e-004**	**0.0727**	**9.0000e-005**	**0.0728**	**0.0182**	**9.0000e-005**	**0.0183**	**0.0000**	**12.6373**	**12.6373**	**2.7000e-004**	**4.5000e-004**	**12.7787**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	584.6050	882.2586	5,812.1894	12.9597	1,397.1932	10.3950	1,407.5881	373.1964	9.7282	382.9246	0.0000	1,199,630.3181	1,199,630.3181	70.7668	61.8208	1,219,822.0887
Unmitigated	584.6050	882.2586	5,812.1894	12.9597	1,397.1932	10.3950	1,407.5881	373.1964	9.7282	382.9246	0.0000	1,199,630.3181	1,199,630.3181	70.7668	61.8208	1,219,822.0887

C-35 Cont.

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	159,786.00	159,786.00	159786.00	466,497,007	466,497,007
Unrefrigerated Warehouse-Rail	1,109,511.00	1,109,511.00	1109511.00	3,239,229,724	3,239,229,724
Total	1,269,297.00	1,269,297.00	1,269,297.00	3,705,726,731	3,705,726,731

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
Parking Lot	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-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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Unrefrigerated Warehouse-No Rail	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Unrefrigerated Warehouse-Rail	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Cont.

	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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0117	0.1064	0.0894	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	115.8556	115.8556	2.2200e-003	2.1200e-003	116.5440
NaturalGas Unmitigated	0.0117	0.1064	0.0894	6.4000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	115.8556	115.8556	2.2200e-003	2.1200e-003	116.5440

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					
Parking Lot	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	597038	3.2200e-003	0.0293	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8602	31.8602	6.1000e-004	5.8000e-004	32.0496
Unrefrigerated Warehouse-Rail	1.57401e+006	8.4900e-003	0.0772	0.0648	4.6000e-004		5.8600e-003	5.8600e-003		5.8600e-003	5.8600e-003	0.0000	83.9953	83.9953	1.6100e-003	1.5400e-003	84.4945
Total		**0.0117**	**0.1064**	**0.0894**	**6.4000e-004**		**8.0800e-003**	**8.0800e-003**		**8.0800e-003**	**8.0800e-003**	**0.0000**	**115.8556**	**115.8556**	**2.2200e-003**	**2.1200e-003**	**116.5440**

C-35 Cont.

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					
Parking Lot	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	597038	3.2200e-003	0.0293	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8602	31.8602	6.1000e-004	5.8000e-004	32.0496
Unrefrigerated Warehouse-Rail	1.57401e+006	8.4900e-003	0.0772	0.0648	4.6000e-004		5.8600e-003	5.8600e-003		5.8600e-003	5.8600e-003	0.0000	83.9953	83.9953	1.6100e-003	1.5400e-003	84.4945
Total		**0.0117**	**0.1064**	**0.0894**	**6.4000e-004**		**8.0800e-003**	**8.0800e-003**		**8.0800e-003**	**8.0800e-003**	**0.0000**	**115.8556**	**115.8556**	**2.2200e-003**	**2.1200e-003**	**116.5440**

C-35 Cont.

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			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	689119	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	1.81677e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

C-35
Cont.

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			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	689119	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	1.81677e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

C-35
Cont.

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	5.4718	1.7000e-004	0.0193	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0376	0.0376	1.0000e-004	0.0000	0.0400
Unmitigated	5.4718	1.7000e-004	0.0193	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0376	0.0376	1.0000e-004	0.0000	0.0400

C-35 Cont.

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	1.2516					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.2184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7700e-003	1.7000e-004	0.0193	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0376	0.0376	1.0000e-004	0.0000	0.0400
Total	**5.4718**	**1.7000e-004**	**0.0193**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0376**	**0.0376**	**1.0000e-004**	**0.0000**	**0.0400**

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	1.2516					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.2184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7700e-003	1.7000e-004	0.0193	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0376	0.0376	1.0000e-004	0.0000	0.0400
Total	**5.4718**	**1.7000e-004**	**0.0193**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0376**	**0.0376**	**1.0000e-004**	**0.0000**	**0.0400**

C-35 Cont.

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	79.2342	8.1381	0.1922	339.9500
Unmitigated	79.2342	8.1381	0.1922	339.9500

C-35 Cont.

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	68.6813 / 0	21.7894	2.2380	0.0528	93.4863
Unrefrigerated Warehouse-Rail	181.069 / 0	57.4448	5.9001	0.1393	246.4638
Total		**79.2342**	**8.1381**	**0.1922**	**339.9500**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	68.6813 / 0	21.7894	2.2380	0.0528	93.4863
Unrefrigerated Warehouse-Rail	181.069 / 0	57.4448	5.9001	0.1393	246.4638
Total		**79.2342**	**8.1381**	**0.1922**	**339.9500**

C-35 Cont.

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	206.0764	12.1788	0.0000	510.5456
Unmitigated	206.0764	12.1788	0.0000	510.5456

C-35 Cont.

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	279.18	56.6710	3.3492	0.0000	140.4001
Unrefrigerated Warehouse-Rail	736.02	149.4054	8.8296	0.0000	370.1456
Total		**206.0764**	**12.1788**	**0.0000**	**510.5456**

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			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	279.18	56.6710	3.3492	0.0000	140.4001
Unrefrigerated Warehouse-Rail	736.02	149.4054	8.8296	0.0000	370.1456
Total		**206.0764**	**12.1788**	**0.0000**	**510.5456**

C-35 Cont.

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	98	24.00	260	82	0.20	CNG
Forklifts	32	24.00	260	82	0.20	Diesel
Forklifts	4	24.00	260	200	0.20	Diesel

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

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Forklifts	1.9145	44.7482	350.9945	0.0768		1.2202	1.2202		1.1749	1.1749	0.0000	8,191.8224	8,191.8224	2.6494	0.0000	8,258.0574
Total	**1.9145**	**44.7482**	**350.9945**	**0.0768**		**1.2202**	**1.2202**		**1.1749**	**1.1749**	**0.0000**	**8,191.8224**	**8,191.8224**	**2.6494**	**0.0000**	**8,258.0574**

C-35 Cont.

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Fire Pump	1	8	50	300	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

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

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Fire Pump - Diesel (300 - 600 HP)	0.0123	0.0344	0.0314	6.0000e-005		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	5.7120	5.7120	8.0000e-004	0.0000	5.7320
Total	**0.0123**	**0.0344**	**0.0314**	**6.0000e-005**		**1.8100e-003**	**1.8100e-003**		**1.8100e-003**	**1.8100e-003**	**0.0000**	**5.7120**	**5.7120**	**8.0000e-004**	**0.0000**	**5.7320**

11.0 Vegetation

C-35 Cont.

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

1M Warehouse

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-No Rail	297.00	1000sqft	6.82	297,034.00	0
Unrefrigerated Warehouse-Rail	783.00	1000sqft	18.00	783,091.00	0
Parking Lot	1,023.00	1000sqft	23.50	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**	2025
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with EIR's Model.

Land Use - Consistent with EIR's Model.

Construction Phase - Consistent with Comment on: "Unsubstantiated Changes to Individual Construction Phase Lengths".

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.

C-35 Cont.

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

Trips and VMT - Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively.

Grading - Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

Architectural Coating - See Comment on: "Unsubstantiated Changes to Architectural Coating Values".

Vehicle Trips - Consistent with EIR's Model.

Vehicle Emission Factors - Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Area Coating - PDF that all arc coatings are 10 g/L or less.

Energy Use -

Water And Wastewater - See Comment on: "Unsubstantiated Changes to Operational Wastewater Values".

Solid Waste -

Construction Off-road Equipment Mitigation - Consistent with EIR's Model.

Operational Off-Road Equipment - Forklifts and yard truck calcs based on attached Excel spreadsheet.

Fleet Mix - See Comment on: "Unsubstantiated Changes to Operational Vehicle Fleet Mix".

Stationary Sources - Emergency Generators and Fire Pumps - Consistent with EIR's Model.

C-35 Cont.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblAreaCoating	Area_Parking	0	61380
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	55.00	25.00
tblConstructionPhase	NumDays	740.00	330.00
tblConstructionPhase	NumDays	75.00	33.00
tblConstructionPhase	NumDays	55.00	25.00

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

tblConstructionPhase	NumDays	30.00	13.00
tblGrading	AcresOfGrading	99.00	135.00
tblGrading	AcresOfGrading	19.50	45.00
tblGrading	MaterialExported	0.00	152,288.00
tblLandUse	LandUseSquareFeet	297,000.00	297,034.00
tblLandUse	LandUseSquareFeet	783,000.00	783,091.00
tblLandUse	LandUseSquareFeet	1,023,000.00	0.00
tblLandUse	LotAcreage	17.98	18.00
tblLandUse	LotAcreage	23.48	23.50
tblOffRoadEquipment	HorsePower	78.00	37.00
tblOffRoadEquipment	HorsePower	231.00	367.00
tblOffRoadEquipment	HorsePower	158.00	36.00
tblOffRoadEquipment	HorsePower	89.00	82.00
tblOffRoadEquipment	HorsePower	84.00	14.00
tblOffRoadEquipment	HorsePower	187.00	148.00
tblOffRoadEquipment	HorsePower	130.00	81.00
tblOffRoadEquipment	HorsePower	132.00	89.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	247.00	367.00
tblOffRoadEquipment	HorsePower	247.00	367.00
tblOffRoadEquipment	HorsePower	367.00	423.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	78.00	37.00
tblOffRoadEquipment	HorsePower	81.00	33.00
tblOffRoadEquipment	HorsePower	158.00	36.00
tblOffRoadEquipment	HorsePower	89.00	82.00
tblOffRoadEquipment	HorsePower	130.00	81.00

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Cont.

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

tblOffRoadEquipment	HorsePower	132.00	89.00
tblOffRoadEquipment	HorsePower	84.00	11.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	LoadFactor	0.48	0.38
tblOffRoadEquipment	LoadFactor	0.73	0.48
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	89.00	82.00
tblOperationalOffRoadEquipment	OperHorsePower	89.00	82.00
tblOperationalOffRoadEquipment	OperHorsePower	89.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	98.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	32.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	300.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	8.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	15,057.00	418.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripNumber	0.00	4.00

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Cont.

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

tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	177.00	178.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripNumber	23.00	24.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	91.00	92.00
tblVehicleTrips	ST_TR	1.74	538.00
tblVehicleTrips	ST_TR	1.74	1,417.00
tblVehicleTrips	SU_TR	1.74	538.00
tblVehicleTrips	SU_TR	1.74	1,417.00
tblVehicleTrips	WD_TR	1.74	538.00
tblVehicleTrips	WD_TR	1.74	1,417.00

2.0 Emissions Summary

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Cont.

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					
2023	4.0792	40.3323	37.2586	0.0717	22.0282	1.8305	23.8587	10.4051	1.6841	12.0892	0.0000	7,056.4759	7,056.4759	1.9556	0.1448	7,148.5257
2024	3.7890	37.4366	36.0841	0.1235	10.9014	1.5525	12.4539	3.9250	1.4289	5.3538	0.0000	12,579.0397	12,579.0397	1.9534	0.8310	12,848.4973
2025	1,001.7927	20.1581	34.3754	0.1207	8.0688	0.5576	8.6265	2.1778	0.5214	2.6992	0.0000	12,294.4624	12,294.4624	0.8566	0.8082	12,556.7309
Maximum	**1,001.7927**	**40.3323**	**37.2586**	**0.1235**	**22.0282**	**1.8305**	**23.8587**	**10.4051**	**1.6841**	**12.0892**	**0.0000**	**12,579.0397**	**12,579.0397**	**1.9556**	**0.8310**	**12,848.4973**

C-35 Cont.

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					
2023	4.0792	40.3323	37.2586	0.0717	10.0727	1.8305	11.9033	4.7252	1.6841	6.4093	0.0000	7,056.4759	7,056.4759	1.9556	0.1448	7,148.5257
2024	3.7890	37.4366	36.0841	0.1235	8.0689	1.5525	8.6970	2.1778	1.4289	3.2756	0.0000	12,579.0397	12,579.0397	1.9534	0.8310	12,848.4973
2025	1,001.7927	20.1581	34.3754	0.1207	8.0688	0.5576	8.6265	2.1778	0.5214	2.6992	0.0000	12,294.4624	12,294.4624	0.8566	0.8082	12,556.7309
Maximum	**1,001.7927**	**40.3323**	**37.2586**	**0.1235**	**10.0727**	**1.8305**	**11.9033**	**4.7252**	**1.6841**	**6.4093**	**0.0000**	**12,579.0397**	**12,579.0397**	**1.9556**	**0.8310**	**12,848.4973**

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**	**36.07**	**0.00**	**34.96**	**44.99**	**0.00**	**38.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

C-35 Cont.

	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	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Energy	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332
Mobile	3,754.6191	4,479.7624	34,053.0013	75.6871	7,824.3907	57.1640	7,881.5547	2,086.7354	53.4968	2,140.2322		7,718,825.0727	7,718,825.0727	412.2821	360.7132	7,836,624.6595
Offroad	14.7266	344.2176	2,699.9606	0.5907		9.3860	9.3860		9.0378	9.0378	0.0000	69,461.1478	69,461.1478	22.4651		70,022.7764
Stationary	3.9386	11.0081	10.0425	0.0189		0.5794	0.5794		0.5794	0.5794		2,014.8339	2,014.8339	0.2825		2,021.8959
Total	**3,803.3409**	**4,835.5732**	**36,763.7084**	**76.3002**	**7,824.3907**	**67.1744**	**7,891.5651**	**2,086.7354**	**63.1591**	**2,149.8945**	**0.0000**	**7,791,001.2894**	**7,791,001.2894**	**435.0443**	**360.7260**	**7,909,373.7552**

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	lb/day										lb/day					
Area	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Energy	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332
Mobile	3,754.6191	4,479.7624	34,053.0013	75.6871	7,824.3907	57.1640	7,881.5547	2,086.7354	53.4968	2,140.2322		7,718,825.0727	7,718,825.0727	412.2821	360.7132	7,836,624.6595
Offroad	14.7266	344.2176	2,699.9606	0.5907		9.3860	9.3860		9.0378	9.0378	0.0000	69,461.1478	69,461.1478	22.4651		70,022.7764
Stationary	3.9386	11.0081	10.0425	0.0189		0.5794	0.5794		0.5794	0.5794		2,014.8339	2,014.8339	0.2825		2,021.8959
Total	**3,803.3409**	**4,835.5732**	**36,763.7084**	**76.3002**	**7,824.3907**	**67.1744**	**7,891.5651**	**2,086.7354**	**63.1591**	**2,149.8945**	**0.0000**	**7,791,001.2894**	**7,791,001.2894**	**435.0443**	**360.7260**	**7,909,373.7552**

	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	12/4/2023	12/20/2023	5	13	
2	Grading	Grading	12/21/2023	2/5/2024	5	33	
3	Pipeline Installation	Trenching	2/6/2024	4/19/2024	5	54	

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

4	Building Construction	Building Construction	4/20/2024	7/25/2025	5	330	
5	Paving	Paving	7/26/2025	8/29/2025	5	25	
6	Architectural Coating	Architectural Coating	8/30/2025	10/3/2025	5	25	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 135

Acres of Paving: 23.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,620,188; Non-Residential Outdoor: 540,063; 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	367	0.40
site preparation	Tractors/Loaders/Backhoes	4	8.00	84	0.37
Grading	Excavators	2	8.00	36	0.38
Grading	Graders	1	8.00	148	0.41
Grading	Rubber Tired Dozers	1	8.00	367	0.40
Grading	Scrapers	2	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	84	0.37
Pipeline Installation	Air Compressors	1	8.00	37	0.38
Pipeline Installation	Concrete/Industrial Saws	1	8.00	33	0.48
Pipeline Installation	Excavators	1	8.00	36	0.38
Pipeline Installation	Forklifts	1	8.00	82	0.20
Pipeline Installation	Pavers	1	8.00	81	0.42
Pipeline Installation	Paving Equipment	1	8.00	89	0.36
Pipeline Installation	Pumps	1	8.00	11	0.74
Pipeline Installation	Rollers	1	8.00	36	0.38
Pipeline Installation	Tractors/Loaders/Backhoes	1	8.00	84	0.37
Building Construction	Cranes	1	7.00	367	0.29

C-35 Cont.

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

Building Construction	Forklifts	3	8.00	82	0.20
Building Construction	Generator Sets	1	8.00	14	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	84	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	81	0.42
Paving	Paving Equipment	2	8.00	89	0.36
Paving	Rollers	2	8.00	36	0.38
Architectural Coating	Air Compressors	1	6.00	37	0.48

Trips and VMT

C-35 Cont.

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	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	4.00	418.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	9	24.00	4.00	2.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	454.00	178.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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

3.2 site preparation - 2023

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					21.7372	0.0000	21.7372	10.3271	0.0000	10.3271			0.0000			0.0000
Off-Road	3.9931	39.5606	36.3608	0.0492		1.8277	1.8277		1.6815	1.6815		4,768.8191	4,768.8191	1.5423		4,807.3774
Total	**3.9931**	**39.5606**	**36.3608**	**0.0492**	**21.7372**	**1.8277**	**23.5650**	**10.3271**	**1.6815**	**12.0086**		**4,768.8191**	**4,768.8191**	**1.5423**		**4,807.3774**

C-35 Cont.

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	5.4400e-003	0.1831	0.0664	1.0200e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		109.8795	109.8795	2.8600e-003	0.0162	114.7747
Worker	0.0806	0.0512	0.8314	2.2500e-003	0.2532	1.2200e-003	0.2544	0.0671	1.1300e-003	0.0683		227.6621	227.6621	5.0000e-003	5.1700e-003	229.3264
Total	**0.0861**	**0.2343**	**0.8978**	**3.2700e-003**	**0.2910**	**2.7700e-003**	**0.2938**	**0.0780**	**2.6100e-003**	**0.0806**		**337.5416**	**337.5416**	**7.8600e-003**	**0.0214**	**344.1011**

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

3.2 site preparation - 2023

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					9.7818	0.0000	9.7818	4.6472	0.0000	4.6472			0.0000			0.0000
Off-Road	3.9931	39.5606	36.3608	0.0492		1.8277	1.8277		1.6815	1.6815	0.0000	4,768.8191	4,768.8191	1.5423		4,807.3774
Total	**3.9931**	**39.5606**	**36.3608**	**0.0492**	**9.7818**	**1.8277**	**11.6095**	**4.6472**	**1.6815**	**6.3287**	**0.0000**	**4,768.8191**	**4,768.8191**	**1.5423**		**4,807.3774**

C-35 Cont.

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	5.4400e-003	0.1831	0.0664	1.0200e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		109.8795	109.8795	2.8600e-003	0.0162	114.7747
Worker	0.0806	0.0512	0.8314	2.2500e-003	0.2532	1.2200e-003	0.2544	0.0671	1.1300e-003	0.0683		227.6621	227.6621	5.0000e-003	5.1700e-003	229.3264
Total	**0.0861**	**0.2343**	**0.8978**	**3.2700e-003**	**0.2910**	**2.7700e-003**	**0.2938**	**0.0780**	**2.6100e-003**	**0.0806**		**337.5416**	**337.5416**	**7.8600e-003**	**0.0214**	**344.1011**

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

3.3 Grading - 2023

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					10.3605	0.0000	10.3605	3.7787	0.0000	3.7787			0.0000			0.0000
Off-Road	3.8665	38.6992	33.2907	0.0611		1.6780	1.6780		1.5438	1.5438		5,918.2208	5,918.2208	1.9141		5,966.0726
Total	**3.8665**	**38.6992**	**33.2907**	**0.0611**	**10.3605**	**1.6780**	**12.0385**	**3.7787**	**1.5438**	**5.3225**		**5,918.2208**	**5,918.2208**	**1.9141**		**5,966.0726**

C-35 Cont.

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	0.0305	1.3931	0.4243	7.1100e-003	0.2218	0.0147	0.2365	0.0608	0.0140	0.0748		775.4177	775.4177	0.0331	0.1229	812.8714
Vendor	5.4400e-003	0.1831	0.0664	1.0200e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		109.8795	109.8795	2.8600e-003	0.0162	114.7747
Worker	0.0896	0.0569	0.9237	2.5000e-003	0.2813	1.3600e-003	0.2827	0.0746	1.2500e-003	0.0759		252.9579	252.9579	5.5600e-003	5.7400e-003	254.8071
Total	**0.1255**	**1.6331**	**1.4145**	**0.0106**	**0.5409**	**0.0176**	**0.5585**	**0.1463**	**0.0168**	**0.1631**		**1,138.2551**	**1,138.2551**	**0.0415**	**0.1448**	**1,182.4531**

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

3.3 Grading - 2023

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					4.6622	0.0000	4.6622	1.7004	0.0000	1.7004			0.0000			0.0000
Off-Road	3.8665	38.6992	33.2907	0.0611		1.6780	1.6780		1.5438	1.5438	0.0000	5,918.2208	5,918.2208	1.9141		5,966.0726
Total	**3.8665**	**38.6992**	**33.2907**	**0.0611**	**4.6622**	**1.6780**	**6.3403**	**1.7004**	**1.5438**	**3.2442**	**0.0000**	**5,918.2208**	**5,918.2208**	**1.9141**		**5,966.0726**

C-35 Cont.

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	0.0305	1.3931	0.4243	7.1100e-003	0.2218	0.0147	0.2365	0.0608	0.0140	0.0748		775.4177	775.4177	0.0331	0.1229	812.8714
Vendor	5.4400e-003	0.1831	0.0664	1.0200e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		109.8795	109.8795	2.8600e-003	0.0162	114.7747
Worker	0.0896	0.0569	0.9237	2.5000e-003	0.2813	1.3600e-003	0.2827	0.0746	1.2500e-003	0.0759		252.9579	252.9579	5.5600e-003	5.7400e-003	254.8071
Total	**0.1255**	**1.6331**	**1.4145**	**0.0106**	**0.5409**	**0.0176**	**0.5585**	**0.1463**	**0.0168**	**0.1631**		**1,138.2551**	**1,138.2551**	**0.0415**	**0.1448**	**1,182.4531**

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					10.3605	0.0000	10.3605	3.7787	0.0000	3.7787			0.0000			0.0000
Off-Road	3.6702	35.8034	32.2814	0.0611		1.5352	1.5352		1.4124	1.4124		5,916.2840	5,916.2840	1.9135		5,964.1202
Total	**3.6702**	**35.8034**	**32.2814**	**0.0611**	**10.3605**	**1.5352**	**11.8957**	**3.7787**	**1.4124**	**5.1910**		**5,916.2840**	**5,916.2840**	**1.9135**		**5,964.1202**

C-35 Cont.

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	0.0302	1.3978	0.4254	6.9900e-003	0.2218	0.0145	0.2363	0.0608	0.0138	0.0747		761.9499	761.9499	0.0321	0.1208	798.7420
Vendor	5.2900e-003	0.1850	0.0652	1.0100e-003	0.0378	1.5200e-003	0.0394	0.0109	1.4600e-003	0.0123		108.3730	108.3730	2.7700e-003	0.0160	113.1992
Worker	0.0832	0.0504	0.8580	2.4300e-003	0.2813	1.3100e-003	0.2826	0.0746	1.2000e-003	0.0758		245.5786	245.5786	5.0200e-003	5.3100e-003	247.2872
Total	**0.1188**	**1.6332**	**1.3486**	**0.0104**	**0.5409**	**0.0173**	**0.5582**	**0.1463**	**0.0165**	**0.1628**		**1,115.9014**	**1,115.9014**	**0.0399**	**0.1420**	**1,159.2284**

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					4.6622	0.0000	4.6622	1.7004	0.0000	1.7004			0.0000			0.0000
Off-Road	3.6702	35.8034	32.2814	0.0611		1.5352	1.5352		1.4124	1.4124	0.0000	5,916.2840	5,916.2840	1.9135		5,964.1202
Total	**3.6702**	**35.8034**	**32.2814**	**0.0611**	**4.6622**	**1.5352**	**6.1974**	**1.7004**	**1.4124**	**3.1128**	**0.0000**	**5,916.2840**	**5,916.2840**	**1.9135**		**5,964.1202**

C-35 Cont.

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	0.0302	1.3978	0.4254	6.9900e-003	0.2218	0.0145	0.2363	0.0608	0.0138	0.0747		761.9499	761.9499	0.0321	0.1208	798.7420
Vendor	5.2900e-003	0.1850	0.0652	1.0100e-003	0.0378	1.5200e-003	0.0394	0.0109	1.4600e-003	0.0123		108.3730	108.3730	2.7700e-003	0.0160	113.1992
Worker	0.0832	0.0504	0.8580	2.4300e-003	0.2813	1.3100e-003	0.2826	0.0746	1.2000e-003	0.0758		245.5786	245.5786	5.0200e-003	5.3100e-003	247.2872
Total	**0.1188**	**1.6332**	**1.3486**	**0.0104**	**0.5409**	**0.0173**	**0.5582**	**0.1463**	**0.0165**	**0.1628**		**1,115.9014**	**1,115.9014**	**0.0399**	**0.1420**	**1,159.2284**

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

3.4 Pipeline Installation - 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	1.2420	9.9259	12.0216	0.0172		0.4766	0.4766		0.4459	0.4459		1,582.3208	1,582.3208	0.4269		1,592.9942
Total	**1.2420**	**9.9259**	**12.0216**	**0.0172**		**0.4766**	**0.4766**		**0.4459**	**0.4459**		**1,582.3208**	**1,582.3208**	**0.4269**		**1,592.9942**

C-35 Cont.

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	9.0000e-005	4.0900e-003	1.2400e-003	2.0000e-005	6.5000e-004	4.0000e-005	6.9000e-004	1.8000e-004	4.0000e-005	2.2000e-004		2.2279	2.2279	9.0000e-005	3.5000e-004	2.3355
Vendor	5.2900e-003	0.1850	0.0652	1.0100e-003	0.0378	1.5200e-003	0.0394	0.0109	1.4600e-003	0.0123		108.3730	108.3730	2.7700e-003	0.0160	113.1992
Worker	0.0999	0.0605	1.0296	2.9200e-003	0.3376	1.5700e-003	0.3391	0.0895	1.4400e-003	0.0910		294.6943	294.6943	6.0200e-003	6.3800e-003	296.7446
Total	**0.1053**	**0.2496**	**1.0960**	**3.9500e-003**	**0.3760**	**3.1300e-003**	**0.3792**	**0.1006**	**2.9400e-003**	**0.1035**		**405.2952**	**405.2952**	**8.8800e-003**	**0.0227**	**412.2794**

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

3.4 Pipeline Installation - 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					
Off-Road	1.2420	9.9259	12.0216	0.0172		0.4766	0.4766		0.4459	0.4459	0.0000	1,582.3208	1,582.3208	0.4269		1,592.9942
Total	**1.2420**	**9.9259**	**12.0216**	**0.0172**		**0.4766**	**0.4766**		**0.4459**	**0.4459**	**0.0000**	**1,582.3208**	**1,582.3208**	**0.4269**		**1,592.9942**

C-35 Cont.

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	9.0000e-005	4.0900e-003	1.2400e-003	2.0000e-005	6.5000e-004	4.0000e-005	6.9000e-004	1.8000e-004	4.0000e-005	2.2000e-004		2.2279	2.2279	9.0000e-005	3.5000e-004	2.3355
Vendor	5.2900e-003	0.1850	0.0652	1.0100e-003	0.0378	1.5200e-003	0.0394	0.0109	1.4600e-003	0.0123		108.3730	108.3730	2.7700e-003	0.0160	113.1992
Worker	0.0999	0.0605	1.0296	2.9200e-003	0.3376	1.5700e-003	0.3391	0.0895	1.4400e-003	0.0910		294.6943	294.6943	6.0200e-003	6.3800e-003	296.7446
Total	**0.1053**	**0.2496**	**1.0960**	**3.9500e-003**	**0.3760**	**3.1300e-003**	**0.3792**	**0.1006**	**2.9400e-003**	**0.1035**		**405.2952**	**405.2952**	**8.8800e-003**	**0.0227**	**412.2794**

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 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	1.3138	11.8155	13.7084	0.0233		0.5309	0.5309		0.4948	0.4948		2,181.8085	2,181.8085	0.6362		2,197.7130
Total	**1.3138**	**11.8155**	**13.7084**	**0.0233**		**0.5309**	**0.5309**		**0.4948**	**0.4948**		**2,181.8085**	**2,181.8085**	**0.6362**		**2,197.7130**

C-35 Cont.

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	0.2354	8.2343	2.8993	0.0450	1.6836	0.0677	1.7513	0.4845	0.0648	0.5493		4,822.5973	4,822.5973	0.1234	0.7104	5,037.3648
Worker	1.8893	1.1436	19.4765	0.0552	6.3853	0.0296	6.4149	1.6933	0.0273	1.7205		5,574.6339	5,574.6339	0.1139	0.1206	5,613.4194
Total	**2.1247**	**9.3779**	**22.3758**	**0.1001**	**8.0689**	**0.0973**	**8.1662**	**2.1778**	**0.0920**	**2.2699**		**10,397.2312**	**10,397.2312**	**0.2373**	**0.8310**	**10,650.7842**

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 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	1.3138	11.8155	13.7084	0.0233		0.5309	0.5309		0.4948	0.4948	0.0000	2,181.8085	2,181.8085	0.6362		2,197.7130
Total	**1.3138**	**11.8155**	**13.7084**	**0.0233**		**0.5309**	**0.5309**		**0.4948**	**0.4948**	**0.0000**	**2,181.8085**	**2,181.8085**	**0.6362**		**2,197.7130**

C-35 Cont.

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	0.2354	8.2343	2.8993	0.0450	1.6836	0.0677	1.7513	0.4845	0.0648	0.5493		4,822.5973	4,822.5973	0.1234	0.7104	5,037.3648
Worker	1.8893	1.1436	19.4765	0.0552	6.3853	0.0296	6.4149	1.6933	0.0273	1.7205		5,574.6339	5,574.6339	0.1139	0.1206	5,613.4194
Total	**2.1247**	**9.3779**	**22.3758**	**0.1001**	**8.0689**	**0.0973**	**8.1662**	**2.1778**	**0.0920**	**2.2699**		**10,397.2312**	**10,397.2312**	**0.2373**	**0.8310**	**10,650.7842**

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 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	1.2299	10.9578	13.5034	0.0233		0.4619	0.4619		0.4308	0.4308		2,182.3026	2,182.3026	0.6347		2,198.1700
Total	**1.2299**	**10.9578**	**13.5034**	**0.0233**		**0.4619**	**0.4619**		**0.4308**	**0.4308**		**2,182.3026**	**2,182.3026**	**0.6347**		**2,198.1700**

C-35 Cont.

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	0.2302	8.1820	2.8464	0.0441	1.6835	0.0676	1.7512	0.4845	0.0647	0.5492		4,728.7087	4,728.7087	0.1198	0.6961	4,939.1444
Worker	1.7584	1.0184	18.0256	0.0533	6.3853	0.0281	6.4134	1.6933	0.0259	1.7191		5,383.4511	5,383.4511	0.1021	0.1121	5,419.4165
Total	**1.9886**	**9.2004**	**20.8720**	**0.0974**	**8.0688**	**0.0957**	**8.1646**	**2.1778**	**0.0906**	**2.2684**		**10,112.1598**	**10,112.1598**	**0.2219**	**0.8082**	**10,358.5609**

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 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	1.2299	10.9578	13.5034	0.0233		0.4619	0.4619		0.4308	0.4308	0.0000	2,182.3026	2,182.3026	0.6347		2,198.1700
Total	**1.2299**	**10.9578**	**13.5034**	**0.0233**		**0.4619**	**0.4619**		**0.4308**	**0.4308**	**0.0000**	**2,182.3026**	**2,182.3026**	**0.6347**		**2,198.1700**

C-35 Cont.

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	0.2302	8.1820	2.8464	0.0441	1.6835	0.0676	1.7512	0.4845	0.0647	0.5492		4,728.7087	4,728.7087	0.1198	0.6961	4,939.1444
Worker	1.7584	1.0184	18.0256	0.0533	6.3853	0.0281	6.4134	1.6933	0.0259	1.7191		5,383.4511	5,383.4511	0.1021	0.1121	5,419.4165
Total	**1.9886**	**9.2004**	**20.8720**	**0.0974**	**8.0688**	**0.0957**	**8.1646**	**2.1778**	**0.0906**	**2.2684**		**10,112.1598**	**10,112.1598**	**0.2219**	**0.8082**	**10,358.5609**

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 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	0.9241	8.2829	10.1181	0.0140		0.4424	0.4424		0.4070	0.4070		1,352.8292	1,352.8292	0.4375		1,363.7675
Paving	2.4628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.3869**	**8.2829**	**10.1181**	**0.0140**		**0.4424**	**0.4424**		**0.4070**	**0.4070**		**1,352.8292**	**1,352.8292**	**0.4375**		**1,363.7675**

C-35 Cont.

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	5.1700e-003	0.1839	0.0640	9.9000e-004	0.0378	1.5200e-003	0.0394	0.0109	1.4500e-003	0.0123		106.2631	106.2631	2.6900e-003	0.0156	110.9920
Worker	0.0620	0.0359	0.6353	1.8800e-003	0.2250	9.9000e-004	0.2260	0.0597	9.1000e-004	0.0606		189.7252	189.7252	3.6000e-003	3.9500e-003	190.9927
Total	**0.0671**	**0.2198**	**0.6992**	**2.8700e-003**	**0.2629**	**2.5100e-003**	**0.2654**	**0.0706**	**2.3600e-003**	**0.0729**		**295.9883**	**295.9883**	**6.2900e-003**	**0.0196**	**301.9847**

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 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	0.9241	8.2829	10.1181	0.0140		0.4424	0.4424		0.4070	0.4070	0.0000	1,352.8292	1,352.8292	0.4375		1,363.7675
Paving	2.4628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.3869**	**8.2829**	**10.1181**	**0.0140**		**0.4424**	**0.4424**		**0.4070**	**0.4070**	**0.0000**	**1,352.8292**	**1,352.8292**	**0.4375**		**1,363.7675**

C-35 Cont.

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	5.1700e-003	0.1839	0.0640	9.9000e-004	0.0378	1.5200e-003	0.0394	0.0109	1.4500e-003	0.0123		106.2631	106.2631	2.6900e-003	0.0156	110.9920
Worker	0.0620	0.0359	0.6353	1.8800e-003	0.2250	9.9000e-004	0.2260	0.0597	9.1000e-004	0.0606		189.7252	189.7252	3.6000e-003	3.9500e-003	190.9927
Total	**0.0671**	**0.2198**	**0.6992**	**2.8700e-003**	**0.2629**	**2.5100e-003**	**0.2654**	**0.0706**	**2.3600e-003**	**0.0729**		**295.9883**	**295.9883**	**6.2900e-003**	**0.0196**	**301.9847**

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

3.7 Architectural Coating - 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					
Archit. Coating	1,001.2763					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1548	0.8821	1.1396	1.6400e-003		0.0273	0.0273		0.0273	0.0273		133.5074	133.5074	0.0139		133.8539
Total	**1,001.4312**	**0.8821**	**1.1396**	**1.6400e-003**		**0.0273**	**0.0273**		**0.0273**	**0.0273**		**133.5074**	**133.5074**	**0.0139**		**133.8539**

C-35 Cont.

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	5.1700e-003	0.1839	0.0640	9.9000e-004	0.1457	1.5200e-003	0.1472	0.0374	1.4500e-003	0.0388		106.2631	106.2631	2.6900e-003	0.0156	110.9920
Worker	0.3563	0.2064	3.6528	0.0108	5.7944	5.7000e-003	5.8001	1.4478	5.2400e-003	1.4530		1,090.9196	1,090.9196	0.0207	0.0227	1,098.2078
Total	**0.3615**	**0.3902**	**3.7167**	**0.0118**	**5.9401**	**7.2200e-003**	**5.9474**	**1.4852**	**6.6900e-003**	**1.4919**		**1,197.1827**	**1,197.1827**	**0.0234**	**0.0384**	**1,209.1998**

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

3.7 Architectural Coating - 2025

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	1,001.2763					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1548	0.8821	1.1396	1.6400e-003		0.0273	0.0273		0.0273	0.0273	0.0000	133.5074	133.5074	0.0139		133.8539
Total	**1,001.4312**	**0.8821**	**1.1396**	**1.6400e-003**		**0.0273**	**0.0273**		**0.0273**	**0.0273**	**0.0000**	**133.5074**	**133.5074**	**0.0139**		**133.8539**

C-35 Cont.

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	5.1700e-003	0.1839	0.0640	9.9000e-004	0.1457	1.5200e-003	0.1472	0.0374	1.4500e-003	0.0388		106.2631	106.2631	2.6900e-003	0.0156	110.9920
Worker	0.3563	0.2064	3.6528	0.0108	5.7944	5.7000e-003	5.8001	1.4478	5.2400e-003	1.4530		1,090.9196	1,090.9196	0.0207	0.0227	1,098.2078
Total	**0.3615**	**0.3902**	**3.7167**	**0.0118**	**5.9401**	**7.2200e-003**	**5.9474**	**1.4852**	**6.6900e-003**	**1.4919**		**1,197.1827**	**1,197.1827**	**0.0234**	**0.0384**	**1,209.1998**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	3,754.6191	4,479.7624	34,053.0013	75.6871	7,824.3907	57.1640	7,881.5547	2,086.7354	53.4968	2,140.2322		7,718,825.0727	7,718,825.0727	412.2821	360.7132	7,836,624.6595
Unmitigated	3,754.6191	4,479.7624	34,053.0013	75.6871	7,824.3907	57.1640	7,881.5547	2,086.7354	53.4968	2,140.2322		7,718,825.0727	7,718,825.0727	412.2821	360.7132	7,836,624.6595

C-35 Cont.

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	159,786.00	159,786.00	159786.00	466,497,007	466,497,007
Unrefrigerated Warehouse-Rail	1,109,511.00	1,109,511.00	1109511.00	3,239,229,724	3,239,229,724
Total	1,269,297.00	1,269,297.00	1,269,297.00	3,705,726,731	3,705,726,731

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
Parking Lot	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-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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Unrefrigerated Warehouse-No Rail	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Unrefrigerated Warehouse-Rail	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606

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	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332
NaturalGas Unmitigated	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332

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Cont.

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					
Parking Lot	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	1635.72	0.0176	0.1604	0.1347	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.4378	192.4378	3.6900e-003	3.5300e-003	193.5814
Unrefrigerated Warehouse-Rail	4312.36	0.0465	0.4228	0.3551	2.5400e-003		0.0321	0.0321		0.0321	0.0321		507.3370	507.3370	9.7200e-003	9.3000e-003	510.3518
Total		**0.0642**	**0.5831**	**0.4899**	**3.5000e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**		**699.7748**	**699.7748**	**0.0134**	**0.0128**	**703.9332**

C-35 Cont.

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					
Parking Lot	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	1.63572	0.0176	0.1604	0.1347	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.4378	192.4378	3.6900e-003	3.5300e-003	193.5814
Unrefrigerated Warehouse-Rail	4.31236	0.0465	0.4228	0.3551	2.5400e-003		0.0321	0.0321		0.0321	0.0321		507.3370	507.3370	9.7200e-003	9.3000e-003	510.3518
Total		**0.0642**	**0.5831**	**0.4899**	**3.5000e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**		**699.7748**	**699.7748**	**0.0134**	**0.0128**	**703.9332**

C-35 Cont.

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	lb/day										lb/day					
Mitigated	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Unmitigated	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902

C-35 Cont.

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	6.8581					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	23.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0197	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Total	**29.9925**	**1.9400e-003**	**0.2142**	**2.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**		**0.4603**	**0.4603**	**1.2000e-003**		**0.4902**

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	6.8581					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	23.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0197	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Total	**29.9925**	**1.9400e-003**	**0.2142**	**2.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**		**0.4603**	**0.4603**	**1.2000e-003**		**0.4902**

C-35 Cont.

7.0 Water Detail

7.1 Mitigation Measures Water

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
Forklifts	98	24.00	260	82	0.20	CNG
Forklifts	32	24.00	260	82	0.20	Diesel
Forklifts	4	24.00	260	200	0.20	Diesel

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

UnMitigated/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
Equipment Type	lb/day										lb/day					
Forklifts	14.7266	344.2176	2,699.9606	0.5907		9.3860	9.3860		9.0378	9.0378	0.0000	69,461.1478	69,461.1478	22.4651		70,022.7764
Total	**14.7266**	**344.2176**	**2,699.9606**	**0.5907**		**9.3860**	**9.3860**		**9.0378**	**9.0378**	**0.0000**	**69,461.1478**	**69,461.1478**	**22.4651**		**70,022.7764**

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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Fire Pump	1	8	50	300	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

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

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Fire Pump - Diesel (300 - 600 HP)	3.9386	11.0081	10.0425	0.0189		0.5794	0.5794		0.5794	0.5794		2,014.8339	2,014.8339	0.2825		2,021.8959
Total	**3.9386**	**11.0081**	**10.0425**	**0.0189**		**0.5794**	**0.5794**		**0.5794**	**0.5794**		**2,014.8339**	**2,014.8339**	**0.2825**		**2,021.8959**

11.0 Vegetation

C-35 Cont.

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

1M Warehouse

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	297.00	1000sqft	6.82	297,034.00	0
Unrefrigerated Warehouse-Rail	783.00	1000sqft	18.00	783,091.00	0
Parking Lot	1,023.00	1000sqft	23.50	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**	2025
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with EIR's Model.

Land Use - Consistent with EIR's Model.

Construction Phase - Consistent with Comment on: "Unsubstantiated Changes to Individual Construction Phase Lengths".

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - Consistent with EIR's Model.

Off-road Equipment - CalEEMod defaults. Equipment assumptions for pipeline installation phase created using similar past pipeline projects. Assuming 10 air compressors for arc coating phase.

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

Trips and VMT - Assuming an even number of all trips. Assuming at least 4 vendor trips per day. Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively.

Grading - Per PD, during the on-site grading and off-site pipeline phases, 150,000 CY and 2,288 CY of soil would be exported, respectively. This was summed in the Grading phase.

Architectural Coating - See Comment on: "Unsubstantiated Changes to Architectural Coating Values".

Vehicle Trips - Consistent with EIR's Model.

Road Dust -

Area Coating - PDF that all arc coatings are 10 g/L or less.

Energy Use -

Water And Wastewater - See Comment on: "Unsubstantiated Changes to Operational Wastewater Values".

Solid Waste -

Construction Off-road Equipment Mitigation - Consistent with EIR's Model.

Operational Off-Road Equipment - Forklifts and yard truck calcs based on attached Excel spreadsheet.

Fleet Mix - See Comment on: "Unsubstantiated Changes to Operational Vehicle Fleet Mix".

Stationary Sources - Emergency Generators and Fire Pumps - Consistent with EIR's Model.

Vehicle Emission Factors - Assuming 40 miles for truck trips as explained in the AQ section. Assuming H-W trip length of 34 miles for all passenger trips.

Vehicle Emission Factors -

Vehicle Emission Factors -

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Cont.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblAreaCoating	Area_Parking	0	61380
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	30.00	13.00
tblConstructionPhase	NumDays	75.00	33.00
tblConstructionPhase	NumDays	740.00	330.00
tblConstructionPhase	NumDays	55.00	25.00

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

tblConstructionPhase	NumDays	55.00	25.00
tblGrading	AcresOfGrading	99.00	135.00
tblGrading	AcresOfGrading	19.50	45.00
tblGrading	MaterialExported	0.00	152,288.00
tblLandUse	LandUseSquareFeet	297,000.00	297,034.00
tblLandUse	LandUseSquareFeet	783,000.00	783,091.00
tblLandUse	LandUseSquareFeet	1,023,000.00	0.00
tblLandUse	LotAcreage	17.98	18.00
tblLandUse	LotAcreage	23.48	23.50
tblOffRoadEquipment	HorsePower	78.00	37.00
tblOffRoadEquipment	HorsePower	231.00	367.00
tblOffRoadEquipment	HorsePower	158.00	36.00
tblOffRoadEquipment	HorsePower	89.00	82.00
tblOffRoadEquipment	HorsePower	84.00	14.00
tblOffRoadEquipment	HorsePower	187.00	148.00
tblOffRoadEquipment	HorsePower	130.00	81.00
tblOffRoadEquipment	HorsePower	132.00	89.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	247.00	367.00
tblOffRoadEquipment	HorsePower	247.00	367.00
tblOffRoadEquipment	HorsePower	367.00	423.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	HorsePower	78.00	37.00
tblOffRoadEquipment	HorsePower	81.00	33.00
tblOffRoadEquipment	HorsePower	158.00	36.00
tblOffRoadEquipment	HorsePower	89.00	82.00
tblOffRoadEquipment	HorsePower	130.00	81.00

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Cont.

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

tblOffRoadEquipment	HorsePower	132.00	89.00
tblOffRoadEquipment	HorsePower	84.00	11.00
tblOffRoadEquipment	HorsePower	80.00	36.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	LoadFactor	0.48	0.38
tblOffRoadEquipment	LoadFactor	0.73	0.48
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	89.00	82.00
tblOperationalOffRoadEquipment	OperHorsePower	89.00	82.00
tblOperationalOffRoadEquipment	OperHorsePower	89.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	24.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	98.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	32.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	300.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	8.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	15,057.00	418.00
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripLength	7.30	10.20
tblTripsAndVMT	VendorTripNumber	177.00	178.00

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Cont.

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

tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripLength	10.80	18.50
tblTripsAndVMT	WorkerTripNumber	23.00	24.00
tblTripsAndVMT	WorkerTripNumber	91.00	92.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblVehicleTrips	ST_TR	1.74	538.00
tblVehicleTrips	ST_TR	1.74	1,417.00
tblVehicleTrips	SU_TR	1.74	538.00
tblVehicleTrips	SU_TR	1.74	1,417.00
tblVehicleTrips	WD_TR	1.74	538.00
tblVehicleTrips	WD_TR	1.74	1,417.00

2.0 Emissions Summary

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Cont.

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					
2023	4.0772	40.4206	37.1062	0.0715	22.0282	1.8305	23.8587	10.4051	1.6841	12.0892	0.0000	7,033.9790	7,033.9790	1.9554	0.1452	7,126.1436
2024	3.7849	37.5248	33.4808	0.1183	10.9014	1.5525	12.4540	3.9250	1.4289	5.3539	0.0000	12,062.7356	12,062.7356	1.9532	0.8363	12,333.7395
2025	1,001.7870	20.6504	31.1369	0.1158	8.0688	0.5578	8.6267	2.1778	0.5216	2.6994	0.0000	11,797.2697	11,797.2697	0.8547	0.8133	12,060.9953
Maximum	**1,001.7870**	**40.4206**	**37.1062**	**0.1183**	**22.0282**	**1.8305**	**23.8587**	**10.4051**	**1.6841**	**12.0892**	**0.0000**	**12,062.7356**	**12,062.7356**	**1.9554**	**0.8363**	**12,333.7395**

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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					
2023	4.0772	40.4206	37.1062	0.0715	10.0727	1.8305	11.9033	4.7252	1.6841	6.4093	0.0000	7,033.9790	7,033.9790	1.9554	0.1452	7,126.1436
2024	3.7849	37.5248	33.4808	0.1183	8.0689	1.5525	8.6972	2.1778	1.4289	3.2756	0.0000	12,062.7356	12,062.7356	1.9532	0.8363	12,333.7395
2025	1,001.7870	20.6504	31.1369	0.1158	8.0688	0.5578	8.6267	2.1778	0.5216	2.6994	0.0000	11,797.2697	11,797.2697	0.8547	0.8133	12,060.9953
Maximum	**1,001.7870**	**40.4206**	**37.1062**	**0.1183**	**10.0727**	**1.8305**	**11.9033**	**4.7252**	**1.6841**	**6.4093**	**0.0000**	**12,062.7356**	**12,062.7356**	**1.9554**	**0.8363**	**12,333.7395**

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**	**36.07**	**0.00**	**34.96**	**44.99**	**0.00**	**38.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

C-35 Cont.

	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	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Energy	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332
Mobile	3,241.8607	4,760.8290	30,691.0276	70.2436	7,824.3907	57.2097	7,881.6004	2,086.7354	53.5406	2,140.2760		7,169,263.8222	7,169,263.8222	424.2662	369.7116	7,290,044.5336
Offroad	14.7266	344.2176	2,699.9606	0.5907		9.3860	9.3860		9.0378	9.0378	0.0000	69,461.1478	69,461.1478	22.4651		70,022.7764
Stationary	3.9386	11.0081	10.0425	0.0189		0.5794	0.5794		0.5794	0.5794		2,014.8339	2,014.8339	0.2825		2,021.8959
Total	**3,290.5825**	**5,116.6398**	**33,401.7347**	**70.8568**	**7,824.3907**	**67.2201**	**7,891.6108**	**2,086.7354**	**63.2029**	**2,149.9383**	**0.0000**	**7,241,440.0390**	**7,241,440.0390**	**447.0285**	**369.7244**	**7,362,793.6293**

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	lb/day										lb/day					
Area	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Energy	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332
Mobile	3,241.8607	4,760.8290	30,691.0276	70.2436	7,824.3907	57.2097	7,881.6004	2,086.7354	53.5406	2,140.2760		7,169,263.8222	7,169,263.8222	424.2662	369.7116	7,290,044.5336
Offroad	14.7266	344.2176	2,699.9606	0.5907		9.3860	9.3860		9.0378	9.0378	0.0000	69,461.1478	69,461.1478	22.4651		70,022.7764
Stationary	3.9386	11.0081	10.0425	0.0189		0.5794	0.5794		0.5794	0.5794		2,014.8339	2,014.8339	0.2825		2,021.8959
Total	**3,290.5825**	**5,116.6398**	**33,401.7347**	**70.8568**	**7,824.3907**	**67.2201**	**7,891.6108**	**2,086.7354**	**63.2029**	**2,149.9383**	**0.0000**	**7,241,440.0390**	**7,241,440.0390**	**447.0285**	**369.7244**	**7,362,793.6293**

	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	12/4/2023	12/20/2023	5	13	
2	Grading	Grading	12/21/2023	2/5/2024	5	33	
3	Pipeline Installation	Trenching	2/6/2024	4/19/2024	5	54	

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

4	Building Construction	Building Construction	4/20/2024	7/25/2025	5	330
5	Paving	Paving	7/26/2025	8/29/2025	5	25
6	Architectural Coating	Architectural Coating	8/30/2025	10/3/2025	5	25

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 135

Acres of Paving: 23.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,620,188; Non-Residential Outdoor: 540,063; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	367	0.29
Building Construction	Forklifts	3	8.00	82	0.20
Building Construction	Generator Sets	1	8.00	14	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	84	0.37
Building Construction	Welders	1	8.00	46	0.45
Pipeline Installation	Air Compressors	1	8.00	37	0.38
Pipeline Installation	Concrete/Industrial Saws	1	8.00	33	0.48
Pipeline Installation	Excavators	1	8.00	36	0.38
Pipeline Installation	Forklifts	1	8.00	82	0.20
Pipeline Installation	Pavers	1	8.00	81	0.42
Pipeline Installation	Paving Equipment	1	8.00	89	0.36
Pipeline Installation	Pumps	1	8.00	11	0.74
Pipeline Installation	Rollers	1	8.00	36	0.38
Pipeline Installation	Tractors/Loaders/Backhoes	1	8.00	84	0.37
Grading	Excavators	2	8.00	36	0.38
Grading	Graders	1	8.00	148	0.41
Grading	Rubber Tired Dozers	1	8.00	367	0.40

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

Grading	Scrapers	2	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	84	0.37
Architectural Coating	Air Compressors	1	6.00	37	0.48
Paving	Pavers	2	8.00	81	0.42
Paving	Paving Equipment	2	8.00	89	0.36
Paving	Rollers	2	8.00	36	0.38
site preparation	Rubber Tired Dozers	3	8.00	367	0.40
site preparation	Tractors/Loaders/Backhoes	4	8.00	84	0.37

Trips and VMT

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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
Building Construction	9	454.00	178.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	9	24.00	4.00	2.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	4.00	418.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT
site preparation	7	18.00	4.00	0.00	18.50	10.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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

3.2 site preparation - 2023

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					21.7372	0.0000	21.7372	10.3271	0.0000	10.3271			0.0000			0.0000
Off-Road	3.9931	39.5606	36.3608	0.0492		1.8277	1.8277		1.6815	1.6815		4,768.8191	4,768.8191	1.5423		4,807.3774
Total	**3.9931**	**39.5606**	**36.3608**	**0.0492**	**21.7372**	**1.8277**	**23.5650**	**10.3271**	**1.6815**	**12.0086**		**4,768.8191**	**4,768.8191**	**1.5423**		**4,807.3774**

C-35 Cont.

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	5.1300e-003	0.1930	0.0682	1.0300e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		110.0656	110.0656	2.8400e-003	0.0162	114.9716
Worker	0.0790	0.0538	0.6772	2.0400e-003	0.2532	1.2200e-003	0.2544	0.0671	1.1300e-003	0.0683		206.1944	206.1944	4.9200e-003	5.3300e-003	207.9052
Total	**0.0841**	**0.2468**	**0.7454**	**3.0700e-003**	**0.2910**	**2.7700e-003**	**0.2938**	**0.0780**	**2.6100e-003**	**0.0806**		**316.2600**	**316.2600**	**7.7600e-003**	**0.0216**	**322.8767**

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

3.2 site preparation - 2023

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					9.7818	0.0000	9.7818	4.6472	0.0000	4.6472			0.0000			0.0000
Off-Road	3.9931	39.5606	36.3608	0.0492		1.8277	1.8277		1.6815	1.6815	0.0000	4,768.8191	4,768.8191	1.5423		4,807.3774
Total	**3.9931**	**39.5606**	**36.3608**	**0.0492**	**9.7818**	**1.8277**	**11.6095**	**4.6472**	**1.6815**	**6.3287**	**0.0000**	**4,768.8191**	**4,768.8191**	**1.5423**		**4,807.3774**

C-35 Cont.

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	5.1300e-003	0.1930	0.0682	1.0300e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		110.0656	110.0656	2.8400e-003	0.0162	114.9716
Worker	0.0790	0.0538	0.6772	2.0400e-003	0.2532	1.2200e-003	0.2544	0.0671	1.1300e-003	0.0683		206.1944	206.1944	4.9200e-003	5.3300e-003	207.9052
Total	**0.0841**	**0.2468**	**0.7454**	**3.0700e-003**	**0.2910**	**2.7700e-003**	**0.2938**	**0.0780**	**2.6100e-003**	**0.0806**		**316.2600**	**316.2600**	**7.7600e-003**	**0.0216**	**322.8767**

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

3.3 Grading - 2023

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					10.3605	0.0000	10.3605	3.7787	0.0000	3.7787			0.0000			0.0000
Off-Road	3.8665	38.6992	33.2907	0.0611		1.6780	1.6780		1.5438	1.5438		5,918.2208	5,918.2208	1.9141		5,966.0726
Total	**3.8665**	**38.6992**	**33.2907**	**0.0611**	**10.3605**	**1.6780**	**12.0385**	**3.7787**	**1.5438**	**5.3225**		**5,918.2208**	**5,918.2208**	**1.9141**		**5,966.0726**

C-35 Cont.

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	0.0282	1.4686	0.4320	7.1300e-003	0.2218	0.0147	0.2365	0.0608	0.0140	0.0749		776.5877	776.5877	0.0330	0.1231	814.0937
Vendor	5.1300e-003	0.1930	0.0682	1.0300e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		110.0656	110.0656	2.8400e-003	0.0162	114.9716
Worker	0.0877	0.0598	0.7524	2.2700e-003	0.2813	1.3600e-003	0.2827	0.0746	1.2500e-003	0.0759		229.1049	229.1049	5.4700e-003	5.9200e-003	231.0057
Total	**0.1211**	**1.7214**	**1.2526**	**0.0104**	**0.5409**	**0.0176**	**0.5585**	**0.1463**	**0.0168**	**0.1631**		**1,115.7582**	**1,115.7582**	**0.0413**	**0.1452**	**1,160.0710**

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

3.3 Grading - 2023

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					4.6622	0.0000	4.6622	1.7004	0.0000	1.7004			0.0000			0.0000
Off-Road	3.8665	38.6992	33.2907	0.0611		1.6780	1.6780		1.5438	1.5438	0.0000	5,918.2208	5,918.2208	1.9141		5,966.0726
Total	**3.8665**	**38.6992**	**33.2907**	**0.0611**	**4.6622**	**1.6780**	**6.3403**	**1.7004**	**1.5438**	**3.2442**	**0.0000**	**5,918.2208**	**5,918.2208**	**1.9141**		**5,966.0726**

C-35 Cont.

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	0.0282	1.4686	0.4320	7.1300e-003	0.2218	0.0147	0.2365	0.0608	0.0140	0.0749		776.5877	776.5877	0.0330	0.1231	814.0937
Vendor	5.1300e-003	0.1930	0.0682	1.0300e-003	0.0378	1.5500e-003	0.0394	0.0109	1.4800e-003	0.0124		110.0656	110.0656	2.8400e-003	0.0162	114.9716
Worker	0.0877	0.0598	0.7524	2.2700e-003	0.2813	1.3600e-003	0.2827	0.0746	1.2500e-003	0.0759		229.1049	229.1049	5.4700e-003	5.9200e-003	231.0057
Total	**0.1211**	**1.7214**	**1.2526**	**0.0104**	**0.5409**	**0.0176**	**0.5585**	**0.1463**	**0.0168**	**0.1631**		**1,115.7582**	**1,115.7582**	**0.0413**	**0.1452**	**1,160.0710**

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					10.3605	0.0000	10.3605	3.7787	0.0000	3.7787			0.0000			0.0000
Off-Road	3.6702	35.8034	32.2814	0.0611		1.5352	1.5352		1.4124	1.4124		5,916.2840	5,916.2840	1.9135		5,964.1202
Total	**3.6702**	**35.8034**	**32.2814**	**0.0611**	**10.3605**	**1.5352**	**11.8957**	**3.7787**	**1.4124**	**5.1910**		**5,916.2840**	**5,916.2840**	**1.9135**		**5,964.1202**

C-35 Cont.

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	0.0280	1.4734	0.4330	7.0000e-003	0.2218	0.0145	0.2363	0.0608	0.0139	0.0747		763.1081	763.1081	0.0320	0.1210	799.9519
Vendor	4.9800e-003	0.1950	0.0669	1.0100e-003	0.0378	1.5300e-003	0.0394	0.0109	1.4600e-003	0.0124		108.5579	108.5579	2.7600e-003	0.0160	113.3947
Worker	0.0818	0.0529	0.6995	2.2000e-003	0.2813	1.3100e-003	0.2826	0.0746	1.2000e-003	0.0758		222.4713	222.4713	4.9500e-003	5.4800e-003	224.2275
Total	**0.1147**	**1.7214**	**1.1994**	**0.0102**	**0.5409**	**0.0173**	**0.5583**	**0.1463**	**0.0165**	**0.1628**		**1,094.1374**	**1,094.1374**	**0.0397**	**0.1424**	**1,137.5741**

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					4.6622	0.0000	4.6622	1.7004	0.0000	1.7004			0.0000			0.0000
Off-Road	3.6702	35.8034	32.2814	0.0611		1.5352	1.5352		1.4124	1.4124	0.0000	5,916.2840	5,916.2840	1.9135		5,964.1202
Total	**3.6702**	**35.8034**	**32.2814**	**0.0611**	**4.6622**	**1.5352**	**6.1974**	**1.7004**	**1.4124**	**3.1128**	**0.0000**	**5,916.2840**	**5,916.2840**	**1.9135**		**5,964.1202**

C-35 Cont.

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	0.0280	1.4734	0.4330	7.0000e-003	0.2218	0.0145	0.2363	0.0608	0.0139	0.0747		763.1081	763.1081	0.0320	0.1210	799.9519
Vendor	4.9800e-003	0.1950	0.0669	1.0100e-003	0.0378	1.5300e-003	0.0394	0.0109	1.4600e-003	0.0124		108.5579	108.5579	2.7600e-003	0.0160	113.3947
Worker	0.0818	0.0529	0.6995	2.2000e-003	0.2813	1.3100e-003	0.2826	0.0746	1.2000e-003	0.0758		222.4713	222.4713	4.9500e-003	5.4800e-003	224.2275
Total	**0.1147**	**1.7214**	**1.1994**	**0.0102**	**0.5409**	**0.0173**	**0.5583**	**0.1463**	**0.0165**	**0.1628**		**1,094.1374**	**1,094.1374**	**0.0397**	**0.1424**	**1,137.5741**

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

3.4 Pipeline Installation - 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	1.2420	9.9259	12.0216	0.0172		0.4766	0.4766		0.4459	0.4459		1,582.3208	1,582.3208	0.4269		1,592.9942
Total	**1.2420**	**9.9259**	**12.0216**	**0.0172**		**0.4766**	**0.4766**		**0.4459**	**0.4459**		**1,582.3208**	**1,582.3208**	**0.4269**		**1,592.9942**

C-35 Cont.

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	8.0000e-005	4.3100e-003	1.2700e-003	2.0000e-005	6.5000e-004	4.0000e-005	6.9000e-004	1.8000e-004	4.0000e-005	2.2000e-004		2.2313	2.2313	9.0000e-005	3.5000e-004	2.3390
Vendor	4.9800e-003	0.1950	0.0669	1.0100e-003	0.0378	1.5300e-003	0.0394	0.0109	1.4600e-003	0.0124		108.5579	108.5579	2.7600e-003	0.0160	113.3947
Worker	0.0981	0.0635	0.8394	2.6400e-003	0.3376	1.5700e-003	0.3391	0.0895	1.4400e-003	0.0910		266.9656	266.9656	5.9300e-003	6.5700e-003	269.0729
Total	**0.1032**	**0.2628**	**0.9075**	**3.6700e-003**	**0.3760**	**3.1400e-003**	**0.3792**	**0.1006**	**2.9400e-003**	**0.1035**		**377.7548**	**377.7548**	**8.7800e-003**	**0.0229**	**384.8067**

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

3.4 Pipeline Installation - 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					
Off-Road	1.2420	9.9259	12.0216	0.0172		0.4766	0.4766		0.4459	0.4459	0.0000	1,582.3208	1,582.3208	0.4269		1,592.9942
Total	**1.2420**	**9.9259**	**12.0216**	**0.0172**		**0.4766**	**0.4766**		**0.4459**	**0.4459**	**0.0000**	**1,582.3208**	**1,582.3208**	**0.4269**		**1,592.9942**

C-35 Cont.

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	8.0000e-005	4.3100e-003	1.2700e-003	2.0000e-005	6.5000e-004	4.0000e-005	6.9000e-004	1.8000e-004	4.0000e-005	2.2000e-004		2.2313	2.2313	9.0000e-005	3.5000e-004	2.3390
Vendor	4.9800e-003	0.1950	0.0669	1.0100e-003	0.0378	1.5300e-003	0.0394	0.0109	1.4600e-003	0.0124		108.5579	108.5579	2.7600e-003	0.0160	113.3947
Worker	0.0981	0.0635	0.8394	2.6400e-003	0.3376	1.5700e-003	0.3391	0.0895	1.4400e-003	0.0910		266.9656	266.9656	5.9300e-003	6.5700e-003	269.0729
Total	**0.1032**	**0.2628**	**0.9075**	**3.6700e-003**	**0.3760**	**3.1400e-003**	**0.3792**	**0.1006**	**2.9400e-003**	**0.1035**		**377.7548**	**377.7548**	**8.7800e-003**	**0.0229**	**384.8067**

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 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	1.3138	11.8155	13.7084	0.0233		0.5309	0.5309		0.4948	0.4948		2,181.8085	2,181.8085	0.6362		2,197.7130
Total	**1.3138**	**11.8155**	**13.7084**	**0.0233**		**0.5309**	**0.5309**		**0.4948**	**0.4948**		**2,181.8085**	**2,181.8085**	**0.6362**		**2,197.7130**

C-35 Cont.

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	0.2216	8.6780	2.9776	0.0450	1.6836	0.0679	1.7514	0.4845	0.0649	0.5495		4,830.8284	4,830.8284	0.1226	0.7120	5,046.0634
Worker	1.8558	1.2015	15.8777	0.0500	6.3853	0.0296	6.4149	1.6933	0.0273	1.7205		5,050.0987	5,050.0987	0.1123	0.1244	5,089.9631
Total	**2.0774**	**9.8795**	**18.8553**	**0.0950**	**8.0689**	**0.0975**	**8.1664**	**2.1778**	**0.0922**	**2.2700**		**9,880.9270**	**9,880.9270**	**0.2349**	**0.8363**	**10,136.0265**

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 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	1.3138	11.8155	13.7084	0.0233		0.5309	0.5309		0.4948	0.4948	0.0000	2,181.8085	2,181.8085	0.6362		2,197.7130
Total	**1.3138**	**11.8155**	**13.7084**	**0.0233**		**0.5309**	**0.5309**		**0.4948**	**0.4948**	**0.0000**	**2,181.8085**	**2,181.8085**	**0.6362**		**2,197.7130**

C-35 Cont.

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	0.2216	8.6780	2.9776	0.0450	1.6836	0.0679	1.7514	0.4845	0.0649	0.5495		4,830.8284	4,830.8284	0.1226	0.7120	5,046.0634
Worker	1.8558	1.2015	15.8777	0.0500	6.3853	0.0296	6.4149	1.6933	0.0273	1.7205		5,050.0987	5,050.0987	0.1123	0.1244	5,089.9631
Total	**2.0774**	**9.8795**	**18.8553**	**0.0950**	**8.0689**	**0.0975**	**8.1664**	**2.1778**	**0.0922**	**2.2700**		**9,880.9270**	**9,880.9270**	**0.2349**	**0.8363**	**10,136.0265**

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 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	1.2299	10.9578	13.5034	0.0233		0.4619	0.4619		0.4308	0.4308		2,182.3026	2,182.3026	0.6347		2,198.1700
Total	**1.2299**	**10.9578**	**13.5034**	**0.0233**		**0.4619**	**0.4619**		**0.4308**	**0.4308**		**2,182.3026**	**2,182.3026**	**0.6347**		**2,198.1700**

C-35 Cont.

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	0.2163	8.6230	2.9244	0.0442	1.6835	0.0678	1.7513	0.4845	0.0649	0.5494		4,736.8576	4,736.8576	0.1190	0.6977	4,947.7482
Worker	1.7319	1.0696	14.7091	0.0483	6.3853	0.0281	6.4134	1.6933	0.0259	1.7191		4,878.1095	4,878.1095	0.1010	0.1156	4,915.0771
Total	**1.9482**	**9.6927**	**17.6335**	**0.0924**	**8.0688**	**0.0959**	**8.1648**	**2.1778**	**0.0907**	**2.2685**		**9,614.9671**	**9,614.9671**	**0.2200**	**0.8133**	**9,862.8253**

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 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	1.2299	10.9578	13.5034	0.0233		0.4619	0.4619		0.4308	0.4308	0.0000	2,182.3026	2,182.3026	0.6347		2,198.1700
Total	**1.2299**	**10.9578**	**13.5034**	**0.0233**		**0.4619**	**0.4619**		**0.4308**	**0.4308**	**0.0000**	**2,182.3026**	**2,182.3026**	**0.6347**		**2,198.1700**

C-35 Cont.

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	0.2163	8.6230	2.9244	0.0442	1.6835	0.0678	1.7513	0.4845	0.0649	0.5494		4,736.8576	4,736.8576	0.1190	0.6977	4,947.7482
Worker	1.7319	1.0696	14.7091	0.0483	6.3853	0.0281	6.4134	1.6933	0.0259	1.7191		4,878.1095	4,878.1095	0.1010	0.1156	4,915.0771
Total	**1.9482**	**9.6927**	**17.6335**	**0.0924**	**8.0688**	**0.0959**	**8.1648**	**2.1778**	**0.0907**	**2.2685**		**9,614.9671**	**9,614.9671**	**0.2200**	**0.8133**	**9,862.8253**

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 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	0.9241	8.2829	10.1181	0.0140		0.4424	0.4424		0.4070	0.4070		1,352.8292	1,352.8292	0.4375		1,363.7675
Paving	2.4628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.3869**	**8.2829**	**10.1181**	**0.0140**		**0.4424**	**0.4424**		**0.4070**	**0.4070**		**1,352.8292**	**1,352.8292**	**0.4375**		**1,363.7675**

C-35 Cont.

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	4.8600e-003	0.1938	0.0657	9.9000e-004	0.0378	1.5200e-003	0.0394	0.0109	1.4600e-003	0.0124		106.4462	106.4462	2.6700e-003	0.0157	111.1854
Worker	0.0610	0.0377	0.5184	1.7000e-003	0.2250	9.9000e-004	0.2260	0.0597	9.1000e-004	0.0606		171.9158	171.9158	3.5600e-003	4.0700e-003	173.2186
Total	**0.0659**	**0.2315**	**0.5841**	**2.6900e-003**	**0.2629**	**2.5100e-003**	**0.2654**	**0.0706**	**2.3700e-003**	**0.0729**		**278.3620**	**278.3620**	**6.2300e-003**	**0.0198**	**284.4039**

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 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	0.9241	8.2829	10.1181	0.0140		0.4424	0.4424		0.4070	0.4070	0.0000	1,352.8292	1,352.8292	0.4375		1,363.7675
Paving	2.4628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.3869**	**8.2829**	**10.1181**	**0.0140**		**0.4424**	**0.4424**		**0.4070**	**0.4070**	**0.0000**	**1,352.8292**	**1,352.8292**	**0.4375**		**1,363.7675**

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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	4.8600e-003	0.1938	0.0657	9.9000e-004	0.0378	1.5200e-003	0.0394	0.0109	1.4600e-003	0.0124		106.4462	106.4462	2.6700e-003	0.0157	111.1854
Worker	0.0610	0.0377	0.5184	1.7000e-003	0.2250	9.9000e-004	0.2260	0.0597	9.1000e-004	0.0606		171.9158	171.9158	3.5600e-003	4.0700e-003	173.2186
Total	**0.0659**	**0.2315**	**0.5841**	**2.6900e-003**	**0.2629**	**2.5100e-003**	**0.2654**	**0.0706**	**2.3700e-003**	**0.0729**		**278.3620**	**278.3620**	**6.2300e-003**	**0.0198**	**284.4039**

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

3.7 Architectural Coating - 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					
Archit. Coating	1,001.2763					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1548	0.8821	1.1396	1.6400e-003		0.0273	0.0273		0.0273	0.0273		133.5074	133.5074	0.0139		133.8539
Total	**1,001.4312**	**0.8821**	**1.1396**	**1.6400e-003**		**0.0273**	**0.0273**		**0.0273**	**0.0273**		**133.5074**	**133.5074**	**0.0139**		**133.8539**

C-35 Cont.

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	4.8600e-003	0.1938	0.0657	9.9000e-004	0.1457	1.5200e-003	0.1472	0.0374	1.4600e-003	0.0388		106.4462	106.4462	2.6700e-003	0.0157	111.1854
Worker	0.3510	0.2168	2.9807	9.7800e-003	5.7944	5.7000e-003	5.8001	1.4478	5.2400e-003	1.4530		988.5156	988.5156	0.0205	0.0234	996.0068
Total	**0.3558**	**0.4105**	**3.0464**	**0.0108**	**5.9401**	**7.2200e-003**	**5.9474**	**1.4852**	**6.7000e-003**	**1.4919**		**1,094.9618**	**1,094.9618**	**0.0231**	**0.0391**	**1,107.1922**

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

3.7 Architectural Coating - 2025

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	1,001.2763					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1548	0.8821	1.1396	1.6400e-003		0.0273	0.0273		0.0273	0.0273	0.0000	133.5074	133.5074	0.0139		133.8539
Total	**1,001.4312**	**0.8821**	**1.1396**	**1.6400e-003**		**0.0273**	**0.0273**		**0.0273**	**0.0273**	**0.0000**	**133.5074**	**133.5074**	**0.0139**		**133.8539**

C-35 Cont.

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	4.8600e-003	0.1938	0.0657	9.9000e-004	0.1457	1.5200e-003	0.1472	0.0374	1.4600e-003	0.0388		106.4462	106.4462	2.6700e-003	0.0157	111.1854
Worker	0.3510	0.2168	2.9807	9.7800e-003	5.7944	5.7000e-003	5.8001	1.4478	5.2400e-003	1.4530		988.5156	988.5156	0.0205	0.0234	996.0068
Total	**0.3558**	**0.4105**	**3.0464**	**0.0108**	**5.9401**	**7.2200e-003**	**5.9474**	**1.4852**	**6.7000e-003**	**1.4919**		**1,094.9618**	**1,094.9618**	**0.0231**	**0.0391**	**1,107.1922**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	3,241.8607	4,760.8290	30,691.0276	70.2436	7,824.3907	57.2097	7,881.6004	2,086.7354	53.5406	2,140.2760		7,169,263.8222	7,169,263.8222	424.2662	369.7116	7,290,044.5336
Unmitigated	3,241.8607	4,760.8290	30,691.0276	70.2436	7,824.3907	57.2097	7,881.6004	2,086.7354	53.5406	2,140.2760		7,169,263.8222	7,169,263.8222	424.2662	369.7116	7,290,044.5336

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4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	159,786.00	159,786.00	159786.00	466,497,007	466,497,007
Unrefrigerated Warehouse-Rail	1,109,511.00	1,109,511.00	1109511.00	3,239,229,724	3,239,229,724
Total	1,269,297.00	1,269,297.00	1,269,297.00	3,705,726,731	3,705,726,731

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
Parking Lot	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-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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Unrefrigerated Warehouse-No Rail	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Unrefrigerated Warehouse-Rail	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606

5.0 Energy Detail

Historical Energy Use: N

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Cont.

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	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332
NaturalGas Unmitigated	0.0642	0.5832	0.4898	3.5000e-003		0.0443	0.0443		0.0443	0.0443		699.7748	699.7748	0.0134	0.0128	703.9332

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					
Parking Lot	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	1635.72	0.0176	0.1604	0.1347	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.4378	192.4378	3.6900e-003	3.5300e-003	193.5814
Unrefrigerated Warehouse-Rail	4312.36	0.0465	0.4228	0.3551	2.5400e-003		0.0321	0.0321		0.0321	0.0321		507.3370	507.3370	9.7200e-003	9.3000e-003	510.3518
Total		**0.0642**	**0.5831**	**0.4899**	**3.5000e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**		**699.7748**	**699.7748**	**0.0134**	**0.0128**	**703.9332**

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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					
Parking Lot	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	1.63572	0.0176	0.1604	0.1347	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.4378	192.4378	3.6900e-003	3.5300e-003	193.5814
Unrefrigerated Warehouse-Rail	4.31236	0.0465	0.4228	0.3551	2.5400e-003		0.0321	0.0321		0.0321	0.0321		507.3370	507.3370	9.7200e-003	9.3000e-003	510.3518
Total		**0.0642**	**0.5831**	**0.4899**	**3.5000e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**		**699.7748**	**699.7748**	**0.0134**	**0.0128**	**703.9332**

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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	lb/day										lb/day					
Mitigated	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Unmitigated	29.9925	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902

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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	6.8581					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	23.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0197	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Total	**29.9925**	**1.9400e-003**	**0.2142**	**2.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**		**0.4603**	**0.4603**	**1.2000e-003**		**0.4902**

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	6.8581					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	23.1147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0197	1.9400e-003	0.2142	2.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004		0.4603	0.4603	1.2000e-003		0.4902
Total	**29.9925**	**1.9400e-003**	**0.2142**	**2.0000e-005**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**		**0.4603**	**0.4603**	**1.2000e-003**		**0.4902**

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7.0 Water Detail

7.1 Mitigation Measures Water

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
Forklifts	98	24.00	260	82	0.20	CNG
Forklifts	32	24.00	260	82	0.20	Diesel
Forklifts	4	24.00	260	200	0.20	Diesel

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

UnMitigated/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
Equipment Type	lb/day										lb/day					
Forklifts	14.7266	344.2176	2,699.9606	0.5907		9.3860	9.3860		9.0378	9.0378	0.0000	69,461.1478	69,461.1478	22.4651		70,022.7764
Total	**14.7266**	**344.2176**	**2,699.9606**	**0.5907**		**9.3860**	**9.3860**		**9.0378**	**9.0378**	**0.0000**	**69,461.1478**	**69,461.1478**	**22.4651**		**70,022.7764**

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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Fire Pump	1	8	50	300	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

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

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Fire Pump - Diesel (300 - 600 HP)	3.9386	11.0081	10.0425	0.0189		0.5794	0.5794		0.5794	0.5794		2,014.8339	2,014.8339	0.2825		2,021.8959
Total	**3.9386**	**11.0081**	**10.0425**	**0.0189**		**0.5794**	**0.5794**		**0.5794**	**0.5794**		**2,014.8339**	**2,014.8339**	**0.2825**		**2,021.8959**

11.0 Vegetation

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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.

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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.

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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.

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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.

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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).

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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.

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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.

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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.

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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.

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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

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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.

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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.

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Cont.

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.

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Cont.

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.

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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.

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Cont.

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

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Cont.

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

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Cont.

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

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Cont.

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

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Cont.

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

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Cont.

Comment Letter D

October 27, 2023

Advocates for the Environment

A non-profit public-interest law firm
and environmental advocacy organization

Daniel Alcayaga
Planning Manager
Town of Apple Valley
14955 Dale Evans Avenue,
Apple Valley, CA, 92307

Via U.S. Mail and email to dalcayaga@applevalley.org

re: Comments on the Draft Environmental Impact Report for the 1M Warehouse Project, SCH No. 2023020285

Dear Mr. Alcayaga:

Advocates for the Environment submits the comments in this letter regarding the Draft Environmental Impact Report (**DEIR**) for the 1M Warehouse Project (**Project**). The Project Site is located near the intersection of Central Road and Lafayette Street in the Town of Apple Valley (**Town**), County of San Bernadino, and is located on approximately 67.3 acres of land.

D-1

The Project includes the construction and operation of an approximately 1,080,125-square foot warehouse facility. We have reviewed the DEIR released in September 2023 and submit comments regarding the sufficiency of the DEIR's Greenhouse-Gas (**GHG**) analysis under the California Environmental Quality Act (**CEQA**).

The Town Should Require the Project to be Net-Zero

Given the current regulatory context and technological advancements, a net-zero significance threshold is feasible and eminently 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 the total global GHG emissions.

D-2

It is much more economically efficient 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.

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 Town to adopt net-zero as the GHG significance threshold for this project and require full fair-share mitigation. 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." (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 Town to do, but also would also help protect the Town and the Applicant from CEQA GHG litigation.

D-2 Cont.

GHG Mitigation is Insufficient under CEQA

The calculated project-related emissions amount to 37,982 metric tons of carbon dioxide equivalent (**MTCO2e**) per year (DEIR, p. 4.6-30). The lead agency adopted a numeric GHG significance threshold of below 3,000 MTCO2e, following the recommendations from the South Coast Air Quality Management District (**SCAQMD**) guidelines. (DEIR, p. 4.6-27.) Based on this threshold, Town concluded the Project would have significant GHG emissions.[1] To reduce this significant GHG impact, the GHG Analysis identified Air Quality Mitigation Measure 1 (**MM-AQ-1**). (DEIR, p. 4.6-36.)

The Town ultimately concluded that "the effectiveness of the mitigation and the associated emission reductions cannot be accurately quantified at this time." (DEIR, p. 7-9.) Nonetheless, after accounting for the GHG reductions from the proposed mitigation measures, the DEIR quantified mitigated emissions at 21,169.5 MTCO2e. (DEIR, p. 4.6-

D-3

[1] Note that the Town mentioned the SCAQMD's tier system for identifying significant impact, yet did not actually implement this method in the GHG analysis. (*See* DEIR, p. 4.2-26 – 4.2-27.)

31.) Despite the availability of other GHG mitigation and Project alternatives, the DEIR declared that the Project's quantified emissions were unavoidable, stating: "MM-AQ-1 would reduce operational GHG emissions, to the extent feasible; however, impacts would remain significant and unavoidable." (DEIR, p. 4.6-36.)

Yet, this statement was not supported by substantial evidence; there are other readily available mitigation measures, so the DEIR should include more mitigation to reduce the Project's GHG emissions to the extent required by CEQA.

D-3 Cont.

Infeasibility Finding Lacks Substantial Evidence

The conclusion that the Project will not be able to achieve any mitigation beyond which was identified in MM-AQ-1 is not supported with substantial evidence. Even though MM-AQ-1 is essentially eight mitigation measures in one package, it is still not sufficient to mitigate the Project's emissions to the extent feasible.

MM-AQ-1 includes the following actions: (1) Design the rooftop "to provide the structural capacity" for solar panels to meet 50% of the Project's base energy requirements; (2) Install electrical conduit and other infrastructure "to accommodate" chargers for electrical equipment and trucks; (3) Install electric vehicle charging stations for 25% of the employee parking spots; (4) Implement sustainable energy, water, and waste measures, as specified; (5) Enter into a contractual lease agreement that requires near-zero-emission equipment; (6) Adhere to CARB's model year 2010 emissions standards for trucks; (7) Restrict idling to three minutes and implement anti-idling management and training; and (8) Implement a Transportation Demand Management Plan to "encourage alternative modes of transportation." (DEIR, p. 1-4 – 1-8.)

D-4

While these measures are a good start, the Town 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. The solar panel portion of MM-AQ-1 could feasibly install the solar panels, rather than simply design the rooftop so that it has the structural capacity for them. The Town did not provide any support for the infeasibility of actually installing solar panels to the maximum extent possible on the warehouse's roof space.

D-5

Additionally, the Town did not explain why 50% of the Project's energy being met by solar panels would be the maximum feasible amount. Likewise, the Town did not discuss why installing electric vehicle charging stations at only 25% of the employee parking spots is supported by substantial evidence.

D-6

Notably, CARB's 2010 emissions standards for trucks only regulate criteria pollutants such as NOx and PM, *not* GHGs. Therefore, it is not at all effective in the context of GHG mitigation, despite having the potential to alleviate local air quality impact. This is also

D-7

contradictory to the part of MM-AQ-1 that intends to prepare the warehouse to accommodate electric truck chargers, because zero emission trucks would also not emit criteria pollutants. Instead, the Town should have adopted CARB's most recent standards, which account for tangible GHG reductions.[2] The Town provided no reasoning why such updated standards would be unachievable for this Project.

D-7 Cont.

The Town also did not provide any support for why three minutes would be the maximum restriction feasible for on-site idling restrictions. It would seem feasible to instruct, train, and manage the warehouse site such that workers turn off the engine immediately upon putting the truck in park.

D-8

Additionally, a transportation management plan would have minimal effect on GHG reduction because it merely encourages changes in employee lifestyle to transition to alternative transportation measures and does not have enforceable conditions that require infrastructural changes and incentives to make it practical for employees to do so. The Town should have included enforceable actions which would achieve actual GHG reductions and did not explain why it would be infeasible to do so.

D-9

Overall, the lead agency carries the burden of including an adequate discussion of feasible mitigation measures, including identifying the reasons for infeasibility, and the failure to do so here is a violation of CEQA and insufficient to meet the Town's burden.

D-10

It Is Feasible to Adopt Further Mitigation Measures

CEQA requires that the lead agency identifies specific reasons for infeasibility of further mitigation when concluding significant and unavoidable impact. The Town did not specify why AQ-MM-1 was the only feasible mitigation measure, and in fact, several mitigation measures were named, but not explained in the DEIR or incorporated into the significance analysis for the GHG section.

The only mention of MM-AQ-2 is that "100% of forklifts and yard trucks are planned to be electrically powered," but this mitigation measure was not adopted in the GHG Analysis Section, nor the Table 1.1 Summary of Project Impacts, which listed the adopted mitigation measures for the Project. (DEIR, p. 4.6-34.) MM-AQ-3 is named without any mention to the details or explanation of the measure. (DEIR, p. 7-9.) Likewise, MM-GHG-1 through MM-GHG-3 were named in reference to operational emissions reductions but were not incorporated into the GHG Analysis Section, nor the Table 1.1 Summary of Project Impacts. (DEIR, p. 7-9; DEIR, p. 1-4.) The Town did not specify what actions some of these mitigation measures were designed to achieve, and it should have done so and

D-11

[2] *See* https://ww2.arb.ca.gov/our-work/programs/ghg-std-md-hd-eng-veh

implemented them as part of the Project's GHG mitigation measures, if applicable and feasible. D-11 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 MM-AQ-1. 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 Project's mitigated annual emissions were estimated at 21,169.5 MTCO2e, and the reasonable lifespan this Project is approximately 30 years, as indicated by the amortization of construction emissions. (DEIR, p. 4.6-29.) Therefore, the Project would likely contribute to approximately 635,085 MTCO2e during its entire lifespan.[3] This would be a good starting point from which to subtract the effect of additional non-offset mitigation measures, before implementing offset purchases. D-12

Operational Emissions Reductions are Feasible

In addition to the recommended modifications to the existing mitigation measure AQ-MM-1 and the adoption of other mitigation measures named in the DEIR, there are several other mitigation measures that are feasible, including renewable energy systems and batteries to power the commercial buildings during non-peak hours, solar water heaters, automatic light switches, among many other mitigation strategies that can be incorporated in the project as design features or as mitigation measures. D-13

Even after implementing on-site emissions reductions to the maximum-feasible extent, the Town could also require the Applicant to enter into an agreement to buy clean power for the remaining warehouse's electricity usage.

Overall, there are more options available to mitigate emissions to the full extent of project emissions, but the measures identified in the DEIR were only able to mitigate less than half of the Project's impact.[4] D-14

[3] (21,169.5 MTCO2e) x (30 years) = 635,085 MTCO2e
[4] (37,982 MTCO2e − 21,169.5 MTCO2e)[mitigation measures impact] ÷ 37,982 MTCO2e [full project impact] = 0.4426 = 44.26%

Offsets Are Feasible

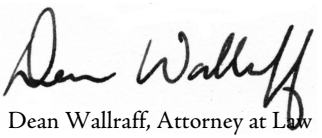
The DEIR did not mention offsets as an available mitigation measure when it concluded that further mitigation is not feasible, nor did it provide any explanation of why offsets would be infeasible. And offsets are acceptable mitigation measures under CEQA (See CEQA Guidelines § 15126.4 (c)(3).) Because the Town has provided no reason why offsets are infeasible, the EIR's conclusion that it is not feasible to fully mitigate the Project's GHG emissions is not supported by substantial evidence. The Town should require the Applicant to purchase offsets to the extent necessary to mitigate the Project's emissions. D-15

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, including offsets. D-16

Please put me on the interest list to receive updates about the progress of this Project. D-17

Sincerely,



Dean Wallraff, Attorney at Law
Executive Director, Advocates for the Environment

10211 Sunland Blvd., Shadow Hills, CA 91040. (818) 650-0030 X101 dw@aenv.org

CENTER for BIOLOGICAL DIVERSITY
Because life is good.
Protecting and restoring natural ecosystems and imperiled species through science, education, policy, and environmental law
via email

October 30, 2023

Mr. Daniel Alcayaga
Town of Apple Valley, Planning Department,
14955 Dale Evans Parkway,
Apple Valley, California 92307.
dalcayaga@applevalley.org

RE: Comments on Draft Environmental Impact Report (EIR) on the environmental effects associated with the 1M Warehouse Project (Proposed Project) – SCH# 2023020285

Dear Mr. Alcayaga,

These comments are respectfully submitted on behalf of the Center for Biological Diversity on the Draft Environmental Impact Report (EIR) on the environmental effects associated with the 1M Warehouse Project (Proposed Project). The Center is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. These comments are submitted on behalf of the Center's 1.7 million staff, members and supporters throughout California and beyond, many of whom live throughout southern California and enjoy visiting, studying, photographing, and hiking in the Mojave Desert, including the areas on and around the proposed project site in the Apple Valley area.
The Proposed Project would construct and operate a 1,080,125-square-foot industrial/warehouse building on a 67.3-acre undeveloped site that currently supports native plants and wildlife located in the Town of Apple Valley, California. The DEIR contemplates commencement of construction of the Project December 2023, which provides inadequate time to remedy the deficiencies in the DEIR which need to be addressed and recirculated in a revised DEIR. E-1

THE DEIR'S ANALYSIS OF AND MITIGATION FOR THE PROJECT'S IMPACTS TO BIOLOGICAL RESOURCES IS INADEQUATE.

A. The Analysis of and Mitigation for Impacts to the Western Joshua Tree is Inadequate

1. The Project Site Is Home to a Natural Community of Concern.

The Project site is located in the eastern part of the City, in San Bernardino County's Apple Valley region. The City is located within the range of the western Joshua tree South population (YUBR South). The geographic area in which YUBR South is situated is comprised of 3.7 million acres, with just over 50% in private ownership, 48% federally owned, and just under 2% state, county and local owned (USFWS 2018). The USFWS (2018) estimates that 3,255,088 acres of this area was suitable for Joshua trees based on soils and other habitat factors. However, Joshua tree actually occupy only a fraction of this area, as they have a patchy and E-2

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disjunct distribution, and large areas of former habitat have been lost to development or agricultural conversion.

Increasing development, climate change, increasing drought and wildfires, invasive species that adversely affect fire dynamics, and other threats have led to ongoing reductions in western Joshua trees and western Joshua tree habitat range-wide. Protecting western Joshua trees and their habitat from continued destruction and habitat loss is therefore of utmost importance to the persistence of the species in California. However, within the City and surrounding communities in particular, western Joshua tree habitat is shrinking at an alarming rate due to increasing development. While western Joshua trees currently persist in the less-developed areas of the City, they are absent from the more developed areas as well as the agricultural lands in the region, making the Project site all the more valuable. E-2 Cont.

The Project site is comprised of ecologically significant habitat for Joshua trees. Joshua tree woodland is a community recognized by the California Department of Fish and Wildlife (CDFW) as a Natural Community of Concern. (DEIR at 5.3-5.) Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects (CDFW 2018). CDFW's List of California Terrestrial Natural Communities is based on the best available information, and indicates which natural communities are considered sensitive at the current stage of the California vegetation classification effort.1 The DEIR fails to disclose or adequately evaluate the impacts from destroying up to160 acres of this Natural Community of Concern. E-3

According to the DEIR the Project site will eliminate one Joshua tree (Appendix B of Appendix C at pg. 11 – Table 1) on the 67.3-acre Project site and 24.7-acre off-site "improvement areas" (DEIR at 4.3-1) Another seven Joshua trees currently live within the 186-foot Biological Survey Area (BSA) and will be retained on site during construction and operation of the warehouse. The DEIR fails to provide a map of the locations of the western Joshua trees on site. Are they clustered or widely distributed? E-4

The one Joshua tree within the project footprint is large and "does not meet the defined criteria for improved likelihood of post-transplant success" (Appendix B of Appendix C at pg.13). However the DEIR leaves open the possibility of transplanting the Joshua tree if the City of Apple Valley requires it. The DEIR must confirm that, even if transplantation were to occur, the project would comply with Section in 1927.3 of the Western Joshua Tree Conservation Act through payment of the elected fees or off-site conservation or through a CDFW approved mitigation bank, or as required by an Incidental Take Permit (DEIR at 4.3-48) E-5

Regarding the seven western Joshua trees retained on the proposed project site, the DEIR fails to evaluate the indirect impacts to the trees from the proposed project to assure their persistence over time. The DEIR, for example, fails even to map the project in relation to the Joshua Trees on site and therefore fails to disclose how close the warehouse will be built to the Joshua trees. Currently CDFW considers the impact analysis to include a 186-foot zone around a E-6

1 *See* the Vegetation Classification and Mapping Program (VegCAMP) website for additional information on natural communities and vegetation classification. Available at: https://www.wildlife.ca.gov/Data/VegCAMP.

western Joshua tree as the site occupancy based on dispersal ability. Absent this crucial information on the areas included within the 186-foot zone for each tree, the DEIR simply lacks the evidence to conclude that the Project will not result in significant impacts to Joshua Tree habitat. If direct or indirect impacts occur within this zone for any western Joshua trees, a revised DEIR is needed to analyze, avoid, minimize, or mitigate any impacts. Absent the analysis of indirect impacts to on-site western Joshua tree, the DEIR also fails to provide a mitigation scenario for these trees if they do not persist over time on the proposed project site.

E-6 Cont.

The Project's proposed warehouse will require the removal of vegetation from the site prior to the start of construction, which will necessarily include any Joshua trees located in the Project footprint. Yet the DEIR is incorrect in concluding that mitigation for direct impacts would also address any potentially significant direct or indirect impacts associated with the destruction or adverse modification of the western Joshua tree's *habitat.* Accordingly, the DEIR lacks evidence to conclude that the Project will not have a significant impact on any sensitive natural community without once mentioning Joshua Tree habitat. (DEIR at 4.3-40.) Development, climate change, and increasing wildfire occurrences exacerbated by drought and invasive species negatively impact western Joshua trees and their habitat. (DeFalco et al. 2010; Harrower and Gilbert 2018.) Climate change, in particular, represents the single greatest threat to the continued existence of western Joshua trees. Even under the most optimistic climate scenarios, western Joshua trees will be eliminated from significant portions of their range by the end of the century; under warming scenarios consistent with current domestic and global emissions trajectories, the species will likely be close to being functionally extinct in the wild in California by century's end. (Dole et al. 2003; Cole et al. 2011.) Studies indicate that the species' range is contracting at lower elevations, recruitment is limited, and mortality is increasing, all of which would likely reflect a population already starting to decline due to recent warming. Even greater changes are projected to occur over the coming decades.

E-7

The DEIR does not acknowledge significant impacts to Joshua trees associated with the reduction in habitat connectivity. Maintaining successful habitat connectivity nearby is particularly important to western Joshua trees: for successful reproduction and recruitment, Joshua trees require the presence of their obligate pollinator, rodents to disperse and cache seeds and nurse plants to shelter emerging seedlings. Therefore, to the degree that any Joshua trees are left remaining on the Project site, such moths and rodents must have access to and also be maintained on site in order for these remnant western Joshua trees to successfully reproduce. Construction on the project site will reduce habitat connectivity necessary for sustainable Joshua tree recruitment onsite. Moreover, construction on the Project site will result not just in the loss of Joshua trees and their pollinators and dispersers from the site itself, but will further fragment habitat, potentially resulting in significant adverse impacts to remnant Joshua tree woodland in nearby areas if pollinator or disperser populations are reduced. None of these impacts are analyzed in the DEIR.

E-8

While the Western Joshua Tree Conservation Act allows for the payment of in lieu fees for the direct impacts to Joshus Trees, the Act does not offer an alternative mechanism to mitigate impacts to Joshua Tree Woodland. Accordingly, the EIR also still must analyze and mitigate the loss of Joshua Tree woodland, upon which a number of species rely. A revised DEIR must clearly address the ultimate direct and indirect impacts to western Joshua trees from the proposed project.

B. The DEIR Does Not Adequately Describe the Environmental Baseline for Various Other Species, and Survey Results.

The DEIR downplays and fails to provide adequate baseline information and description of the environmental setting for many species other than the western Joshua tree. This deficiency extends to the DEIR's analyses of rare plants, animals, and communities, including desert tortoise, burrowing owls, and other imperiled and desert species, as well as more common species present on the Project site. For some species or habitats baseline conditions are lacking or totally absent and as a result no impact assessment is provided for these biological resources. E-9

i. Rare Plants and Plant Communities

The Proposed Project site is interesting botanically because of the mix of typically transmontane and desert plants and the relative low diversity of non-native plants compared to native species (Appendix E of Appendix C). Some of these plant species may be considered locally rare species because they are at the edge of their range. Protecting populations at the edges of their range, particularly at the warmer and drier edge of their range, as climate change progresses, is an important strategy(Caissy et al. 2020; Leppig and White 2006). The revised DEIR needs to address this issue. E-10

Eighty-seven percent of the Proposed Project area is undisturbed, including a wash area (noted as Unvegetated wash and river bottom) which is an important ephemeral hydrological feature. The DEIR is unclear about the number washes within the proposed project area. For example in the Hydrology and Water Quality section, the DEIR states "Drainage at the Project site occurs as sheet flow with upgradient flows originating from numerous dry desert washes with several established drainages that cut across the northwest corner of the site." (at 4.8-2). The Biological section recognizes "Unvegetated Wash and River Bottom" and states that "may be jurisdictional by … Porter–Cologne Act, or CDFW pursuant to Section 1602 of the California Fish and Game Code. Thus, unvegetated wash and river bottom may be considered a sensitive vegetation community under CEQA.' At pg (4.3-4). However no further analysis is provided in the DEIR. The revised DEIR needs to address this issue. E-11

a. Rare Plants

The DEIR identifies the rare plant survey methodology used and the dates that the surveys were performed, but it does not affirmatively discuss the results of those surveys in the DEIR or Appendix C. While Appendix E - Plant Compendium does not list any rare plants as being present, the revised DEIR still needs to clearly include the rare plants that were targeted, the results of the rare plant survey and a discussion of the results. E-12

ii. Wildlife

The DEIR includes pre-Project surveys of Desert tortoise and Mohave ground squirrels.

a. Desert tortoise

Two or three surveys for Mojave desert tortoise were reported in the DEIR. The initial survey on October 24, 2022 covered 106 acres (Appendix C of Appendix C) with the southern area inaccessible. On January 17, 2023, another 50 acres were surveyed (Appendix C of Appendix C). While the data sheet for this survey indicates that it occurred between 8:45 am and 1:15 pm, the temperature ranges on the data sheet ranged from 102F to 118F (39C to 48C) which seems inaccurate for that time of year. There is no data sheet for surveys performed on August 25, 2023. It is unclear if the whole project site was surveyed as required by the "small project protocol". The revised DEIR needs to include all of the data sheets and a map of the extent of each survey was performed by date. E-13

In the analysis of impacts, the DEIR relies on pre-construction Mojave desert tortoise clearance survey "conducted in areas supporting potentially suitable habitat 14 to 21 days prior to the start of construction activities" (at pg. 4.3-26). If desert tortoise are found, the DEIR determines that 75.1 acres would be permanently impacted and 13.8 acres temporarily impacted of the 160-acre site. The permanent impacts are proposed to be mitigated at 1:1 ratio, which is well below established mitigation for occupied desert tortoise habitat. Typical occupied Mojave desert tortoise habitat mitigation ranges from 5:1 to 3:1. No mitigation is proposed for the temporary impacts. No analysis is analyzed for indirect impacts to on-site or off-site habitat for Mojave desert tortoise. The revised DEIR needs to analyze where needed and address these issues. E-14

b. Mohave ground squirrel

The map of where the Mohave ground squirrel live- and camera-trappings (Appendix D of Appendix C) have two grids on two parcels separated by about half a mile. Is the Proposed Project on the southern parcel? The revised DEIR needs to clarify which parcel the Proposed Project is located on. E-15

C. The DEIR Fails to Adequately Identify and Analyze Direct and Indirect Impacts to Other Species.

The DEIR fails to adequately analyze the direct, indirect, and cumulative impacts of the proposed Project on the environment. The City must look at avoidance, minimization and reasonable mitigation measures to avoid impacts in the DEIR but failed to do so here. Even in those cases where the extent of impacts may be somewhat uncertain due to the complexity of the issues, the City is not relieved of its responsibility to discuss avoidance through alternatives, minimization or mitigation of reasonably likely impacts at the outset. E-16

In addition to inadequately describing the baseline of biological conditions and analyzing impacts, the DEIR fails to fully analyze or disclose the Project's direct, indirect, and cumulative impacts to numerous species including the desert tortoise as documented above, or to mitigate those impacts.

It also fails to identify if the mitigation for on-site occupied species habitat will be "nested" where a single mitigation site will be used to mitigate all species impacts. The revised DEIR must require that each species' mitigation obligations must be met. If a mitigation site only hosts one or two of the species which need mitigation, then additional mitigation lands (or E-17

credits) must be acquired for the species that remain to be mitigated. The revised DEIR must require full mitigation for the project's permanent, temporary, direct, and indirect impacts over the timeframe of the proposed project's construction and operation.

E-17 Cont.

i. Burrowing Owl

For example, while the DEIR states that it will conduct burrowing owl surveys no more than 14 days before initiation of site preparation or grading activities, and a second survey will be completed within 24 hours of the start of site preparation or grading activities (DEIR at 4.3-27). If burrowing owls are located on site, the Burrowing Owl Translocation plan will be activated (Appendix I in Appendix C). If burrowing owls are located on site during the pre-construction surveys, 75.1 acres of mitigation is proposed at a 1:1 ratio. As with the desert tortoise, the mitigation ratio is well below established mitigation for occupied burrowing owl habitat. Typical occupied burrowing owl habitat mitigation is 3:1. No mitigation is proposed for13.8 acre of temporary impacts. No analysis is analyzed for indirect impacts to on-site or off-site habitat for burrowing owls. The revised DEIR needs to analyze where needed and address these issues.

E-18

ii. Desert Kit Fox

Another example is the desert kit fox where occupation of the site was confirmed during the Mohave ground squirrel surveys (4.3-31). In addition to its status as a special status species, the desert kit fox is also State-protected for hunting (Cal. Code Regs. tit. 14 § 460 - Fisher, Marten, River Otter, Desert Kit Fox and Red Fox), which disallows lethal take of the species. Because the Proposed Project site is occupied by the desert kit fox a Desert Kit Fox Relocation and Mitigation Plan has been created. It requires that "pre-construction surveys will commence within 10 days before the start of surface disturbance to determine if desert kit foxes are on the project site and off-site improvement areas, or within 200 feet of the project site and off-site improvement areas (where legal access has been granted)" (Appendix J of Appendix C). If desert kit fox are occupying burrows, the Relocation and Mitigation plan requires "If an active non-natal desert kit fox den is detected within the project site, off-site improvement areas, or 200-foot buffer area during the biological compliance monitoring, a 200-foot buffer will be established around the active den, unless otherwise authorized by CDFW." The plan continues "If an active natal desert kit fox den is detected within the project site, off-site improvement areas, or 200-foot buffer area during the biological compliance monitoring, an initial 200-foot no-disturbance buffer will be established around the natal den, and this buffer will be maintained until the den can be verified to not host pups. Construction activities will not be permitted in this area until the den has been vacated." While we support these avoidance measures during construction, the mitigation of occupied habitat of 1:1 still falls short of established mitigation for occupied desert kit fox habitat. Typical occupied desert kit fox habitat mitigation is 3:1. No mitigation is proposed for13.8 acre of temporary impacts. No analysis is analyzed for indirect impacts to on-site or off-site habitat for burrowing owls. The revised DEIR needs to analyze where needed and address these issues.

E-19

If additional species need to be mitigated due to the Proposed Project's impacts, then the same analyses for avoidance, minimization and mitigation need to be applied.

D. The Apple Valley Multiple Species Habitat Conservation Plan/Natural Communities Conservation Plan

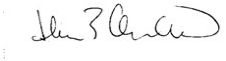
Currently, the City is undergoing planning for the Apple Valley Multiple Species Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) and the Proposed Project is within the boundaries of the HCP/NCCP. The "covered species" list anticipated to be covered under the HCP/NCCP include four of the species either present on the site or may occur on the site: burrowing owl, desert kit fox, Mojave desert tortoise and western Joshua tree. The revised DEIR must clarify how the Proposed Project complies, by species, with the current interim guidelines found in the Draft Public Review Planning Agreement document and in consultation with the City. E-20

E. Conclusion

While the DEIR provides some data and analyses regarding biological impacts from the Proposed Project, it still fails to provide comprehensive analyses of the impacts. More data and analyses are needed in a revised DEIR. E-21

Thank you for the opportunity to submit these comments. Please feel free to reach out with any questions.

Sincerely,



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cc: Drew Kaiser, CDFW Drew.Kaiser@wildlife.ca.gov

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Comment Letter F

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October 13, 2023

Via U.S. Mail and Email

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Attn: Public Records Act Coordinator
Town Clerk's Office
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307
Email: records@applevalley.org; townclerk@applevalley.org

Re: Request for Immediate Access to Public Records – 1M Warehouse Project (SCH No. 2023020285)

Dear Mr. Alcayaga and Public Records Act Coordinator:

We are writing on behalf of Californians Allied for a Responsible Economy ("CARE CA") to request ***immediate access*** to any and all public records in the Town of Apple Valley's possession referring or related to the 1M Warehouse Project (SCH No. 2023020285), proposed by AP Investors Group ("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.*

F-1

The Project proposes the construction and operation of a 1,080,125-square-foot industrial/warehouse building and associated improvements on approximately 68.2 acres of vacant land in the Town of Apple Valley, San Bernardino County, CA. The Project would involve associated improvements, including loading docks, truck and vehicle parking, bike parking, and landscaped areas. The Project site is located south of Johnson Road, east of Central Road, north of Lafayette Street, and west of Sycamore Lane. The Project site consists of Assessor's Parcel Numbers 0463-241-02 and 0463-241-03.

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.

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
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Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
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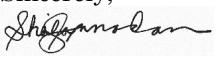
Email
ssannadan@adamsbroadwell.com

F-1
Cont.

[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,



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Legal Assistant

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Comment Letter G

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Via U.S. Mail and Email

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Re: Request for Immediate Access to Documents Referenced in the Draft Environmental Impact Report – 1M Warehouse Project (SCH No. 2023020285)

Dear Mr. Alcayaga and Ms. Pearson:

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 1M Warehouse Project (SCH No. (SCH No. 2023020285), proposed by AP Investors Group ("Applicant"). *This request excludes a copy of the DEIR and its appendices. This request also excludes any documents that are currently available on Town of Apple Valley*.[1]

G-1

The Project proposes the construction and operation of a 1,080,125-square-foot industrial/warehouse building and associated improvements on approximately 68.2 acres of vacant land in the Town of Apple Valley, San Bernardino County, CA.

[1] Accessed https://www.applevalley.org/services/planning-division/environmental on October 13, 2023.

The Project would involve associated improvements, including loading docks, truck and vehicle parking, bike parking, and landscaped areas. The Project site is located south of Johnson Road, east of Central Road, north of Lafayette Street, and west of Sycamore Lane. The Project site consists of Assessor's Parcel Numbers 0463-241-02 and 0463-241-03.

G-1 Cont.

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]

Please use the following contact information for all correspondence:

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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:ljl

[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 H

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October 27, 2023

Via Email and Overnight Mail

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Re: Request to Extend the Public Review and Comment Period for the Draft Environmental Impact Report - 1M Warehouse Project (SCH No. 2023020285)

Dear Mr. Alcayaga:

On behalf of Californians Allied for a Responsible Economy ("CARE CA") we respectfully request that the Town of Apple Valley ("Town") extend the public review and comment period for the Draft Environmental Impact Report ("DEIR") for the 1M Warehouse Project (SCH No. 2023020285)[1] ("Project") proposed by Uncommon Developers ("Applicant") **by at least 45 days** due to the Town's failure to provide timely access to the supporting documents for the DEIR. This request is made pursuant to the California Environmental Quality Act, Pub. Resources Code ("PRC") §§ 21000 et seq. ("CEQA") Section 21092(b)(1), which requires that "all documents referenced [or relied upon] in the draft environmental impact report or negative declaration" be available for review and "readily accessible" during the entire comment period.[2]

H-1

[1] Town of Apple Valley, Draft Environmental Impact Report, 1M Warehouse Project (SCH No. 2023020285) (hereinafter "DEIR") (September 15, 2023) available at https://ceqanet.opr.ca.gov/2023020285/2.
[2] PRC §§ 21092(b)(1) (emphasis added); 14 Cal. Code Regs. ("CCR") § 15087(c)(5).

On October 13, 2023, we submitted a letter to the Town pursuant to CEQA Section 21092(b)(1) requesting "***immediate access to any and all documents referenced or relied upon***" in the DEIR ("DEIR Reference Request") (emphasis added).[3] Additionally, on October 13, 2023, we submitted a letter to the Town pursuant to California Public Records Act, Government Code §§ 6250, et seq. and Article I, section 3(b) of the California Constitution, requesting "***immediate access to any and all documents related***" to the Project ("PRA Request") (emphasis added).[4] The DEIR Request and the PRA Request were sent separately to avoid confusion as to what documents and records were sought.

To date the Town has not acknowledged receipt of the DEIR Request or the PRA Request, nor has CARE CA been provided with access to the requested documents.

In our review of the DEIR and its appendices we have identified numerous reference documents and files which are not available online and were not made available with the DEIR for review, including the following:

- Electronic copies of the live modeling files used to quantify the Project's air quality impacts from construction and operation, and live modeling files used to quantify the health risk impacts of the proposed Project including the following:
    - Live EMFAC output files;
    - Spreadsheets used to convert EMFAC output from g/VMT to g/s, calculate the Project's emissions sources such as trucks and TRUs, and emission spreadsheet calculations used to calculate weighted emission factors;
    - AERMOD Input and Output files;
    - Any other files related to post-processing using EMFAC emission rates done outside of AERMOD to calculate pollutant-specific concentrations;
    - Live cancer risk calculation spreadsheets;
    - HARP Input and Output files; and
    - CalEEMod Output Files.

H-2

[3] **Exhibit A** Letter from Adams, Broadwell, Joseph & Cardozo ("ABJC"), re Request for Immediate Access to Documents Referenced in the Draft Environmental Impact Report – 1M Warehouse Project (SCH No. 2023020285) (October 13, 2023).
[4] **Exhibit B** Letter from ABJC, re Request for Immediate Access to Public Records – 1M Warehouse Project (SCH No. 2023020285) (October 13, 2023).
6756-005j

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H-2
Cont.

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H-2
Cont.

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H-2 Cont.

These missing documents are critical to understanding and commenting on the DEIR's analysis of the Project's impacts to several critical resource areas, including, in particular, the DEIR's air quality, transportation, biological impacts, greenhouse gas, and hazardous materials analyses. We are unable to meaningfully review and comment on the DEIR without these documents.

Without access to these critical DEIR reference documents during the public comment period on the DEIR, CARE CA and other members of the public are precluded from having the meaningful opportunity to comment on the DEIR that is required by CEQA. The Town's failure to make the underlying DEIR documents available during the entire comment period makes public review particularly burdensome in this case because of the DEIR's reliance on missing documents for significance determinations and mitigation measures to address the Project's air quality, health risk, biological resources, greenhouse gas, and hazardous materials impacts. Without having access to these documents, CARE CA and other members of the public are unable to evaluate the accuracy of the Town's air quality, health risk, and hazardous materials impact analysis, or the efficacy of the Town's proposed mitigation measures. Additionally, the size of the DEIR and the Project's complexity make it difficult to effectively comment on the DEIR without the referenced documents by the current comment deadline of October 30, 2023.

H-3

The courts have held that the failure to provide even a few pages of a CEQA documents for a portion of the CEQA review period invalidates the entire CEQA process, and that such a failure must be remedied by permitting additional public comment.[5] It is also well settled that an EIR may not rely on hidden studies or documents that are not provided to the public.[6] By failing to make all documents referenced in the DEIR "readily available" during the current comment period, the

[5] *Ultramar v. South Coast Air Quality Man. Dist*. (1993) 17 Cal.App.4th 689, 699.
[6] *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3rd 818, 831 ("Whatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.").
6756-005j

Town is violating the clear procedural mandates of CEQA, to the detriment of CARE CA and other members of the public who wish to meaningfully review and comment on the DEIR.

Accordingly, we request that:

1) The Town immediately provide us with access to the missing documents requested in our October 13, 2023 DEIR Reference Request.

2) the Town extend the public review and comment period on the DEIR for at least 45 days from the date on which the Town releases these documents for public review.[7] If the missing documents are provided today, we request an extension to December 11, 2023.

H-3 Cont.

Given the short time before the current comment deadline, please contact me today with your response to this request.

Please feel free to call or email with any questions: Tel: (650) 589-1660, Email: kcarmichael@adamsbroadwell.com. Thank you for your prompt attention and response to this matter.

Sincerely,

Kevin Carmichael

KTC:ljl

[7] This Project has a 45-day public comment period, pursuant to 14 CCR § 15105 (projects submitted to the State Clearinghouse).

EXHIBIT A

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
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SOUTH SAN FRANCISCO, CA 94080-7037
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AIDAN P. MARSHALL
TARA C. RENGIFO

Of Counsel
MARC D. JOSEPH
DANIEL L. CARDOZO

October 13, 2023

Via U.S. Mail and Email

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

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

Re: Request for Immediate Access to Documents Referenced in the Draft Environmental Impact Report – 1M Warehouse Project (SCH No. 2023020285)

Dear Mr. Alcayaga and Ms. Pearson:

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 1M Warehouse Project (SCH No. (SCH No. 2023020285), proposed by AP Investors Group ("Applicant"). *This request excludes a copy of the DEIR and its appendices. This request also excludes any documents that are currently available on Town of Apple Valley*.[1]

The Project proposes the construction and operation of a 1,080,125-square-foot industrial/warehouse building and associated improvements on approximately 68.2 acres of vacant land in the Town of Apple Valley, San Bernardino County, CA.

[1] Accessed https://www.applevalley.org/services/planning-division/environmental on October 13, 2023.

The Project would involve associated improvements, including loading docks, truck and vehicle parking, bike parking, and landscaped areas. The Project site is located south of Johnson Road, east of Central Road, north of Lafayette Street, and west of Sycamore Lane. The Project site consists of Assessor's Parcel Numbers 0463-241-02 and 0463-241-03.

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]

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:ljl

[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.

EXHIBIT B

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RACHAEL E. KOSS
AIDAN P. MARSHALL
TARA C. RENGIFO

Of Counsel
MARC D. JOSEPH
DANIEL L. CARDOZO

October 13, 2023

Via U.S. Mail and Email

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

Attn: Public Records Act Coordinator
Town Clerk's Office
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307
Email: records@applevalley.org; townclerk@applevalley.org

Re: Request for Immediate Access to Public Records – 1M Warehouse Project (SCH No. 2023020285)

Dear Mr. Alcayaga and Public Records Act Coordinator:

We are writing on behalf of Californians Allied for a Responsible Economy ("CARE CA") to request ***immediate access*** to any and all public records in the Town of Apple Valley's possession referring or related to the 1M Warehouse Project (SCH No. 2023020285), proposed by AP Investors Group ("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.*

The Project proposes the construction and operation of a 1,080,125-square-foot industrial/warehouse building and associated improvements on approximately 68.2 acres of vacant land in the Town of Apple Valley, San Bernardino County, CA. The Project would involve associated improvements, including loading docks, truck and vehicle parking, bike parking, and landscaped areas. The Project site is located south of Johnson Road, east of Central Road, north of Lafayette Street, and west of Sycamore Lane. The Project site consists of Assessor's Parcel Numbers 0463-241-02 and 0463-241-03.

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.

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:

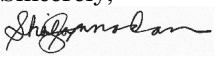
U.S. Mail
Sheila M. Sannadan
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080-7037

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:ljl

6756-003j

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MARC D. JOSEPH
DANIEL L. CARDOZO

October 30, 2023

Via Email and Overnight Mail

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

Re: **Comments on the Draft Environmental Impact Report for the 1M Warehouse Project (SCH No. 2023020285)**

Dear Mr. Alcayaga:

We are writing on behalf of Californians Allied for a Responsible Economy ("CARE CA") to provide comments on the Draft Environmental Impact Report ("DEIR") for the 1M Warehouse Project (SCH No. 2023020285) ("Project")[1] proposed by Uncommon Developers ("Applicant") and prepared by the Town of Apple Valley ("Town") pursuant to the California Environmental Quality Act ("CEQA").[2]

The Project proposes the construction and operation of a 1,080,125-square-foot industrial/warehouse building on a 67.3-acre undeveloped site located at the northeast corner of Central Road and Lafayette Street in the Town of Apple Valley, California.[3] The approximately 67.3-acre Project site is located in the northern part of the Town, which is within the Victor Valley region of San Bernardino County. The Project site is located south of Johnson Road, west of Sycamore Lane, north of Lafayette Street, and east of Central Road (Assessor's Parcel Numbers 0463-241-02

I-1

[1] Town of Apple Valley, Draft Environmental Impact Report, 1M Warehouse Project (SCH No. 2023020285) (hereinafter "DEIR") (September 15, 2023) available at https://ceqanet.opr.ca.gov/2023020285/2.
[2] Pub. Resources Code (hereinafter "PRC") §§ 21000 et seq.; 14 Cal. Code Regs (hereinafter "CEQA Guidelines") §§ 15000 et seq.
[3] DEIR, p. 1-1.

and 0463-241-03).[4] The Project also includes an approximately 1.75-mile off-site utilities alignment within developed roadways for proposed water and sewer lines. Regional access to the Project site is provided via Interstate 15, located approximately 4.6 miles west of the Project site.[5] Construction of the Project is anticipated to take 22 months, commencing in December 2023 and concluding in October 2025.[6] The Project requires approval of applications for Site Plan Review and a Lot Line Adjustment as well as certification of the EIR.[7]

I-1 Cont.

Based upon our review of the DEIR and supporting documentation, we conclude that the DEIR fails to comply with the requirements of CEQA. The DEIR fails to adequately analyze many of the Project's potentially significant environmental impacts and fails to propose enforceable mitigation measures that can reduce those impacts to a less than significant level, as required by CEQA. The Town therefore lacks substantial evidence to support the DEIR's conclusions that Project impacts would be mitigated to the greatest extent feasible.

As explained in these comments, there is substantial evidence that the Project will result in significant unmitigated impacts relating to air quality, health risk, greenhouse gas ("GHG") emissions, noise, and transportation. The Project also conflicts with applicable land use plans and policies, resulting in land use inconsistencies as well as significant impacts under CEQA. The Town may not approve the Project until the Town revises and recirculates the Project's DEIR to adequately analyze the Project's significant direct, indirect, and cumulative impacts, and incorporates all feasible mitigation measures to avoid or minimize these impacts to the greatest extent feasible.

I-2

We reviewed the DEIR and its technical appendices with the assistance of traffic and transportation expert Norman Marshall of Smart Mobility[8], health risk, air quality, GHG emissions and hazardous materials expert James Clark Ph.D.[9],

[4] DEIR, p. 1-1.
[5] DEIR, p. 1-1.
[6] DEIR, pp. 1-1 – 1-2.
[7] DEIR, p. 1-2.
[8] Mr. Marshall's technical comments (hereinafter "Marshall") and curricula vitae are attached hereto as Exhibit A.
[9] Dr. Clark's technical comments (hereinafter "Clark") and curricula vitae are attached hereto as Exhibit B.

and noise expert Luke Watry of Wilson Ihrig.[10] We reserve the right to supplement these comments at a later date, and at any later proceedings related to this Project.[11]

I-2 Cont.

I. STATEMENT OF INTEREST

CARE CA is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards, and the environmental impacts of the Project. The coalition includes the District Council of Ironworkers, Southern California Pipe Trades DC 16, along with their members, their families, and other individuals who live and work in the Town of Apple Valley and in San Bernardino County.

CARE CA advocates for protecting the environment and the health of their communities' workforces. CARE CA seeks to ensure a sustainable construction industry 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.

CARE CA includes individuals who live, work, recreate, and raise their families in the Town of Apple Valley and surrounding communities. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist onsite.

I-3

In addition, CARE CA has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making the area less desirable for new businesses and new residents. Continued environmental degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

[10] Mr. Watry's technical comments (hereinafter "Watry Comments") and curricula vitae are attached hereto as Exhibit C.
[11] Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* ("*Bakersfield*") (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.
6756-006j

II. LEGAL BACKGROUND

CEQA requires public agencies to analyze the potential environmental impacts of their proposed actions in an EIR.[12] "The foremost principle under CEQA is that the Legislature intended the act to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."[13]

CEQA has two primary purposes. First, CEQA is designed to inform decisionmakers and the public about the potential significant environmental effects of a project.[14] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'"[15] The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[16] As the CEQA Guidelines explain, "[t]he EIR serves not only to protect the environment but also to demonstrate to the public that it is being protected."[17]

I-4

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring consideration of environmentally superior alternatives and adoption of all feasible mitigation measures.[18] The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced."[19] If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has

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[12] PRC § 21100.
[13] *Laurel Heights Improvement Assn. v. Regents of Univ. of Cal ("Laurel Heights I")* (1988) 47 Cal.3d 376, 390 (internal quotations omitted).
[14] Pub. Resources Code § 21061; CEQA Guidelines §§ 15002(a)(1); 15003(b)-(e); *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 517 ("[T]he basic purpose of an EIR is to provide public agencies and the public in general with detailed information about the effect [that] a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.").
[15] *Citizens of Goleta Valley,* 52 Cal.3d at p. 564 (quoting *Laurel Heights I*, 47 Cal.3d at 392).
[16] *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810; *see also Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs*. (2001) 91 Cal.App.4th 1344, 1354 ("*Berkeley Jets*") (purpose of EIR is to inform the public and officials of environmental consequences of their decisions *before* they are made).
[17] CEQA Guidelines § 15003(b).
[18] CEQA Guidelines § 15002(a)(2), (3); *see also Berkeley Jets*, 91 Cal.App.4th at 1354; *Citizens of Goleta Valley*, 52 Cal.3d at p. 564.
[19] CEQA Guidelines § 15002(a)(2).
6756-006j

"eliminated or substantially lessened all significant effects on the environment" to the greatest extent feasible and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns."[20]

While courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference."[21] As the courts have explained, a prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process."[22] "The ultimate inquiry, as case law and the CEQA guidelines make clear, is whether the EIR includes enough detail 'to enable who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.'"[23]

I-4 Cont.

III. THE DEIR FAILS TO ADEQUATELY ESTABLISH THE EXISTING BASELINE

The DEIR fails to accurately disclose the baseline environmental conditions related to the Project's health risk impacts. As a result, the DEIR lacks the necessary information against which to measure the Project's environmental impacts with regard to impacts on sensitive receptors from construction.

I-5

The existing environmental setting is the starting point from which the lead agency must measure whether a proposed project may cause a significant environmental impact.[24] CEQA defines the environmental setting as the physical environmental conditions in the vicinity of the project, as they exist at the time the

[20] PRC § 21081(a)(3), (b); CEQA Guidelines §§ 15090(a), 15091(a), 15092(b)(2)(A), (B); *Covington v. Great Basin Unified Air Pollution Control Dist*. (2019) 43 Cal.App.5th 867, 883.
[21] *Berkeley Jets*, 91 Cal.App.4th at p. 1355 (emphasis added) (quoting *Laurel Heights I*, 47 Cal.3d at 391, 409, fn. 12).
[22] *Berkeley Jets*, 91 Cal.App.4th at p. 1355; *see also San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722 (error is prejudicial if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process); *Galante Vineyards*, 60 Cal.App.4th at p. 1117 (decision to approve a project is a nullity if based upon an EIR that does not provide decision-makers and the public with information about the project as required by CEQA); *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 946 (prejudicial abuse of discretion results where agency fails to comply with information disclosure provisions of CEQA).
[23] *Sierra Club,* 6 Cal.5th at p. 516 (quoting *Laurel Heights I*, 47 Cal.3d at 405).
[24] *See, e.g., Communities for a Better Env't v. S. Coast Air Quality Mgmt. Dist.* (March 15, 2010) 48 Cal.4th 310, 316.
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notice of preparation is published, from both a local and regional perspective.[25] Describing the environmental setting accurately and completely for each environmental condition in the vicinity of the Project is critical to an accurate, meaningful evaluation of environmental impacts. The courts have clearly stated that,"[b]efore the impacts of a project can be assessed and mitigation measures considered, an [environmental review document] must describe the existing environment. It is only against this baseline that any significant environmental effects can be determined."[26]

I-5 Cont.

A. The DEIR Fails to Adequately Establish the Existing Baseline with Respect to Valley Fever

The DEIR fails to include accurate information regarding the known presence/issue of *Coccidiodes Immitis* ("Valley Fever Cocci")[27] in the vicinity of the Project site, thereby failing to provide context on the environmental setting of the Project. This results in the failure to analyze the potential impacts of Valley Fever exposure on Project construction workers and sensitive receptors and a corresponding failure to mitigate its potentially significant impacts on human health.

I-6

Valley Fever is a disease that can spread when persons are exposed to *Coccidioides immitis* ("*Cocci*") fungus spores during ground disturbance.[28] Impacts to human health from Valley Fever can be severe, cause long lasting health problems, and can even result in death.[29] The fungus lives in the top 2 to 12 inches of soil, and when disturbed by activities such as digging, construction activities (e.g. site preparation and grading), dust storms, or during earthquakes, the fungal spores become airborne.[30] The Project will disturb up to 45 acres of soil during the

[25] CEQA Guidelines §15125(a) (emphasis added); *Riverwatch v. County of San Diego* (1999) 76 Cal.App.4th 1428, 1453 ("*Riverwatch*").
[26] *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952.
[27] San Bernardino County, Public Health, Environmental Health Services, *Coccidioidomycosis* (February 2017) available at http://www.sbcounty.gov/uploads/dph/dehs/Depts/EnvironmentalHealth/EHSDocuments/Coccidioidomycosis.pdf
[28] Clark Comments, p. 5.
[29] California Department of Public Health ("CDPH"), Valley Fever Basics (May 7, 2020), *available at* https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/ValleyFeverBasics.aspx.
[30] Clark Comments, p. 5.
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site preparation phase, 135 acres of soil during the grading phase, and 24.7 acres during the off-site pipeline installation phase which may lead to the release of fungus spores resulting in impacts to Project workers and nearby sensitive receptors.[31]

The DEIR cites a 2017 report regarding Valley Fever rates in San Bernardino County, and misleadingly states that "the *latest* report from the California Department of Public Health ("CDPH") listed San Bernardino County as having 1.8 cases of Valley Fever per 100,000 people."[32] This figure is outdated and misleading because the 2017 report is not the latest report available from CDPH.

In fact, according to the CDPH, the Valley Fever case rate in San Bernardino County has steadily increased from a case rate of 1.4 cases per 100,000 residents in 2015 to 10.7 per 100,000 residents in 2020, and 11.4 per 100,000 residents in 2021.[33] In San Bernardino County, there were 233 and 250 cases in 2020 and 2021 respectively, and the County had the ninth highest number of cases among California's 58 counties in 2020 and the eighth highest in 2021.[34] On August 1, 2023, CDPH published a press release ("CDPH Notice") notifying the public of a potential increased risk for Valley Fever in the California due to high rates of precipitation over the 2022-2023 winter season.[35] The CDPH Notice states that "[c]ases of Valley fever in California have historically been lowest during years of drought and highest during years immediately after a drought. The wet winter season California experienced could lead to more Valley fever cases this summer and fall."[36] Additionally, according to the National Oceanic and Atmospheric Administration ("NOAA") current predictions for the 2023-2024 winter season forecast higher than average precipitation for Southern California due to the presence of El Niño.[37] According to the DEIR, site preparation, grading and

I-6
Cont.

[31] DEIR, Appendix B, p. 166, see also DEIR, p. 4.3-1.
[32] DEIR, p. 4.2-8. (Emphasis provided)
[33] California Department of Public Health, Epidemiologic Summary of Valley Fever (Coccidioidomycosis) in California, 2020-2021 (hereinafter "Valley Fever Report") (December 2022) p. 5. Available at https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2020-2021.pdf
[34] Valley Fever Summary, p. 5.
[35] California Department of Public Health, Potential Increased Risk for Valley Fever Expected (hereinafter "CDPH Notice") (August 1, 2023) available at https://www.cdph.ca.gov/Programs/OPA/Pages/NR23-023.aspx
[36] CDPH Notice
[37] National Oceanic and Atmospheric Administration, June 2023 ENSO update: El Niño is here (June 8, 2023) available at https://www.climate.gov/news-features/blogs/enso/june-2023-enso-update-el-nino-here.

pipeline installation at the Project site are anticipated to take place between December 2023 and August 2024 and will coincide with the risk period identified in the CDPH Notice.[38]

I-6 Cont.

Despite the known presence of Valley Fever in the Project's vicinity and the potential impacts posed by exposure to the fungus spores, the DEIR fails to provide accurate information regarding the prevalence of *Cocci* fungus spores in the Project's vicinity, fails to discuss available construction worker Valley Fever training,[39] and fails to include any Valley Fever-specific mitigation in the Project's Mitigation Monitoring and Reporting Program ("MMRP"). The lack of accurate information precludes meaningful analysis and mitigation of the potential health impacts the Project will cause to onsite construction workers and other individuals in close proximity to the Project site from disturbing soils which may be contaminated with *Cocci* spores site during Project construction.

I-7

The Town must prepare and recirculate a revised DEIR which includes a discussion of the potential for the presence of *Cocci* fungus spores at the Project site in order to accurately analyze and mitigate the Project's potentially significant health risk impacts from Valley Fever.

B. The DEIR's Noise Analysis Contains Inadequate Baseline Data.

The CEQA Guidelines require an EIR to consider "whether a project would result in… a substantial permanent increase in ambient noise levels in the vicinity of the project" or a "temporary or periodic increase in ambient noise levels in the vicinity of the project . . ."[40] The DEIR's Noise analysis fails to contain the baseline ambient noise data necessary to assess the significance of the Project's estimated 22-month construction and permanent operational noise impacts on sensitive receptors in the vicinity of the Project.

I-8

First, the DEIR's noise measurements are inadequate to establish an ambient noise baseline on which to measure the potential operational and construction noise impacts of the Project. The DEIR relies on a total of five, 10-

[38] DEIR, p. 4.2-24.
[39] California Labor Code § 6709 mandates that employers at worksites in counties where Valley Fever is highly endemic (i.e. where the annual incidence rate is greater than 20 cases per 100,000 persons per year) provide effective awareness training on Valley Fever to all employees. Labor Code § 6709(a-d). Although San Bernardino County Valley Fever incidents have not yet reached 20 per 100,000, they are steadily rising, indicating that the Valley Fever worker awareness training described in Section 6709 should be used at the Project site.
[40] CEQA Guidelines, Appendix G, Sec. XII(c)-(d).
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minute measurements taken on September 27, 2022, between 3:21PM and 5:27PM.[41] No long-term measurement were taken. Mr. Watry explains that industry practices call for measurement of ambient noise conditions over a period of several days in order to provide substantial evidence of existing noise levels, because a noise environment that is dominated by transport uses, as the Project vicinity is, can change hour to hour and day to day.[42] Additionally, Mr. Watry states that the short term noise measurements should have been at least 15 minutes long and taken concurrently with the traffic counts in order to validate the model that the DEIR relies on.[43]

I-8 Cont.

Second, the noise model does not comply with the Federal Transit Authority's 2018 Transit Noise and Vibration Impact Assessment Manual ("FTA Manual") guidance which recommends a minimum of three one-hour Leq noise measurements, including during peak-hour roadway traffic, midday, and nighttime recordings, to estimate the Ldn/CNEL.[44]

Third, the DEIR's noise analysis reports existing CNEL without specifying how the levels were calculated or their relationship to the direct Leq measurements in the DEIR.[45] Mr. Watry explains that the existing Ldn/CNEL cannot be determined based on the noise measurements collected for the DEIR.[46] Therefore, any analysis of increases to Ldn/CNEL from Project operation cannot be relied upon by the Town to determine the Project's noise impacts.[47]

I-9

The DEIR lacks substantial evidence to justify its reliance on a truncated ambient noise methodology which relies on incomplete noise measurements and does not inform the City or the public of the baseline against which noise levels will increase during Project construction and operation. The DEIR should be revised to include an updated baseline analysis that properly validates the model including 15-minute noise and traffic measurements during periods where truck volumes are comparable to the actual peak noise hour conditions, and a minimum of three one-hour Leq noise measurements, including during peak-hour roadway traffic, midday, and nighttime recordings, to estimate the Ldn/CNEL. The results of the revised noise calculations should be included in a recirculated DEIR.

[41] DEIR, Appendix I, pp. 17-26.
[42] Watry Comments, p. 2.
[43] Watry Comments, p. 2.
[44] Watry Comments, p. 2.
[45] Watry Comments, p. 2.
[46] Watry Comments, p. 2.
[47] Watry Comments, p. 2.

IV. THE DEIR FAILS TO DISCLOSE, ANALYZE AND MITIGATE POTENTIALLY SIGNIFICANT IMPACTS

An EIR must fully disclose all potentially significant impacts of a Project and implement all feasible mitigation to reduce those impacts to less than significant levels. The lead agency's significance determination with regard to each impact must be supported by accurate scientific and factual data.[48] An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.[49]

Moreover, the failure to provide information required by CEQA is a failure to proceed in the manner required by CEQA.[50] Challenges to an agency's failure to proceed in the manner required by CEQA, such as the failure to address a subject required to be covered in an EIR or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an agency's factual conclusions.[51] In reviewing challenges to an agency's approval of an EIR based on a lack of substantial evidence, the court will 'determine de novo whether the agency has employed the correct procedures, scrupulously enforcing all legislatively mandated CEQA requirements.'[52]

I-10

Additionally, CEQA requires agencies to commit to all feasible mitigation measures to reduce significant environmental impacts.[53] In particular, the lead agency may not make required CEQA findings, including finding that a project impact is significant and unavoidable, unless the administrative record demonstrates that it has adopted all feasible mitigation to reduce significant environmental impacts to the greatest extent feasible.[54] Yet, as explained below, the DEIR falls far short of this mandate by adopting mitigation measures that are vague, ineffective, and unenforceable and by failing to commit to other feasible and effective mitigation strategies to address the significant transportation, air quality, GHG emissions and noise impacts of the Project.

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[48] CEQA Guidelines § 15064(b).
[49] *Kings Cty. Farm Bur. v. Hanford* (1990) 221 Cal.App.3d 692, 732.
[50] *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.
[51] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.
[52] *Id., Madera Oversight Coal., Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 102.
[53] CEQA Guidelines § 15002(a)(2).
[54] PRC § 21081(a)(3), (b); CEQA Guidelines §§ 15090, 15091; *Covington v. Great Basin Unified Air Pollution Control Dist*. (2019) 43 Cal.App.5th 867, 883.

Even when the substantial evidence standard is applicable to agency decisions to certify an EIR and approve a project, reviewing courts will not 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference.'"[55]

I-10 Cont.

A. The DEIR Fails to Adequately Disclose, Analyze and Mitigate the Project's Significant Transportation Impacts

The DEIR concludes that the transportation impacts of the Project will be significant and unavoidable. The transportation impacts analysis is flawed in numerous ways, most notably with respect to the Project's trip generation and trip length and the resulting vehicle miles traveled ("VMT") impacts. In addition, the DEIR's incorrect and unsupported conclusions with respect to VMT and trip generation undermine the DEIR's air quality and GHG analyses, which rely heavily on Project VMT in their respective analyses. As a result of these errors, the DEIR also fails to mitigate the Project's significant VMT impacts to the greatest extent feasible, as required by CEQA.[56]

I-11

1. The DEIR Incorrectly Calculates the Project's Operational Trip Generation

The DEIR's trip generation analysis is not supported by substantial evidence because it relies on unsupported assumptions regarding Project related truck trip generation.

The DEIR's transportation impacts analysis relies on the trip generation rates available in the Institute of Transportation Engineers, Trip Generation Manual, 11th Edition ("ITE Manual") for Category 155 – High-Cube Fulfillment Center Warehouse.[57] Based on the ITE Manual Category 155, the DEIR estimates that the Project will generate 1.81 vehicle trips per 1,000 square feet of building area, or 573 daily trips, with the AM and PM peak hours generating 162 and 173 trips respectively.[58]

I-12

[55] *Berkeley Jets*, 91 Cal.App.4th at 1355.
[56] Covington v Great Basin Unif. Air Pollution Control Dist. (2019) 43 Cal.App.5th 867, 879-883.
[57] DEIR, Appendix J, p. 23.
[58] DEIR, Appendix J, p. 23.
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The DEIR lacks substantial evidence to support the estimated trip generation because the DEIR unreasonably and without justification relies on an unreasonably low trip generation rate in the ITE Manual for high-cube warehouse uses. Mr. Marshall explains that the ITE Manual provides a range of trip generation rates that are applicable to the Project.[59] The ITE Manual provides five separate categories that are applicable to high-cube warehouse, each with different trip generation rates per 1,000 square feet as follows[60]:

- 154 High-Cube Transload and Short-Term Storage Warehouse – 1.4 trips
- 155 High-Cube Fulfillment Center Warehouse
  - Non-Sort – 1.81 trips
  - Sort – 6.44 trips
- 156 High-Cube Parcel Hub Warehouse – 4.63 trips
- 157 High-Cube Cold Storage Warehouse – 2.12 trips

As Mr. Marshall explains, the DEIR's project description is so general that the Project could fall within any of these categories. The DEIR states that "[a] tenant for the proposed industrial warehouse building has not yet been identified, but the Project would operate as an unrefrigerated warehouse and/or distribution facility."[61] Based on the fact that the future tenants are not known, the DEIR lacks support for its assumption that the Project will generate the 1.81 trips provided under Category 155, which is one of the least trip intensive use of all ITE warehouse categories for high-cube warehouses.

Moreover, a 2019 study of warehouse trip generation rates completed for the Western Riverside Council of Governments ("WRCOG Study")[62] analyzed actual trip generation rates from 16 warehouses in the Inland Empire region and found that the ITE Categories underestimate trip generation for fulfillment centers, finding an average trip generation for fulfillment centers of 2.2 trips per 1,000 square feet.[63] The WRCOG Study also details that the parcel hubs analyzed in the region generated as many as 14 trips per 1,000 square feet.[64]

I-12
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[59] Marshall, p. 6.
[60] Marshall, p. 3.
[61] DEIR, p. 1-2.
[62] Western Riverside Council of Governments Technical Advisory Committee, Staff Report, High-Cube Warehouse Trip Generation Study and Proposed TUMF Calculation Handbook Update (February 21, 2019) (hereinafter "WRCOG Study") PDF, p. 53. *available at* https://wrcog.us/AgendaCenter/ViewFile/Agenda/_02212019-292
[63] *Id. PDF p. 43.*
[64] *Id, PDF p. 50.*
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As noted above, the future tenants of the Project are unknown, and based on the variability of trip generation rates for high-cube warehouses reported in the ITE Manual, and the results of the WRCOG Study, it is evident that the DEIR underestimated the Project's operational trips. If the Town does not know what tenants will occupy the Project, nor what the full range of uses of the Project will be, the Town must analyze the most intensive reasonably foreseeable uses of the Project site.

I-12 Cont.

To reasonably analyze the full scope of the Project's impacts related to future tenant uses, analysis of the Projects trip generation should therefore use the most conservative estimate from the WRCOG Study and present the data in a revised and recirculated DEIR for public review.

A. The DEIR Underestimates Project VMT and Mobile Source GHGs

Transportation expert Norm Marshall explains that the DEIR potentially underestimates average trip lengths for both trucks and passenger vehicles.[65] Longer trip lengths results in greater impacts (including air quality, GHGs, and VMT). As a result, the analyses that rely on these trip lengths lack the support of substantial evidence. The DEIR's mobile source emissions analysis relies on the following reasoning to estimate the Project's trip lengths "truck trip lengths were based on the SCAQMD recommendation of 40 miles and assumed to be 100% of primary trips."[66] However, SCAQMD does not make a recommendation that a 40-mile trip length be assumed for warehouse project EIRs.[67] The DEIR's reference for the 40-mile figure is derived from SCAQMD's *Second Draft Staff Report Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program And Proposed Rule 316 -Fees for Rule 2305*[68] which clarifies that the 40-mile figure was the average truck trip length assumed by SCAQMD to be used in the rulemaking process for the proposed Rule 2305.[69] The document provides no indication that the 40-mile estimate was

I-13

[65] Marshall Comments, pp. 7-8.
[66] DEIR, p. 4.2-27 (
[67] Marshall Comments, p. 7.
[68] SCAQMD, Second Draft Staff Report Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program And Proposed Rule 316 -Fees for Rule 2305 (April 2021) available at www.aqmd.gov/docs/default-source/planning/fbmsm-docs/pr-2305_sr_2nd-draft_4-7-21_clean.pdf
[69] Id. p. 49

intended to inform trip length estimates for any other purpose, and no evidence that the estimate applies to actual truck trip lengths for this Project. Additionally, the Attorney General's ("AG") guidance document for warehouse projects states:

> CEQA requires full public disclosure of a project's anticipated truck trips, which entails calculating truck trip length based on likely truck trip destinations, rather than the distance from the facility to the edge of the air basin, local jurisdiction, or other truncated endpoint. All air pollution associated with the project must be considered, regardless of where those impacts occur.[70]

I-13 Cont.

In contrast to the approach recommended by the AG, the DEIR's estimated trip distances did not account for the Project's likely trip destinations. Mr. Marshall explains that, while it may be too early to determine specific truck trip origins and destinations, it is notable that important major freight origins and destinations are considerably further away than the 40-mile trip length assumed in the DEIR.[71] These include the Ports of Los Angeles and Long Beach – each approximately 110 miles away. The DEIR's analysis thus likely underestimates trip distances resulting in underestimation of Project related air quality, transportation and GHG emissions impacts.

B. The DEIR Improperly Defers VMT Mitigation and Fails to Identify All Feasible Mitigation Measures

The DEIR concludes that the Project would result in a significant and unavoidable VMT impact despite mitigation included in the DEIR. Specifically, the DEIR estimates that the Project would exceed the VMT screening thresholds by a wide margin: 20.8% in the baseline year and 80.4% in the horizon year.[72] To mitigate this significant impact, the DEIR identifies the following mitigation measure to be implemented:

> MM-AQ-1: Transportation Demand Management Plan. For occupants with more than 250 employees, a Transportation Demand management Program to reduce employee commute vehicle emissions shall be established, subject to review and approval by the Town of Apple Valley. The Transportation Demand Management Plan shall apply to Project tenants through tenant leases. The

I-14

[70] Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act (September 2022) pg. 7. available at https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf
[71] Marshall Comments, p. 7.
[72] DEIR, p. 4.12-21.

TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. Examples of trip reduction measures may include, but are not limited to:

- Transit passes
- Car-sharing programs
- Telecommuting and alternative work schedules
- Ride sharing programs[73]

This measure fails to meet CEQA's standards for mitigation. CEQA provides that if the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment" to the greatest extent feasible and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns."[74] Further, EIRs must mitigate significant impacts through measures that are "fully enforceable through permit conditions, agreements, or other legally binding instruments."[75] Deferring formulation of mitigation measures is generally impermissible.[76] If identification of specific mitigation measures is impractical until a later stage in the Project, specific performance criteria must be articulated and further approvals must be made contingent upon meeting these performance criteria.[77] Mitigation that does no more than allow approval by a lead agency without setting enforceable standards is inadequate.[78]

I-14
Cont.

Here, the measure improperly defers identification of specific VMT-reducing mitigation measures to a future date by allowing the future creation of a Transportation Demand Management ("TDM") Program outside of the CEQA process and with no specific requirements. MM-AQ-1 does not commit to any particular measures to reduce VMT. Nor does the measure articulate specific

[73] DEIR, p. 4.2-44.
[74] PRC § 21081(a)(3), (b); CEQA Guidelines §§ 15090(a), 15091(a), 15092(b)(2)(A), (B); *Covington v. Great Basin Unified Air Pollution Control Dist*. (2019) 43 Cal.App.5th 867, 883.
[75] CEQA Guidelines, § 15126.4, subd. (a)(2).
[76] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308-309; Pub. Resources Code, § 21061.
[77] *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1393; *Quail Botanical*, *supra*, 29 Cal.App.4th at pg. 1604, fn. 5.
[78] *Endangered Habitats League, Inc. v. County of Orange,* (2005) 131 Cal.App.4th 777, 794.
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performance criteria to ensure that impacts would be mitigated to the greatest extent feasible. Simply requiring the TDM Plan to be prepared and approved by the Town is not enough.[79]

As a result of this improper deferral of mitigation, the DEIR also fails to comply with CEQA's requirement to reduce all significant effects on the environment to the greatest extent feasible. Additional, feasible VMT-reducing measures must be adopted until the expected 20.8% excess VMT is mitigated.

Mr. Marshall notes that, while MM-AQ-1 lists potential measures to reduce VMT, the measures are generic and are largely not applicable to the Project and that additional feasible mitigation measures are available in this case, including specific measures identified by the California Air Pollution Control Officers Association ("CAPCOA") in its *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity: Designed for Local Governments, Communities, and Project Developers* ("CAPCOA Handbook").[80] The Handbook includes data regarding GHG emissions and proven effective methods that a local agency can employ to reduce GHG impacts, including reduction in GHG impacts from VMT.[81]

I-14 Cont.

The Handbook states that the VMT reduction (and therefore, GHG emissions reduction) could be as great as 45 percent with the implementation of additional measures which include:

- T-7 Implement Commute Trip Reduction Marketing
- T-8 Provide Ridersharing Program
- T-9 Implement Subsidized or Discounted Transit Program
- T-10 Provide End-of Trip Bike Facilities
- T-11 Provide Employer-Sponsored Vanpool
- T-12 Price Workplace Parking
- T-13 Implement Employee Parking Cash-Out[82]

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[79] *Id*. ("mitigation measure[s] [that do] no more than require a report be prepared and followed" do not provide adequate information for informed decision making under CEQA."); CEQA Guidelines § 15126.4(a)(1)(B).

[80] California Air Pollution Control Officers Association ("CAPCOA") Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (hereinafter "CAPCOA Handbook") (December 2021) available at https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf

[81] CAPCOA Handbook, p. 35.

[82] CAPCOA Handbook, pp. 89-115.

Many of the individual measures included in the Handbook offer high potential reductions *even if only one measure is used*.[83] For example, the maximum reduction produced by "T-11 Provide Employer-Sponsored Vanpool" is 20.4 percent.[84]

The DEIR fails to include any analysis of the feasibility of the above methods, or any other methods, to reduce the Project's significant impacts and lacks substantial evidence to conclude that the Town has eliminated or substantially lessened all significant effects on the environment to the greatest extent feasible. Therefore, the DEIR violates CEQA, and the Town cannot conclude that the Project's VMT impacts are significant and unavoidable.[85] The Town must evaluate the feasibility and effectiveness of additional mitigation measures in a revised and recirculated DEIR for the Project. I-14 Cont.

B. The DEIR Fails to Disclose, Analyze or Mitigate the Project's Significant Air Quality and Health Risk Impacts

The DEIR's air quality analysis concludes, with respect to air quality and health risks to sensitive receptors, that the Project's construction and operation will cause a significant unavoidable impact.[86] However, the Town failed to account for the severity of the impacts and failed to consider feasible mitigation measures to reduce the impacts. I-15

1. The DEIR Fails to Analyze and Mitigate Potentially Significant Valley Fever Impacts from Project Construction

As detailed above, the DEIR incorrectly characterizes the potential presence of *Cocci* fungus spores at the Project site and fails to discuss or require any Valley Fever employee training measures to protect Project construction workers from Valley Fever exposure. As a result, the DEIR fails to analyze the Project's threat of Valley Fever exposure to workers and sensitive receptors, and fails to include critical mitigation measures to reduce the health risk impacts of Valley Fever. I-16

[83] Marshall Comments, p. 4.
[84] CAPCOA Handbook, p. 104.
[85] CEQA Guidelines § 15002(a)(2).
[86] DEIR, p. 4-13.

According to the DEIR's air quality analysis, Project construction will include 30 days of site preparation which will disturb 45 acres of soil, 45 days of grading activities which will disturb 135 acres of soil at the Project site and 120 days of trenching for pipeline installation which will involve ground disturbing activities on 24.7 acres of dirt and paved roads.[87] Dr. Clark explains that, when soil containing Valley Fever spores is disturbed by construction activities, the spores become airborne, exposing construction workers and other nearby sensitive receptors to potential infection.[88] Sensitive receptors on and near the Project site, including workers and those who live or work nearby, are at risk from exposure from disturbed dust during Project construction.[89]

The most at-risk populations are construction and agricultural workers. Additionally, the potentially exposed population in surrounding areas is much larger than construction workers because the nonselective raising of dust during Project construction will carry the very small spores which measure 0.002–0.005 millimeters into nonendemic areas, potentially exposing large non-Project-related populations.[90] Furthermore, the small fungus spore particles will not be controlled by the conventional construction dust-control measures under the Mojave Desert Air Quality Management District ("MDAQMD") Rule 403.[91] Thus, off-site sensitive receptors may have a significant risk of exposure to Valley Fever spores with no mitigation.

I-16 Cont.

The DEIR must be revised and recirculated to include an analysis of the Project's significant Valley Fever impacts, and to require that any and all mitigation measures that will reduce Valley Fever risks are incorporated as binding mitigation in the Project's MMRP.

2. Feasible Mitigation is Available to Reduce the Project's Significant Health Risk Impacts from Valley Fever

CEQA imposes a duty on the Town to adopt all feasible mitigation measures to reduce potentially significant health impacts from the Project. Yet here, the

I-17

[87] DEIR, Appendix B, pp. 166 and 221; see also DEIR, p. 4.3-1.
[88] Clark Comments, p. 5.
[89] Clark Comments, p. 5.
[90] Clark Comments, p. 5.
[91] Clark Comments, p. 5; Mojave Desert Air Quality Management District, Rule 403: Fugitive Dust Control (October 26, 2020) available at https://www.mdaqmd.ca.gov/rules/rule-book/regulation-iv-prohibitions; DEIR, p. 5.2-8 *(note: the DEIR incorrectly refers to MDAQMD Rule 403.2 -Fugitive Dust Control for the Mojave Desert Planning Area, which was rescinded on October 26, 2020*)

DEIR fails to incorporate any mitigation measures that would address Valley Fever risks to construction employees and sensitive receptors.

In his comments, Dr. Clark proposes a variety of feasible mitigation measures the DEIR should consider and adopt in a revised DEIR to reduce potential health impacts from Valley Fever.[92] The following mitigation measures identified in Dr. Clark's comments are based on his experience during construction of projects in areas affected by the fungi that cause Valley Fever, these measures should be included in the DEIR's mitigation measures in addition to the requirements under MDAQMD Rule 403:

- Include specific requirements in the Project's Injury and Illness Prevention Program regarding safeguards to prevent Valley Fever.

- **Control dust exposure through the following methods:**
- Apply chemical stabilizers at least 24-hours prior to high wind event;
- Apply water to all disturbed areas a minimum of three times per day. Watering frequency should be increased to a minimum of four times per day if there is any evidence of visible wind-driven fugitive dust;
- Provide National Institute for Occupational Safety and Health (NIOSH)-approved respirators for workers with a prior history of Valley Fever.
- Half-face respirators equipped with a minimum N-95 protection factor for use during worker collocation with surface disturbance activities. Half-face respirators equipped with N-100 or P-100 filters should be used during digging activities. Employees should wear respirators when working near earth-moving machinery.
- Prohibit eating and smoking at the worksite, and provide separate, clean eating areas with hand-washing facilities.
- Avoid outdoor construction operations during unusually windy conditions or in dust storms.
- Consider limiting outdoor construction during the fall to essential jobs only, as the risk of cocci infection is higher during this season.

- **Prevent transport of cocci outside endemic areas:**
- Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate;

I-17
Cont.

[92] Clark Comments, pp. 6-8.

- Provide workers with coveralls daily, lockers (or other systems for keeping work and street clothing and shoes separate), daily changing and showering facilities.
- Clothing should be changed after work every day, preferably at the work site.
- Train workers to recognize that cocci may be transported offsite on contaminated equipment, clothing, and shoes; alternatively, consider installing boot-washing.
- Post warnings onsite and consider limiting access to visitors, especially those without adequate training and respiratory protection.

- **Improve medical surveillance for employees:**
- Employees should have prompt access to medical care, including suspected work-related illnesses and injuries.
- Work with a medical professional to develop a protocol to medically evaluate employees who have symptoms of Valley Fever.
- Consider preferentially contracting with 1-2 clinics in the area and communicate with the health care providers in those clinics to ensure that providers are aware that Valley Fever has been reported in the area. This will increase the likelihood that ill workers will receive prompt, proper and consistent medical care.
- Respirator clearance should include medical evaluation for all new employees, annual re-evaluation for changes in medical status, and annual training, and fit-testing.
- Skin testing is not recommended for evaluation of Valley Fever.
- If an employee is diagnosed with Valley Fever, a physician must determine if the employee should be taken off work, when they may return to work, and what type of work activities they may perform.

I-17
Cont.

Any mitigation measures must be included in the DEIR and be fully enforceable through permit conditions, agreements or other legally binding instruments.[93] Failure to include enforceable mitigation measures is considered a failure to proceed in the manner required by CEQA.[94] In order to meet this requirement, mitigation measures must be incorporated directly into the EIR to be enforceable.[95]

[93] CEQA Guidelines § 15126.4(a)(2).
[94] *San Joaquin Raptor Rescue Ctr. v. County of Merced* (2007) 149 Cal.App.4th 645, 672.
[95] *Lotus v. Dept of Transportation* (2014) 223 Cal. App. 4th 645, 651-52.
6756-006j

The DEIR must be revised and recirculated to include mitigation measures such as the those proposed by Dr. Clark to reduce the impacts of exposure to Valley Fever causing fungus spores and mitigate impacts to sensitive receptors. I-17 Cont.

3. The DEIR Fails to Require Effective Mitigation to Reduce the Project's Construction Air Quality Impacts

In order to mitigate the Project's potentially significant construction air quality impacts, the DEIR includes in its mitigation monitoring and reporting program ("MMRP") PDF-AQ-1, which, among other provisions, requires that all heavy duty off-road construction equipment meet U.S. Environmental Protection Agency ("USEPA) certified Tier 4 Interim emissions standards, and includes an exception to allow the use of Tier 3 construction equipment if Tier 4 Interim equipment is not available.[96] Dr. Clark explains that the USEPA standards for construction equipment are designed to lower emissions from off-road construction equipment.[97] The USEPA standards specify that Tier 4 Final standards are the cleanest burning equipment and have the lowest emissions compared to the other tiers.[98] Dr. Clark explains that Tier 3 equipment puts out 80% to 89% more PM_{10} than Tier 4 Interim equipment and 85% to 91% more PM_{10} than Tier 4 Final equipment. Additionally, Tier 3 equipment puts out 81% to 89% more $PM_{2.5}$ than Tier 4 Interim equipment and 85% to 92% more $PM_{2.5}$ than Tier 4 Final equipment. I-18

The DEIR fails to provide justification why PDF-AQ-1 allows for the use of Tier 3 and Tier 4 Interim equipment during Project construction. By requiring the use of Tier 4 Final construction equipment, the Project would see significant reductions in emissions. Furthermore, requiring Tier 4 Final construction equipment at the site is feasible, including Tier 4 Final equipment, which produces the highest available emissions reductions from the Tier 4 equipment categories. The Town must revise PDF-AQ-1 to require the use of Tier 4 Final construction equipment in order to reduce the Project's air quality and GHG emissions impacts to the greatest extent feasible.

C. The DEIR Fails to Analyze and Mitigate the Project's Significant GHG Emissions Impacts

The DEIR states that the Project's unmitigated GHG emissions impacts of 37,982 MTCO2e/year would exceed the SCAQMD GHG threshold of 3,000 MTCO2e I-19

[96] DEIR, p. 4.2-21.
[97] Clark Comments, p. 8.
[98] Clark Comments, p. 8.

and would result in a considerable contribution to cumulative emissions related to global climate change and therefore result in a significant impact.[99] The DEIR includes mitigation measure MM-AQ-1 to reduce the Project's impacts.[100] Despite the proposed mitigation measures, the DEIR concludes that the Project will result in the release of 21,169.5 MGCO2e/year, exceeding SCAQMD's threshold of 3,000 MTCO2e/year and resulting in significant and unavoidable GHG emissions impacts.[101]

As discussed above, the DEIR's failure to adequately analyze the Project's transportation and air quality impacts results in a failure to analyze the Project's GHG emissions impacts. The DEIR's errors in the Project VMT analysis results in an underestimation of the Project's GHG emissions from mobile sources. The DEIR's GHG analysis and conclusions are therefore not based on substantial evidence, whereas Mr. Marshall and Dr. Clark provide substantial evidence showing that the Project's GHG emissions will likely be much higher than stated in the DEIR. The Town must correct the errors in the DEIR's transportation and air quality impacts analyses to accurately estimate the Project's significant GHG emissions impacts.

I-19 Cont.

D. The DEIR Fails to Adequately Analyze Potentially Significant Noise Impacts

CEQA requires agencies to conduct noise analyses for projects that consider both the absolute noise levels expected, and the degree noise levels are expected to increase. Noise studies that rely on a single measure that excludes possible significant impacts from noise increases or noise extremes do not receive deference by reviewing courts.

In *King & Gardiner Farms, LLC v. County of Kern*, the Court of Appeal held that an agency cannot simply rely on compliance with local noise regulations to conclude there will be no significant noise impacts without considering the impacts of increases in noise.[102] The County approved an EIR for proposed zoning amendments to streamline oil and gas permitting.[103] The EIR included an analysis of noise impacts that determined significance based solely on whether the 65 decibel day-night average ("dBA DNL") threshold in the County General Plan would be

I-8 and I-9

[99] DEIR, p. 4.6-30.
[100] DEIR, pp. 1-4 – 1-8.
[101] DEIR, p. 4.6-31.
[102] *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 894.
[103] *Id.* at 829.

exceeded.[104] The Court of Appeal reasoned that the County General Plan did not conclude that all increases in the magnitude of noise are insignificant until the 65 dBA DNL threshold is exceeded, so the General Plan "does not constitute substantial evidence that the magnitude of an increase in ambient noise is irrelevant."[105] Rather, an EIR's noise analysis should consider both the increase in noise level and the absolute noise level associated with a project in determining the significance of the project's noise impacts.[106] The Court of Appeal concluded that an agency cannot exclusively rely on "a single cumulative DNL metric for determining the significance of the project's noise impacts" while deciding "the magnitude of the increase in ambient noise is irrelevant."[107]

In *Berkeley Jets*, the Court of Appeal invalidated the Port of Oakland's EIR for expansion of the Oakland Airport because of its reliance on an improper noise standard.[108] The EIR evaluated the significance of noise impacts based on whether the estimated level of sound would exceed 65 dB Community Noise Equivalent Level ("CNEL").[109] However, as the Court of Appeal explained, the CNEL metric—which averages noise over the course of a day—could not be the sole indicator of significant effects from noise because it does not provide a meaningful analysis of the "degree single overflights will create noise levels over and above the existing ambient noise level at a given location, and the community reaction to aircraft noise, including sleep disturbance."[110] Therefore, the Court concluded, a revised EIR with additional study of noise impacts from flights was necessary.[111]

Here, the DEIR states that construction and operational noise impacts would not be significant. However, as explained above, the DEIR relies on an inadequate noise study to inform the Project's noise analysis, relies on improper thresholds of significance for construction and operational noise resulting in a failure to analyze and mitigate the Project's potentially significant noise impacts to the greatest extent feasible.

I-8 and I-9 Cont.

[104] *Id.* at 830, 889.
[105] *Id.* at 894.
[106] *Id.*
[107] *Id.*
[108] *Berkeley Jets*, 91 Cal.App.4th at 1381–1382.
[109] *Id.* at 1373.
[110] *Id.* at 1381–1382.
[111] *Id.* at 1382.

1. The DEIR Fails to Analyze and Mitigate Potentially Significant Construction and Operational Noise Impacts

CEQA does not set a numeric threshold for determining the significance of ambient noise increases. Lead agencies may select their own thresholds. The agency's selection of a threshold of significance must be supported by substantial evidence.[112]

The DEIR relies on the Town's noise ordinance, which sets a maximum noise level for construction and operational noise as its threshold of significance.[113] Reliance solely on the noise ordinance violates CEQA because it fails to consider whether the magnitude of changes in noise levels is significant.[114] The DEIR relies on the noise ordinance to determine the significance of the off-site construction noise, stating:

> [N]oise levels from construction are predicted to range from approximately 48 dBA Leq (during the architectural coating phase) to 61 dBA Leq (during the grading phase) at the nearest noise-sensitive receiver (a single-family residence approximately 850 feet from the nearest construction work). These noise levels would be lower than the Town of Apple Valley's construction noise standard at single-family residences for temporary (i.e., mobile) equipment of 75 dBA Leq. […] Therefore, noise from Project site construction would be less than significant. No noise mitigation is necessary.[115]

The DEIR's construction noise analysis omits a critical component, namely that the magnitude of the noise increase is not considered in the impact analysis.[116] The DEIR reports that the existing Leq at a nearby residence, receptor M1, is 39 dBA and that Project construction is expected to result in noise levels of 61 dBA Leq during the grading phase and noise levels of 57 dBA Leq during typical construction activity. Mr. Watry explains that this constitutes a four-fold increase of perceived noise levels at this receptor, resulting in a significant impact.[117]

I-8 and I-9 Cont.

[112] 14 CCR § 15064(b); *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 884.
[113] AVMC, § 9.73.050.
[114] *King & Gardiner Farms*, 45 Cal.App.5th 814, 865.
[115] DEIR, p. 3.6-12.
[116] Watry Comments, p. 3.
[117] Watry Comments, p. 3.

The DEIR also fails to analyze the magnitude of the Project's potentially significant operational noise impacts. Mr. Watry calculated that the Project will generate 38.3 dBA CNEL at receptor M1 during operation, resulting in an increase of 9 dBA over the DEIR's reported ambient existing nighttime noise level of 29.8 dBA Leq.[118] Mr. Watry explains that this relative increase will be perceptible to the residents at receptor M1 and constitutes a significant impact. Mr. Watry states that the Project must employ additional mitigation measures, such as sound barriers to block line of sight from the operational noise sources in order to reduce the Project's significant impacts.[119]

I-8 and I-9 Cont.

The DEIR lacks substantial evidence to support its conclusion that the Project's construction and operational noise impacts will be less than significant because it failed to analyze the magnitude of noise increase from the Project. As a result, the DEIR fails to analyze and mitigate the Project's significant construction noise impacts. The DEIR must be revised and recirculated to analyze the Project's construction and operational noise impacts.

V. THE DEIR FAILS TO CONSIDER THE OFFICE OF THE ATTORNEY GENERAL'S BEST PRACTICES AND MITIGATION MEASURES FOR WAREHOUSE PROJECTS

In September 2022, the California Office of the Attorney General ("AG") released an updated version of its guidance document titled "*Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act*" ("Best Practices").[120] The Best Practices were developed to aid local agencies to achieve CEQA compliance, and promote environmentally-just development when they are considering warehouse project proposals.[121] The AG developed the Best Practices based on knowledge gained from monitoring, providing comments on, and litigating, warehouse development projects in California.[122] The Best Practices state that while CEQA analysis is necessarily project-specific, the document provides feasible best practices and mitigation measures which were adapted from actual warehouse projects in California.[123]

I-20

[118] Watry Comments, p. 3.
[119] Watry Comments, p. 3.
[120] California Office of the Attorney General, Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act (hereinafter "Best Practices") (September 2022) available at https://oag.ca.gov/system/files/media/warehouse-best-practices.pdf
[121] Best Practices, p. 1.
[122] Best Practices, p. 1
[123] Best Practices, p. 1.
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The Best Practices provide examples of environmentally superior methods of developing warehouse projects and offers sample mitigation measures that a local agency should consider when faced with a project such as the Project proposed here. For example, the Best Practices encourage local governing bodies to proactively plan for logistics projects by establishing industrial districts near major highway and rail corridors but away from sensitive receptors in order to help attract investment while avoiding conflicts between warehouse facilities and residential communities.[124]

Here, the proposed Project defies many of the recommendations in the Best Practices. For example, with regard to the above recommendation to site projects close to freeways and away from sensitive receptors, the proposed Project site is located approximately 5-miles away from the closest freeway onramp onto Interstate 15 ("I-15"). The following excerpts from the Best Practices are included to demonstrate that the proposed Project is at odds with the guidance provided by the OAG.

The Best Practices recommend that local jurisdictions take care when considering potential impacts from air quality and GHG emissions from project construction and operation. The DEIR does not comply with many of the recommendations and fails to include mitigation measures that conform with the Best Practices, which for construction include:

- Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
- Limiting the amount of daily grading disturbance area.[125]

For operational air quality and GHG emissions impacts, the Best Practices recommend:

I-20
Cont.

[124] Best Practices, p. 3.
[125] Best Practices, p. 8.
6756-006j

- Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
- Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.

I-20 Cont.

The DEIR fails to demonstrate conformance with the above recommendations. The Best Practices also include several recommendations and suggested mitigation measures regarding warehouse noise and transportation impacts that the DEIR fails to take into account. The Town must consider all of the recommendations of the AG and incorporate any feasible measures recommended in the Best Practices as mitigation measures in the DEIR to further reduce the Project's significant (and in some cases significant and unavoidable) air quality, GHG emissions, transportation, and noise impacts.

VII. THE TOWN MAY NOT MAKE THE REQUIRED FINDINGS TO APPROVE THE PROJECT'S LOCAL LAND USE PERMITS

The Project requires approval of Site Plan Review, Lot Line Adjustment and certification of the Environmental Impact Report. The Town cannot make the findings necessary to approve the Project's entitlements because the Project will result in significant environmental impacts that the Town has failed to analyze and mitigate.

In order to approve the Project's Site Plan Review Permit pursuant to the North Apple Valley Industrial Specific Plan, the Town must find that proposed Project is consistent with the following findings:

I-21

1. That the location, size, design, density, and intensity of the proposed development is consistent with the General Plan, the North Apple Valley Industrial Specific Plan, the Development Code, and the development policies and standards of the Town.
2. That the location, size and design of the proposed structures and improvements are compatible with the site's natural landforms, surrounding sites, structures, and streetscapes.
3. That the materials, textures, and details of the proposed construction are compatible with the adjacent and neighboring structures.
4. That quality in architectural design is maintained in order to enhance the visual environment of the Town and protect the economic value of existing structures.

5. That there are public facilities, services, and utilities available at the appropriate levels or that these shall be installed at the appropriate time to serve the project.
6. That access to the site and internal circulation are safe.
7. That the project is consistent with the uses described in the North Apple Valley Industrial Specific Plan, and analyzed in the North Apple Valley Industrial Specific Plan Environmental Impact Report (SCH No. 2006031112).[126]

The Town is precluded from making finding one above because it cannot find that the Project's location, size, design, density, and intensity is consistent with the Town's General Plan. The Project is inconsistent with the General Plan's Air Quality Element, Policy 1.D. which states that "[a]ll 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."[127]

I-21 Cont.

As explained in detail above, the DEIR fails to effectively mitigate the Project's significant VMT, air quality, and health risk impacts to the greatest degree feasible. We provide several feasible mitigation measures that would further reduce the Project's significant impacts in these comments that the Town must consider prior to finding that the Project is consistent with Policy 1.D.

The Project's significant VMT, health risk, air quality and GHG impacts preclude the Town from making the findings required under the NAVISP to approve the Project's Site Plan Review. The Town must prepare a revised DEIR which adequately analyzes the significant impacts of the Project and adopts feasible mitigation measures to reduce the Project's impacts.

[126] Town of Apple Valley, North Apple Valley Industrial Specific Plan (Adopted October 24, 2006, Last Amended January 24, 2012) available at https://www.applevalley.org/home/showpublisheddocument/18587/636149111285930000
[127] Town of Apple Valley, 2009 General Plan, Air Quality Element (Adopted August 11, 2009) p. III-79. available at https://www.applevalley.org/services/planning-division/2009-general-plan.

VI. CONCLUSION

For the reasons discussed above, the DEIR for the Project is wholly inadequate under CEQA. It must be thoroughly revised to provide legally adequate analysis of, and mitigation for, all of the Project's potentially significant impacts. These revisions will necessarily require that the DEIR be recirculated for additional public review. Until the DEIR has been revised and recirculated, as described herein, the Town may not lawfully approve the Project. I-22

Thank you for your attention to these comments. Please include them in the record of proceedings for the Project.

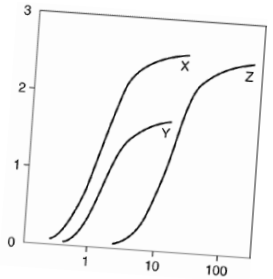
Sincerely,

Kevin Carmichael

KTC:ljl

6756-006j

EXHIBIT A



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October 25, 2023

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

Attn: Mr. Kevin Carmichael

Subject: Comment Letter on Draft Environmental Impact Report (DEIR) 1M Warehouse Project, State Clearinghouse No. 2023020285 Apple Valley, California.

Dear Mr. Carmichael:

At the request of Adams Broadwell Joseph & Cardozo (ABJC), Clark and Associates (Clark) has reviewed materials related to the above referenced project.

Clark's review of the materials in no way constitutes a validation of the conclusions or materials contained within the DEIR. If we do not comment on a specific item, this does not constitute acceptance of the item.

I-23

Project Description:

The Project involves construction and operation of a 1,080,125-square-foot industrial/warehouse building on a 67.3-acre undeveloped site located at the northeast corner of Central Road and Lafayette Street in the Town of Apple Valley, California. Construction of the Project is anticipated to commence in December 2023 and conclude in October 2025, lasting approximately 22 months. Approximately 15,000 square feet of office space would be provided within the building. The building would have a maximum building height of 50 feet, measured from the finished floor to the top of building parapets. The building would have a floor area ratio (FAR) of

I-24

0.369.According to the DEIR, a tenant for the proposed industrial warehouse building has not yet been identified, but the Project would operate as an unrefrigerated warehouse and/or distribution facility. The DEIR states[1] that while operational hours are anticipated to follow common working hours (e.g., 8-12 hours per day), it was assumed that the facility could be operated 24 hours a day, 7 days a week. Additionally, cold or refrigerated storage would not be permitted in the proposed building subject to additional environmental review and approval by the Town.

I-24 Cont.

For on-site and off-site development, it was assumed that approximately 150,000 cubic yards and 2,288 cubic yards of soil would be exported, respectively. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week.[2] The trenching necessary to install utilities to the site (labeled pipeline installation) is assumed to take 120 days and would effectively extend the area of impacts from the construction phase of the project beyond the project site boundaries.

[1] Dudek. 2023. Environmental Impact Report 1M Warehouse Project, State Clearinghouse 2023020285. Prepared for Town of Apple Valley. Prepared by Dudek. Pg 3-14.

[2] *ibid*. Pg 3-15.

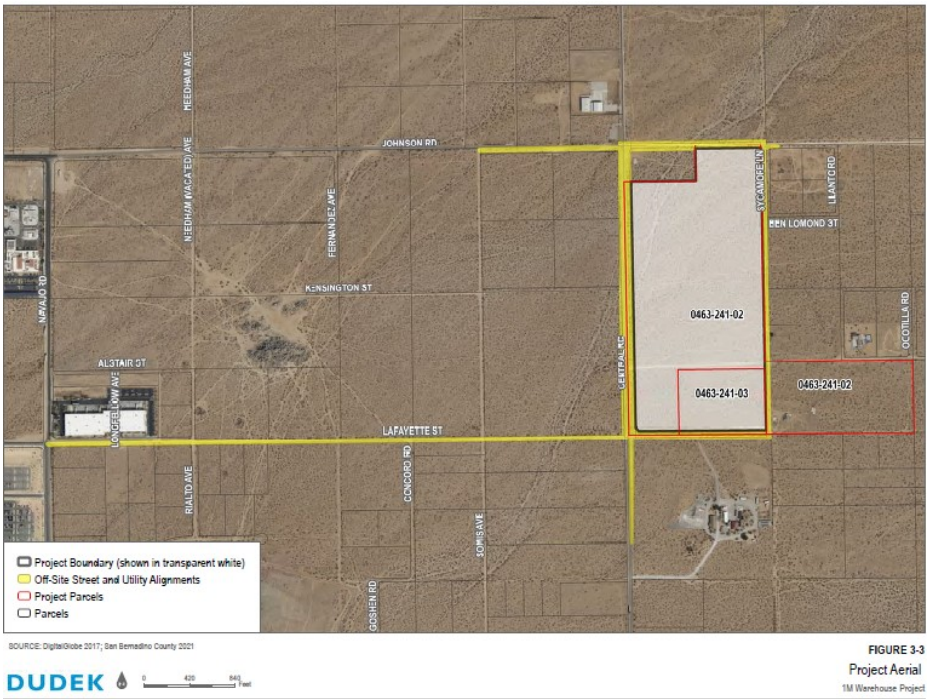

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Figure 1: Project Site Location

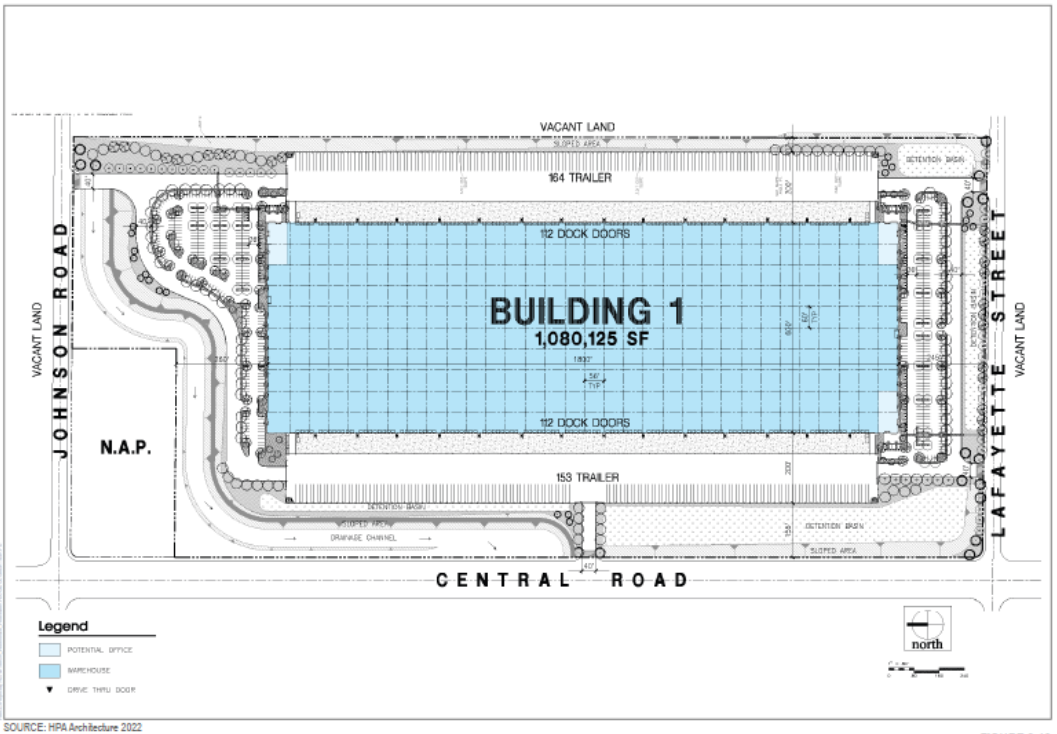


Figure 2: Project Site Plan

The DEIR concludes that no mitigation is required to prevent impacts from the project on air quality in the area. This conclusion is in conflict with the facts provided within the DEIR.

I-24 Cont.

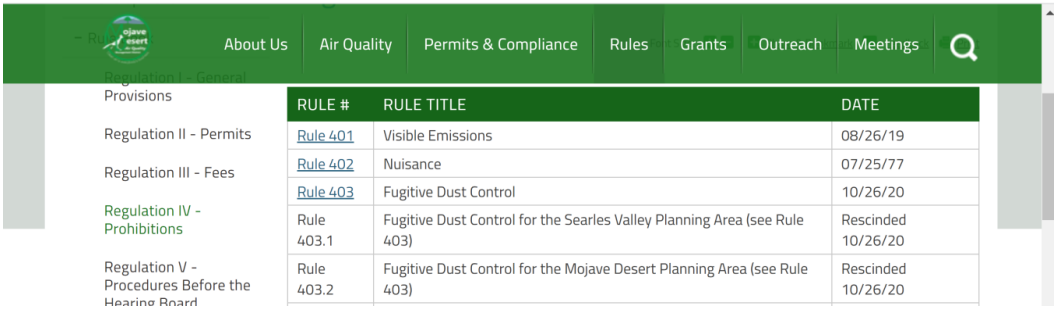
Specific Comments:

1. The DEIR Fails To Address Impacts from Exposure to *Coccidiodes Immitis* (Valley Fever Cocci) From Particulate Matter Released From Site During Construction Activities of The Project.

I-25

The Town's comments on the presence/issue of *Coccidiodes Immitis* (Valley Fever Cocci) in the High Desert Portion of Southern California and mitigation from existing dust suppression rules is

speculative at best. The Town assumes that "the Project would implement PDF-AQ-1, which includes dust control measures in accordance with the MDAQMD Rules 401 and 403.2, which that would limit the amount of fugitive dust generated during construction." Mojave Desert Air Quality Management District (MDAQMD) Rule 403.2 was rescinded in October, 2020 (nearly three years ago).



RULE #	RULE TITLE	DATE
Rule 401	Visible Emissions	08/26/19
Rule 402	Nuisance	07/25/77
Rule 403	Fugitive Dust Control	10/26/20
Rule 403.1	Fugitive Dust Control for the Searles Valley Planning Area (see Rule 403)	Rescinded 10/26/20
Rule 403.2	Fugitive Dust Control for the Mojave Desert Planning Area (see Rule 403)	Rescinded 10/26/20

Figure 3: MDAQMD List Of Rules

The Town is citing a rule that has been replaced by Rule 403. The Town must correct this error in its responses. In addition, Rule 403 only deals with emissions of particulate matter ten microns in diameter (PM_{10}).

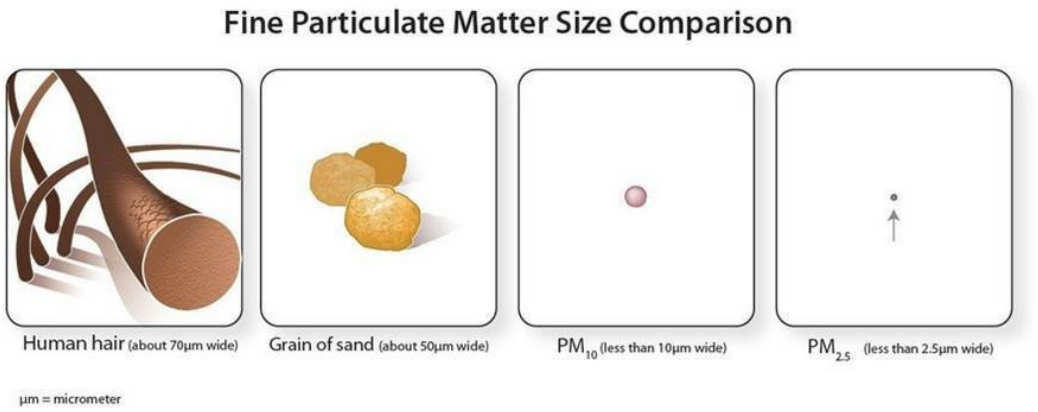


Figure 4: Fine Particle Matter Size Comparison

Very small particles require different mitigation measures than the much larger PM_{10}. The settling velocity of a particle (the amount of time a particle takes to fall to the ground) is proportional to the diameter of the spherical particle squared. The larger the particle diameter, the faster the particle

I-25 Cont.

will settle. The smaller the particle diameter, the longer it will stay suspended in air. As was noted in my initial comments *Coccidiodes Immitis* spores are very small. The spores are typically 0.002–0.005 millimeters ("mm") or 2 microns to 5 microns in diameter.

In a 2004 paper regarding the fate of viruses and bacteria, including spores, in the air, Utrup and Frey[3] noted that smaller particles like spores require significantly longer to settle out of air. For particles 10 um in diameter the settling time is measured in minutes. For particles less than 10 um in diameter, the settling time is measured in hours. This would allow the spores to travel significantly longer distances impacting receptors at greater distances.

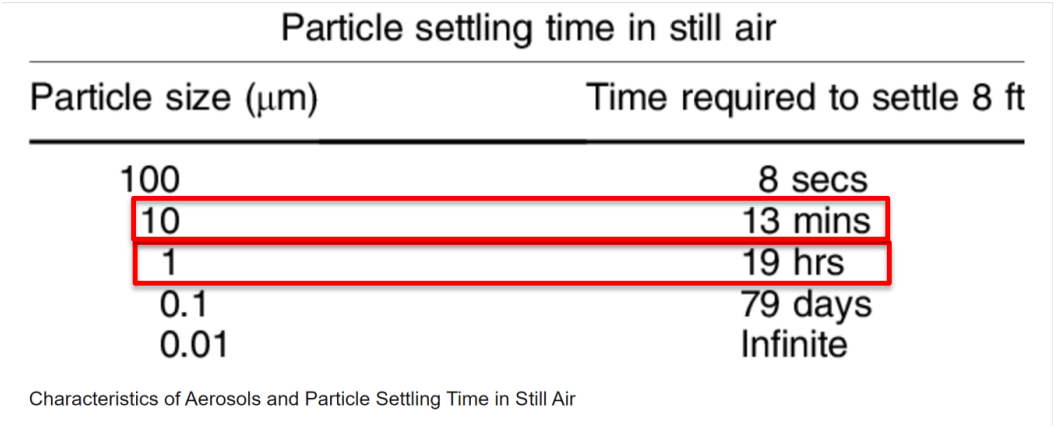


Figure 5: Particle Settling Times

Clearly, based on the particle size and setting rate, Valley Fever spores present in soils are capable of travel many miles following the disturbance of impacted soils. The City must correct their speculative answer with an accurate assessment of the threat posed to residents and other sensitive receptors in the area.

The Town's response that dust from the construction of the project is not anticipated to exacerbate or significantly add to the existing exposure of people to Valley Fever is misplaced at best. Further claiming that because the rate in the County is lower than other counties and should not be evaluated in a CEQA analysis not only fails to assess the threat to the community from a known hazard, it ignores the larger public health concern about rising Valley Fever rates in the County of San Bernardino. As noted in my initial comments since 2015, the number of cases of Valley Fever in

I-25 Cont.

[3] Utrup, L. and A. Frey. 2004. Fate of Bioterrorism-Relevant Viruses and Bacteria, Including Spores, Aerosolized into an Indoor Air Environment. *Experimental Biology and Medicine* 229(4):345-50

San Bernardino County has increased from 29 in 2015 to 229 in 2019 (an increase of 789 percent), as reported by the California Department of Public Health (CDPH).[4] In 2021, 66 cases were recorded in San Bernardino County,[5] twice as many as the amounts reported in 2015. In the first quarter of 2023, San Bernardino County reported 45 cases, representing a nearly 55% increase over the baseline year of 2015 in only one quarter of the year. Since Valley Fever cases are directly related to the disturbance of soils in the area, the City must directly address the impacts that the project's construction phase will have on the community.

Valley fever is the initial form of coccidioidomycosis infection. The acute form of Valley Fever can develop into a more serious disease, including chronic and disseminated coccidioidomycosis. The initial, or acute, form of coccidioidomycosis is often mild, with few or no symptoms. Signs and symptoms occur one to three weeks after exposure. They tend to be similar to flu symptoms. Symptoms can range from minor to severe, including:

I-25 Cont.

- Fever
- Cough
- Tiredness
- Shortness of breath
- Headache
- Chills
- Night sweats
- Joint aches and muscle soreness
- Red, spotty rash, mainly on lower legs but sometimes on the chest, arms and back

If the initial coccidioidomycosis infection doesn't completely resolve, it may progress to a chronic form of pneumonia. This complication is most common in people with weakened immune systems. Signs and symptoms of chronic coccidioidomycosis include:

[4] CDPH. 2019. Epidemiologic Summary of Valley Fever (Coccidiodomycosis) In California, 2019. Surveillance and Statistics Section, Infection Diseases Branch, Division of Communicable Disease Control, Center For Infectious Diseases, California Department of Public Health. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2019.pdf

[5] CDPH. 2023. Coccidiodomycosis In California, Provisional Monthly Report, January – March 2023 (as of March 31, 2023). Surveillance and Statistics Section, Infection Diseases Branch, Division of Communicable Disease Control, Center For Infectious Diseases, California Department of Public Health. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciinCAProvisionalMonthlyReport.pdf

- Low-grade fever
- Weight loss
- Cough
- Chest pain
- Blood-tinged sputum (matter discharged during coughing)
- Nodules in the lungs

The most serious form of the disease, disseminated coccidioidomycosis, is uncommon. It occurs when the infection spreads (disseminates) beyond the lungs to other parts of the body. Most often these parts include the skin, bones, liver, brain, heart, and the membranes that protect the brain and spinal cord (meninges). Signs and symptoms of disseminated disease depend on the body parts affected and may include:

- Nodules, ulcers and skin lesions that are more serious than the rash that sometimes occurs with initial infection
- Painful lesions in the skull, spine or other bones
- Painful, swollen joints, especially in the knees or ankles
- Meningitis — an infection of the membranes and fluid surrounding the brain and spinal cord

Given the wide range of public health impacts from coccidioidomycosis infection/exposure it is clear that

I-25 Cont.

The Town's responses are not protective of the community and they should require specific mitigation measures to prevent the spread of Valley Fever in the community. The Town should require the following measures to ensure the safety of the community (listed below).

1. Include specific requirements in the Project's Injury and Illness Prevention Program (as required by Title 8, Section 3203) regarding safeguards to prevent Valley Fever.
2. Control dust exposure:
   - Apply chemical stabilizers at least 24-hours prior to high wind event;
   - Apply water to all disturbed areas a minimum of three times per day. Watering frequency should be increased to a minimum of four times per day if there is any evidence of visible wind-driven fugitive dust;
   - Provide National Institute for Occupational Safety and Health (NIOSH)-approved respirators for workers with a prior history of Valley Fever.

- Half-face respirators equipped with a minimum N-95 protection factor for use during worker collocation with surface disturbance activities. Half-face respirators equipped with N-100 or P-100 filters should be used during digging activities. Employees should wear respirators when working near earth-moving machinery.
- Prohibit eating and smoking at the worksite, and provide separate, clean eating areas with hand-washing facilities.
- Avoid outdoor construction operations during unusually windy conditions or in dust storms.
- Consider limiting outdoor construction during the fall to essential jobs only, as the risk of cocci infection is higher during this season.

3. Prevent transport of cocci outside endemic areas:
    - Thoroughly clean equipment, vehicles, and other items before they are moved off-site to other work locations.
    - Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate;
    - Load all haul trucks such that the freeboard is not less than six inches when material is transported on any paved public access road and apply water to the top of the load sufficient to limit VDE to 20 percent opacity; or cover haul trucks with a tarp or other suitable cover.
    - Provide workers with coveralls daily, lockers (or other systems for keeping work and street clothing and shoes separate), daily changing and showering facilities.
    - Clothing should be changed after work every day, preferably at the work site.
    - Train workers to recognize that cocci may be transported offsite on contaminated equipment, clothing, and shoes; alternatively, consider installing boot-washing.
    - Post warnings onsite and consider limiting access to visitors, especially those without adequate training and respiratory protection.
4. Improve medical surveillance for employees:
    - Employees should have prompt access to medical care, including suspected work-related illnesses and injuries.
    - Work with a medical professional to develop a protocol to medically evaluate

I-25 Cont.

employees who have symptoms of Valley Fever.

- Consider preferentially contracting with 1-2 clinics in the area and communicate with the health care providers in those clinics to ensure that providers are aware that Valley Fever has been reported in the area. This will increase the likelihood that ill workers will receive prompt, proper and consistent medical care.
- Respirator clearance should include medical evaluation for all new employees, annual re-evaluation for changes in medical status, and annual training, and fit-testing.
- Skin testing is not recommended for evaluation of Valley Fever.[6]
- If an employee is diagnosed with Valley Fever, a physician must determine if the employee should be taken off work, when they may return to work, and what type of work activities they may perform.

I-25 Cont.

The mitigation measures identified in this comment, based on actual experience during construction of solar and wind projects in endemic areas, should be required for the Project. The Town must include concrete measures like the ones listed above in a revised DEIR of the Project.

2. Air Quality Analysis Fails To Require The Use Of Tier 4 Final Technology For Off-Road Sources Of Diesel Exhaust On-Site.

The Project Air Quality Analysis fails to list mitigation measures to reduce construction related air quality emissions (particulate matter (PM_{10} and $PM_{2.5}$)) and fails to require the best emission technology level, Tier 4 Final, on construction equipment with a horsepower (hp) rating greater than 25 hp. The Air Quality Analysis assumes that Tier 4 interim technology will be utilized in a subset of equipment utilized during the construction phase of the Project (rubber tired dozers, scrapers, and cranes). The remaining equipment is assumed to be the averaged tier for available equipment.

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Based upon a review of public records of the California Air Resources Board's (CARB) Diesel Off-Road Online Reporting System (DOORS), it is evident that the availability of Tiered construction

[6] Short-term skin tests that produce results within 48 hours are now available. See Kerry Klein, NPR for Central California, New Valley Fever Skin Test Shows Promise, But Obstacles Remain, November 21, 2016; available at http://kvpr.org/post/new-valley-fever-skin-test-shows-promise-obstacles-remain.

equipment is highly dependent on the type of equipment.

Table 1: Percent of Equipment in California DOORS Database by Emission Tier Level

Equipment Type (> 50 hp)	U.S. EPA Emission Tier Level					
	T0	T1	T2	T3	T4F	T4I
Aerial Lifts	1.63%	4.67%	14.86%	4.08%	**48.64%**	**26.12%**
Boom	0.15%	0.77%	5.22%	1.59%	**76.20%**	**16.06%**
Bore/Drill Rigs	11.53%	15.42%	16.86%	21.76%	**17.72%**	**14.34%**
Bucket	8.33%	18.33%	10.00%	6.67%	**33.33%**	**23.33%**
Concrete Mixer	0.00%	0.00%	0.00%	14.29%	**85.71%**	**0.00%**
Concrete Pump	1.30%	7.79%	40.26%	1.30%	**32.47%**	**16.88%**
Crane 35ton or more	5.57%	4.41%	5.37%	18.81%	**37.62%**	**27.45%**
Crane less than 35ton	20.37%	2.47%	6.79%	12.35%	**38.27%**	**19.75%**
Cranes	27.84%	11.49%	9.13%	26.60%	**10.82%**	**11.80%**
Crawler Tractors	26.56%	13.31%	13.11%	13.70%	**22.39%**	**10.93%**
Crushing/Processing Equipment	0.00%	0.78%	2.34%	14.06%	**74.22%**	**8.59%**
Drill Rig	7.09%	4.14%	8.86%	12.56%	**45.79%**	**17.87%**
Drill Rig (Mobile)	11.51%	8.71%	11.51%	17.26%	**30.95%**	**14.77%**
Excavators	5.24%	8.34%	13.95%	7.29%	**48.67%**	**16.50%**
Forklifts	9.57%	10.57%	13.82%	7.99%	**40.45%**	**17.46%**
Garbage Refuse	0.00%	0.00%	8.70%	8.70%	**43.48%**	**39.13%**
Garbage Transfer	0.00%	0.00%	0.00%	33.33%	**66.67%**	**0.00%**
Graders	29.78%	14.12%	12.89%	15.27%	**17.40%**	**10.52%**
Hopper Tractor Trailer	0.00%	0.00%	0.00%	0.00%	**50.00%**	**50.00%**
Mower	2.44%	7.27%	13.58%	1.10%	**54.40%**	**21.22%**
Nurse Rig Aircraft Supply	0.00%	0.00%	0.00%	0.00%	**100.00%**	**0.00%**
Nurse Rig Other	0.00%	0.00%	0.00%	100.00%	**0.00%**	**0.00%**
Off Highway Tractors	3.55%	6.28%	6.01%	8.74%	**65.30%**	**10.11%**
Off Highway Trucks	1.69%	3.87%	11.14%	5.81%	**62.23%**	**15.25%**
Off-Highway Tractors	18.25%	17.06%	20.98%	10.02%	**17.18%**	**16.31%**
Off-Highway Trucks	16.96%	12.96%	17.54%	20.81%	**16.13%**	**13.99%**
Other Construction Equipment	16.35%	14.20%	17.11%	10.53%	**24.03%**	**17.19%**
Other General Industrial Equipment	13.18%	16.56%	27.57%	8.61%	**13.80%**	**19.84%**
Other Material Handling Equipment	10.84%	11.39%	19.25%	15.55%	**26.63%**	**16.26%**
Other Truck	15.64%	10.34%	5.31%	13.41%	**36.87%**	**11.45%**
Pavers	12.11%	21.18%	16.99%	14.97%	**23.34%**	**11.41%**
Paving Equipment	6.49%	12.80%	12.74%	12.44%	**38.17%**	**17.05%**
Railcars or Track Cars	16.33%	8.16%	0.00%	14.29%	**51.02%**	**10.20%**
Rollers	14.09%	15.93%	18.30%	6.46%	**30.61%**	**14.59%**

I-26 Cont.

Equipment Type (> 50 hp)	U.S. EPA Emission Tier Level					
	T0	T1	T2	T3	T4F	T4I
Rough Terrain Forklifts	3.95%	9.32%	15.89%	8.11%	**41.94%**	**20.80%**
Rubber Tired Dozers	41.04%	10.02%	9.44%	19.65%	**15.22%**	**4.62%**
Rubber Tired Loaders	16.74%	12.71%	13.56%	14.94%	**29.29%**	**12.76%**
Scrapers	28.91%	10.98%	15.47%	30.41%	**10.15%**	**4.04%**
Skid Steer Loaders	3.70%	10.02%	15.81%	3.20%	**54.69%**	**12.58%**
Spray Truck	5.56%	4.17%	19.44%	2.78%	**34.72%**	**26.39%**
Spreader Tractor Trailer	0.00%	14.29%	28.57%	0.00%	**42.86%**	**14.29%**
Spreader Truck	4.17%	0.00%	4.17%	37.50%	**16.67%**	**25.00%**
Surfacing Equipment	15.38%	14.25%	10.18%	23.08%	**19.23%**	**17.65%**
Sweepers/Scrubbers	11.02%	20.84%	16.57%	6.61%	**25.75%**	**19.06%**
Tank Truck	4.05%	6.76%	8.11%	27.03%	**37.84%**	**16.22%**
Tanker Truck Trailer	0.00%	18.18%	0.00%	0.00%	**63.64%**	**18.18%**
Telescopic Handler	1.33%	0.00%	2.67%	0.00%	**80.00%**	**16.00%**
Tow Tractor	0.00%	100.00%	0.00%	0.00%	**0.00%**	**0.00%**
Tractors/Loaders/Backhoes	13.53%	16.50%	18.73%	8.96%	**29.23%**	**13.05%**
Trenchers	21.86%	19.57%	20.87%	3.28%	**21.86%**	**12.57%**
Vacuum Truck	2.21%	18.38%	15.44%	25.00%	**13.24%**	**14.71%**
Water Truck	21.79%	8.21%	16.43%	16.07%	**23.57%**	**13.57%**
Workover Rig (Mobile)	5.99%	15.14%	9.78%	17.35%	**7.10%**	**13.56%**
Yard Goat	4.40%	4.58%	9.41%	18.31%	**41.71%**	**21.33%**

I-26 Cont.

It is clear from the CARB data that access to Tier 4 interim certified equipment necessary for the construction phase are in short supply in the State. In particular, Tier 4 interim rubber dozers, scrapers, and cranes make up a small portion of the registered fleet in California. If the Proponent cannot acquire the necessary equipment during construction or delay the construction until the equipment is available, project construction could be substantially delayed while the Proponent searches for Tier equipment to comply with mitigation requirement. The Town must address the availability concerns for certified equipment and the impacts that will have on the surrounding environment in a revised EIR for the Project.

3. The DEIR Fails To Assess All Of The Projects Within The Immediate Vicinity Of The Project Site.

The DEIR indicates that there are 7 proposed projects within the vicinity of the proposed project (accounting for approximately 11.12 million square feet of development). The projects include the Apple Valley 143 Covington Development (2.6 million square feet of industrial warehousing), the Redwood Industrial – The Development (1.2 million square foot warehouse distribution center), the Loves Travel Center (travel center and RV park), the Inland Empire Logistics Center (3.9 million square foot logistics center), the Quary Pawnee Complex (1.46 million square foot industrial development), the Cordova Complex (1.56 million square foot industrial development), and the Green Trucking Solutions Cold Storage project (400,000 square foot cold-storage facility). Figure 3-9 of the DEIR (below) shows the location of the Loves Travel Center and the Apple Valley 143 Industrial Warehouse Project.

Figure 6: Cumulative Projects Listed In DEIR

The figure below indicates the location of all the existing and proposed projects that should have been included in Figure 3-9.

I-27

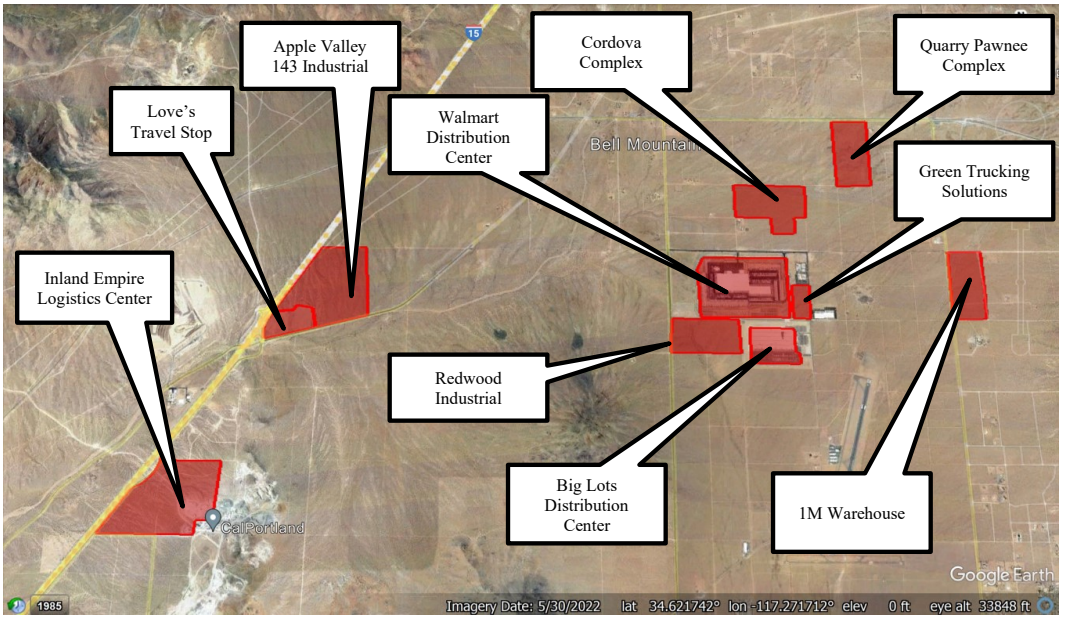


Figure 7: Cumulative Projects Planned Or Existing Near Project Site

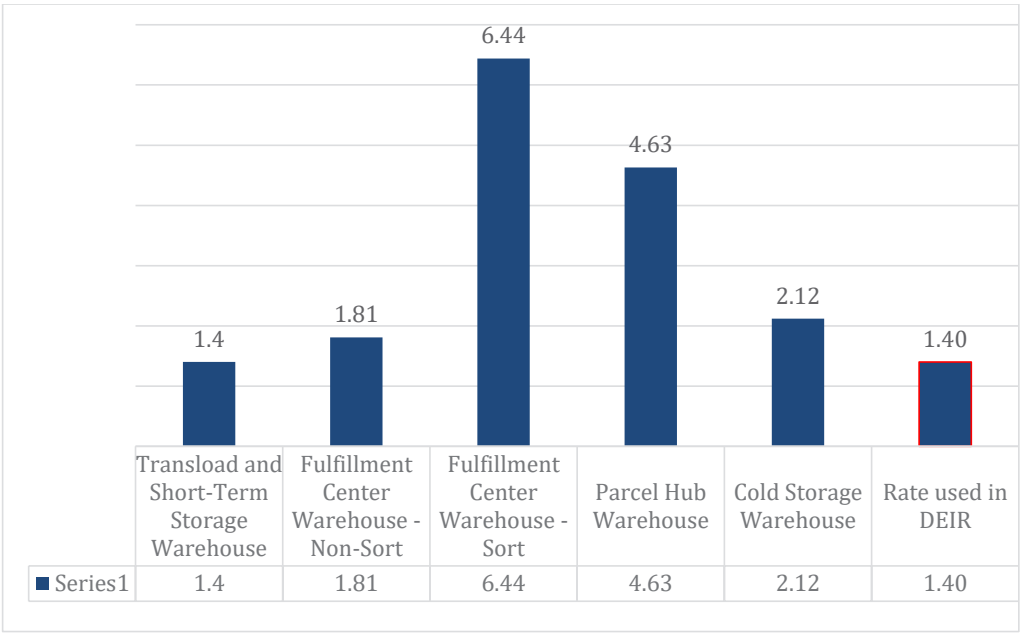
Unaccounted for in the DEIR are the existing impacts from the Walmart Distribution Center and the Big Lots Distribution Center. According to the DEIR,[7] the Big Lots Warehouse encompasses approximately 1,360,875 square feet and the Walmart Distribution Center encompasses approximately 1,080,000 square feet.

The ITE manual includes a variety of average daily vehicle trips for high cube warehouses (HCWs) which range from a low of 1.4 per 1,000 square feet for transload and short-term storage warehouses to a high of 6.44 trips per square feet for fulfillment center warehouses.[8] An averaged value of all the warehouse HCW types reported in the ITE manual would be 3.28 trips per 1,000 square feet.

I-27
Cont.

[7] Dudek. 2023. Environmental Impact Report 1M Warehouse Project, State Clearinghouse 2023020285. Prepared for Town of Apple Valley. Prepared by Dudek. Pg 4.13-14.

[8] Institute of Transportation Engineers (2020).



I-27 Cont.

Figure 8: Trip rates per 1,000 square feet as reported in ITE manual

Using the ITE manual rates above, the Walmart DC and Big Lots Warehouses (totaling 2,440,714 square feet of buildings) have between 3,417 to 15,718 trips daily. The traffic estimates and resulting air quality impacts (DPM emissions, ROG emissions, etc..) are unaccounted for in the DEIR. In addition, the level of service for all of the feeder routes to the project site will need to be upgraded to support the additional traffic burden. The DEIR is clearly failing to provide a clear representation of the projects in the area and should be revised in a new DEIR.

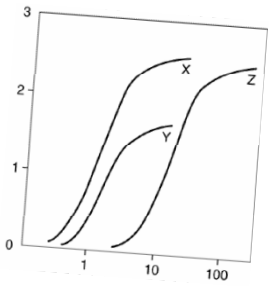
Conclusion

The facts identified and referenced in this comment letter lead me to reasonably conclude that the Project could result in significant impacts if allowed to proceed. A revised environmental impact report should be prepared to address these substantial concerns. I-28

Sincerely,

Exhibit A:

Curriculum Vitae



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James J. J. Clark, Ph.D.

Principal Toxicologist

Toxicology/Exposure Assessment Modeling

Risk Assessment/Analysis/Dispersion Modeling

Education:

Ph.D., Environmental Health Science, University of California, 1995

M.S., Environmental Health Science, University of California, 1993

B.S., Biophysical and Biochemical Sciences, University of Houston, 1987

Professional Experience:

Dr. Clark is a well recognized toxicologist, air modeler, and health scientist. He has 20 years of experience in researching the effects of environmental contaminants on human health including environmental fate and transport modeling (SCREEN3, AEROMOD, ISCST3, Johnson-Ettinger Vapor Intrusion Modeling); exposure assessment modeling (partitioning of contaminants in the environment as well as PBPK modeling); conducting and managing human health risk assessments for regulatory compliance and risk-based clean-up levels; and toxicological and medical literature research.

Significant projects performed by Dr. Clark include the following:

LITIGATION SUPPORT

Case: James Harold Caygle, et al, v. Drummond Company, Inc. Circuit Court for the Tenth Judicial Circuit, Jefferson County, Alabama. Civil Action. CV-2009

Client: Environmental Litgation Group, Birmingham, Alabama

Dr. Clark performed an air quality assessment of emissions from a coke factory located in Tarrant, Alabama. The assessment reviewed include a comprehensive review of air quality standards, measured concentrations of pollutants from factory, an inspection of the facility and detailed assessment of the impacts on the community. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Rose Roper V. Nissan North America, et al. Superior Court of the State Of California for the County Of Los Angeles – Central Civil West. Civil Action. NC041739

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to multiple chemicals, including benzene, who later developed a respiratory distress. A review of the individual's medical and occupational history was performed to prepare an exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to respiratory irritants. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: O'Neil V. Sherwin Williams, et al. United States District Court Central District of California

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to petroleum distillates who later developed a bladder cancer. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Summary judgment for defendants.

Case: Moore V., Shell Oil Company, et al. Superior Court of the State Of California for the County Of Los Angeles

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to chemicals while benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Raymond Saltonstall V. Fuller O'Brien, KILZ, and Zinsser, et al. United States District Court Central District of California

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Richard Boyer and Elizabeth Boyer, husband and wife, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-7G.

Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: JoAnne R. Cook, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-9R

Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.

Dr. Clark performed a toxicological assessment of an individual exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Patrick Allen And Susan Allen, husband and wife, and Andrew Allen, a minor, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-W

Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Michael Fahey, Susan Fahey V. Atlantic Richfield Company, et al. United States District Court Central District of California Civil Action Number CV-06 7109 JCL.

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Constance Acevedo, et al., V. California Spray-Chemical Company, et al., Superior Court of the State Of California, County Of Santa Cruz. Case No. CV 146344

Dr. Clark performed a comprehensive exposure assessment of community members exposed to toxic metals from a former lead arsenate manufacturing facility. The former manufacturing site had undergone a DTSC mandated removal action/remediation for the presence of the toxic metals at the site. Opinions were presented regarding the elevated levels of arsenic and lead (in attic dust and soils) found throughout the community and the potential for harm to the plaintiffs in question.

Case Result: Settlement in favor of defendant.

Case: Michael Nawrocki V. The Coastal Corporation, Kurk Fuel Company, Pautler Oil Service, State of New York Supreme Court, County of Erie, Index Number I2001-11247

Client: Richard G. Berger Attorney At Law, Buffalo, New York

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the

known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Judgement in favor of defendant.

SELECTED AIR MODELING RESEARCH/PROJECTS

Client – Confidential

Dr. Clark performed a comprehensive evaluation of criteria pollutants, air toxins, and particulate matter emissions from a carbon black production facility to determine the impacts on the surrounding communities. The results of the dispersion model will be used to estimate acute and chronic exposure concentrations to multiple contaminants and will be incorporated into a comprehensive risk evaluation.

Client – Confidential

Dr. Clark performed a comprehensive evaluation of air toxins and particulate matter emissions from a railroad tie manufacturing facility to determine the impacts on the surrounding communities. The results of the dispersion model have been used to estimate acute and chronic exposure concentrations to multiple contaminants and have been incorporated into a comprehensive risk evaluation.

Client – Los Angeles Alliance for a New Economy (LAANE), Los Angeles, California

Dr. Clark is advising the LAANE on air quality issues related to current flight operations at the Los Angeles International Airport (LAX) operated by the Los Angeles World Airport (LAWA) Authority. He is working with the LAANE and LAX staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

Client – City of Santa Monica, Santa Monica, California

Dr. Clark is advising the City of Santa Monica on air quality issues related to current flight operations at the facility. He is working with the City staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

Client: Omnitrans, San Bernardino, California

Dr. Clark managed a public health survey of three communities near transit fueling facilities in San Bernardino and Montclair California in compliance with California Senate Bill 1927. The survey included an epidemiological survey of the effected communities, emission surveys of local businesses, dispersion modeling to determine potential emission concentrations within the communities, and a comprehensive risk assessment of each community. The results of the study were presented to the Governor as mandated by Senate Bill 1927.

Client: Confidential, San Francisco, California

Summarized cancer types associated with exposure to metals and smoking. Researched the specific types of cancers associated with exposure to metals and smoking. Provided causation analysis of the association between cancer types and exposure for use by non-public health professionals.

Client: Confidential, Minneapolis, Minnesota

Prepared human health risk assessment of workers exposed to VOCs from neighboring petroleum storage/transport facility. Reviewed the systems in place for distribution of petroleum hydrocarbons to identify chemicals of concern (COCs), prepared comprehensive toxicological summaries of COCs, and quantified potential risks from carcinogens and non-carcinogens to receptors at or adjacent to site. This evaluation was used in the support of litigation.

Client – United Kingdom Environmental Agency

Dr. Clark is part of team that performed comprehensive evaluation of soil vapor intrusion of VOCs from former landfill adjacent residences for the United Kingdom's Environment

Agency. The evaluation included collection of liquid and soil vapor samples at site, modeling of vapor migration using the Johnson Ettinger Vapor Intrusion model, and calculation of site-specific health based vapor thresholds for chlorinated solvents, aromatic hydrocarbons, and semi-volatile organic compounds. The evaluation also included a detailed evaluation of the use, chemical characteristics, fate and transport, and toxicology of chemicals of concern (COC). The results of the evaluation have been used as a briefing tool for public health professionals.

EMERGING/PERSISTENT CONTAMINANT RESEARCH/PROJECTS

Client: Ameren Services, St. Louis, Missouri

Managed the preparation of a comprehensive human health risk assessment of workers and residents at or near an NPL site in Missouri. The former operations at the Property included the servicing and repair of electrical transformers, which resulted in soils and groundwater beneath the Property and adjacent land becoming impacted with PCB and chlorinated solvent compounds. The results were submitted to U.S. EPA for evaluation and will be used in the final ROD.

Client: City of Santa Clarita, Santa Clarita, California

Dr. Clark is managing the oversight of the characterization, remediation and development activities of a former 1,000 acre munitions manufacturing facility for the City of Santa Clarita. The site is impacted with a number of contaminants including perchlorate, unexploded ordinance, and volatile organic compounds (VOCs). The site is currently under a number of regulatory consent orders, including an Immanent and Substantial Endangerment Order. Dr. Clark is assisting the impacted municipality with the development of remediation strategies, interaction with the responsible parties and stakeholders, as well as interfacing with the regulatory agency responsible for oversight of the site cleanup.

Client: Confidential, Los Angeles, California

Prepared comprehensive evaluation of perchlorate in environment. Dr. Clark evaluated the production, use, chemical characteristics, fate and transport, toxicology, and remediation of perchlorate. Perchlorates form the basis of solid rocket fuels and have recently been detected in water supplies in the United States. The results of this research

were presented to the USEPA, National GroundWater, and ultimately published in a recent book entitled *Perchlorate in the Environment*.

Client – Confidential, Los Angeles, California

Dr. Clark is performing a comprehensive review of the potential for pharmaceuticals and their by-products to impact groundwater and surface water supplies. This evaluation will include a review if available data on the history of pharmaceutical production in the United States; the chemical characteristics of various pharmaceuticals; environmental fate and transport; uptake by xenobiotics; the potential effects of pharmaceuticals on water treatment systems; and the potential threat to public health. The results of the evaluation may be used as a briefing tool for non-public health professionals.

PUBLIC HEALTH/TOXICOLOGY

Client: Brayton Purcell, Novato, California

Dr. Clark performed a toxicological assessment of residents exposed to methyl-tertiary butyl ether (MTBE) from leaking underground storage tanks (LUSTs) adjacent to the subject property. The symptomology of residents and guests of the subject property were evaluated against the known outcomes in published literature to exposure to MTBE. The study found that residents had been exposed to MTBE in their drinking water; that concentrations of MTBE detected at the site were above regulatory guidelines; and, that the symptoms and outcomes expressed by residents and guests were consistent with symptoms and outcomes documented in published literature.

Client: Confidential, San Francisco, California

Identified and analyzed fifty years of epidemiological literature on workplace exposures to heavy metals. This research resulted in a summary of the types of cancer and non-cancer diseases associated with occupational exposure to chromium as well as the mortality and morbidity rates.

Client: Confidential, San Francisco, California

Summarized major public health research in United States. Identified major public health research efforts within United States over last twenty years. Results were used as a briefing tool for non-public health professionals.

Client: Confidential, San Francisco, California

Quantified the potential multi-pathway dose received by humans from a pesticide applied indoors. Part of team that developed exposure model and evaluated exposure concentrations in a comprehensive report on the plausible range of doses received by a specific person. This evaluation was used in the support of litigation.

Client: Covanta Energy, Westwood, California

Evaluated health risk from metals in biosolids applied as soil amendment on agricultural lands. The biosolids were created at a forest waste cogeneration facility using 96% whole tree wood chips and 4 percent green waste. Mass loading calculations were used to estimate Cr(VI) concentrations in agricultural soils based on a maximum loading rate of 40 tons of biomass per acre of agricultural soil. The results of the study were used by the Regulatory agency to determine that the application of biosolids did not constitute a health risk to workers applying the biosolids or to residences near the agricultural lands.

Client – United Kingdom Environmental Agency

Oversaw a comprehensive toxicological evaluation of methyl-*tertiary* butyl ether (M*t*BE) for the United Kingdom's Environment Agency. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of M*t*BE. The results of the evaluation have been used as a briefing tool for public health professionals.

Client – Confidential, Los Angeles, California

Prepared comprehensive evaluation of *tertiary* butyl alcohol (TBA) in municipal drinking water system. TBA is the primary breakdown product of M*t*BE, and is suspected to be the primary cause of M*t*BE toxicity. This evaluation will include available information on the production, use, chemical characteristics, fate and transport in the environment, absorption, distribution, routes of detoxification, metabolites, carcinogenic potential, and remediation of TBA. The results of the evaluation were used as a briefing tool for non-public health professionals.

Client – Confidential, Los Angeles, California

Prepared comprehensive evaluation of methyl *tertiary* butyl ether (MTBE) in municipal drinking water system. MTBE is a chemical added to gasoline to increase the octane

rating and to meet Federally mandated emission criteria. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MTBE. The results of the evaluation have been were used as a briefing tool for non-public health professionals.

Client – Ministry of Environment, Lands & Parks, British Columbia

Dr. Clark assisted in the development of water quality guidelines for methyl tertiary-butyl ether (MTBE) to protect water uses in British Columbia (BC). The water uses to be considered includes freshwater and marine life, wildlife, industrial, and agricultural (e.g., irrigation and livestock watering) water uses. Guidelines from other jurisdictions for the protection of drinking water, recreation and aesthetics were to be identified.

Client: Confidential, Los Angeles, California

Prepared physiologically based pharmacokinetic (PBPK) assessment of lead risk of receptors at middle school built over former industrial facility. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

Client: Kaiser Venture Incorporated, Fontana, California

Prepared PBPK assessment of lead risk of receptors at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

RISK ASSESSMENTS/REMEDIAL INVESTIGATIONS

Client: Confidential, Atlanta, Georgia

Researched potential exposure and health risks to community members potentially exposed to creosote, polycyclic aromatic hydrocarbons, pentachlorophenol, and dioxin compounds used at a former wood treatment facility. Prepared a comprehensive toxicological summary of the chemicals of concern, including the chemical characteristics, absorption, distribution, and carcinogenic potential. Prepared risk characterization of the carcinogenic and non-carcinogenic chemicals based on the exposure assessment to quantify the potential risk to members of the surrounding community. This evaluation was used to help settle class-action tort.

Client: Confidential, Escondido, California

Prepared comprehensive Preliminary Endangerment Assessment (PEA) of dense non-aqueous liquid phase hydrocarbon (chlorinated solvents) contamination at a former printed circuit board manufacturing facility. This evaluation was used for litigation support and may be used as the basis for reaching closure of the site with the lead regulatory agency.

Client: Confidential, San Francisco, California

Summarized epidemiological evidence for connective tissue and autoimmune diseases for product liability litigation. Identified epidemiological research efforts on the health effects of medical prostheses. This research was used in a meta-analysis of the health effects and as a briefing tool for non-public health professionals.

Client: Confidential, Bogotá, Columbia

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of a 13.7 hectares plastic manufacturing facility in Bogotá, Colombia The risk assessment was used as the basis for the remedial goals and closure of the site.

Client: Confidential, Los Angeles, California

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally cadmium) and VOCs from soil and soil vapor at 12-acre former crude oilfield and municipal landfill. The site is currently used as a middle school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and was used as the basis for regulatory closure of site.

Client: Confidential, Los Angeles, California

Managed remedial investigation (RI) of heavy metals and volatile organic chemicals (VOCs) for a 15-acre former manufacturing facility. The RI investigation of the site included over 800 different sampling locations and the collection of soil, soil gas, and groundwater samples. The site is currently used as a year round school housing approximately 3,000 children. The Remedial Investigation was performed in a manner

that did not interrupt school activities and met the time restrictions placed on the project by the overseeing regulatory agency. The RI Report identified the off-site source of metals that impacted groundwater beneath the site and the sources of VOCs in soil gas and groundwater. The RI included a numerical model of vapor intrusion into the buildings at the site from the vadose zone to determine exposure concentrations and an air dispersion model of VOCs from the proposed soil vapor treatment system. The Feasibility Study for the Site is currently being drafted and may be used as the basis for granting closure of the site by DTSC.

Client: Confidential, Los Angeles, California

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally lead), VOCs, SVOCs, and PCBs from soil, soil vapor, and groundwater at 15-acre former manufacturing facility. The site is currently used as a year round school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and will be basis for regulatory closure of site.

Client: Confidential, Los Angeles, California

Prepared comprehensive evaluation of VOC vapor intrusion into classrooms of middle school that was former 15-acre industrial facility. Using the Johnson-Ettinger Vapor Intrusion model, the evaluation determined acceptable soil gas concentrations at the site that did not pose health threat to students, staff, and residents. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

Client –Dominguez Energy, Carson, California

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of 6-acre portion of a 500-acre oil and natural gas production facility in Carson, California. The risk assessment was used as the basis for closure of the site.

Kaiser Ventures Incorporated, Fontana, California

Prepared health risk assessment of semi-volatile organic chemicals and metals for a fifty-year old wastewater treatment facility used at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

Prepared a comprehensive Preliminary Endangerment Assessment (PEA) of petroleum hydrocarbon and metal contamination of a former freight depot. This evaluation was as the basis for reaching closure of the site with lead regulatory agency.

Kaiser Ventures Incorporated, Fontana, California

Prepared comprehensive health risk assessment of semi-volatile organic chemicals and metals for 23-acre parcel of a 1,100-acre former steel mill. The health risk assessment was used to determine clean up goals and as the basis for granting closure of the site by lead regulatory agency. Air dispersion modeling using ISCST3 was performed to determine downwind exposure point concentrations at sensitive receptors within a 1 kilometer radius of the site. The results of the health risk assessment were presented at a public meeting sponsored by the Department of Toxic Substances Control (DTSC) in the community potentially affected by the site.

Unocal Corporation - Los Angeles, California

Prepared comprehensive assessment of petroleum hydrocarbons and metals for a former petroleum service station located next to sensitive population center (elementary school). The assessment used a probabilistic approach to estimate risks to the community and was used as the basis for granting closure of the site by lead regulatory agency.

Client: Confidential, Los Angeles, California

Managed oversight of remedial investigation most contaminated heavy metal site in California. Lead concentrations in soil excess of 68,000,000 parts per billion (ppb) have been measured at the site. This State Superfund Site was a former hard chrome plating operation that operated for approximately 40-years.

Client: Confidential, San Francisco, California

Coordinator of regional monitoring program to determine background concentrations of metals in air. Acted as liaison with SCAQMD and CARB to perform co-location sampling and comparison of accepted regulatory method with ASTM methodology.

Client: Confidential, San Francisco, California

Analyzed historical air monitoring data for South Coast Air Basin in Southern California and potential health risks related to ambient concentrations of carcinogenic metals and volatile organic compounds. Identified and reviewed the available literature and calculated risks from toxins in South Coast Air Basin.

IT Corporation, North Carolina

Prepared comprehensive evaluation of potential exposure of workers to air-borne VOCs at hazardous waste storage facility under SUPERFUND cleanup decree. Assessment used in developing health based clean-up levels.

Professional Associations

American Public Health Association (APHA)
Association for Environmental Health and Sciences (AEHS)
American Chemical Society (ACS)
California Redevelopment Association (CRA)
International Society of Environmental Forensics (ISEF)
Society of Environmental Toxicology and Chemistry (SETAC)

Publications and Presentations:

Books and Book Chapters

Sullivan, P., **J.J. J. Clark,** F.J. Agardy, and P.E. Rosenfeld. (2007). *Synthetic Toxins In The Food, Water and Air of American Cities*. Elsevier, Inc. Burlington, MA.

Sullivan, P. and **J.J. J. Clark**. 2006. *Choosing Safer Foods, A Guide To Minimizing Synthetic Chemicals In Your Diet*. Elsevier, Inc. Burlington, MA.

Sullivan, P., Agardy, F.J., and **J.J.J. Clark**. 2005. *The Environmental Science of Drinking Water*. Elsevier, Inc. Burlington, MA.

Sullivan, P.J., Agardy, F.J., **Clark, J.J.J.** 2002. *America's Threatened Drinking Water: Hazards and Solutions*. Trafford Publishing, Victoria B.C.

Clark, J.J.J. 2001. "TBA: Chemical Properties, Production & Use, Fate and Transport, Toxicology, Detection in Groundwater, and Regulatory Standards" in *Oxygenates in the Environment.* Art Diaz, Ed.. Oxford University Press: New York.

Clark, J.J.J. 2000. "Toxicology of Perchlorate" in *Perchlorate in the Environment.* Edward Urbansky, Ed. Kluwer/Plenum: New York.

Clark, J.J.J. 1995. Probabilistic Forecasting of Volatile Organic Compound Concentrations At The Soil Surface From Contaminated Groundwater. UMI.

Baker, J.; **Clark, J.J.J.**; Stanford, J.T. 1994. Ex Situ Remediation of Diesel Contaminated Railroad Sand by Soil Washing. Principles and Practices for Diesel Contaminated Soils, Volume III. P.T. Kostecki, E.J. Calabrese, and C.P.L. Barkan, eds. Amherst Scientific Publishers, Amherst, MA. pp 89-96.

Journal and Proceeding Articles

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 Equialency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. Organohalogen Compounds, Volume 70 (2008) page 002254.

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, Volume 70 (2008) page 000527

Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** (2007). "Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." *Environmental Research.* 105:194-199.

Rosenfeld, P.E., **Clark, J. J.,** Hensley, A.R., and Suffet, I.H. 2007. "The Use Of An Odor Wheel Classification For The Evaluation of Human Health Risk Criteria For Compost Facilities" Water Science & Technology. 55(5): 345-357.

Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** 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, August 21 – 25, 2006. Radisson SAS Scandinavia Hotel in Oslo Norway.

Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2005. "The Value Of An Odor Quality Classification Scheme For Compost Facility Evaluations" The U.S. Composting Council's 13th Annual Conference January 23 - 26, 2005, Crowne Plaza Riverwalk, San Antonio, TX.

Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2004. "The Value Of An Odor Quality Classification Scheme For Urban Odor" WEFTEC 2004. 77th Annual Technical Exhibition & Conference October 2 - 6, 2004, Ernest N. Morial Convention Center, New Orleans, Louisiana.

Clark, J.J.J. 2003. "Manufacturing, Use, Regulation, and Occurrence of a Known Endocrine Disrupting Chemical (EDC), 2,4-Dichlorophnoxyacetic Acid (2,4-D) in California Drinking Water Supplies." National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Minneapolis, MN. March 20, 2003.

Rosenfeld, P. and **J.J.J. Clark**. 2003. "Understanding Historical Use, Chemical Properties, Toxicity, and Regulatory Guidance" National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Phoenix, AZ. February 21, 2003.

Clark, J.J.J., Brown A. 1999. Perchlorate Contamination: Fate in the Environment and Treatment Options. In Situ and On-Site Bioremediation, Fifth International Symposium. San Diego, CA, April, 1999.

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Browne, T., **Clark, J.J.J.** 1998. Treatment Options For Perchlorate In Drinking Water. Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.

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Clark J.J.J., Brown, A., Ulrey, A. 1997. Impacts of Perchlorate On Drinking Water In The Western United States. U.S. EPA Symposium on Biological and Chemical Reduction of Chlorate and Perchlorate, Cincinnati, OH, December 5, 1997.

Clark, J.J.J.; Corbett, G.E.; Kerger, B.D.; Finley, B.L.; Paustenbach, D.J. 1996. Dermal Uptake of Hexavalent Chromium In Human Volunteers: Measures of Systemic Uptake From Immersion in Water At 22 PPM. Toxicologist. 30(1):14.

Dodge, D.G.; **Clark, J.J.J.**; Kerger, B.D.; Richter, R.O.; Finley, B.L.; Paustenbach, D.J. 1996. Assessment of Airborne Hexavalent Chromium In The Home Following Use of Contaminated Tapwater. Toxicologist. 30(1):117-118.

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Ozone Exposures in Residents of Los Angeles County. American Review of Respiratory Disease. 141(4):A70.

Tierney, D.F. and **J.J.J. Clark.** (1990). Lung Polyamine Content Can Be Increased By Spermidine Infusions Into Hyperoxic Rats. American Review of Respiratory Disease. 139(4):A41.

EXHIBIT B

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Norman Marshall, President
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October 27, 2023

Kevin T. Carmichael
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814

Subject: 1M Warehouse Project

Dear Mr. Carmichael,

I have reviewed vehicle miles traveled (VMT), trip generation, and greenhouse gas (GHG) impacts of the proposed 1M Warehouse Project in Apple Valley Draft Environmental Impact Report ("DEIR"). I make the following findings:

1) The DEIR demonstrates that the project will not generate excessive VMT. The County's VMT Screening Tool calculates VMT that is about two times the Town's threshold, and that modeling shows the threshold exceeded by 80%.

2) It is highly unlikely that the project's VMT impacts can be reduced below the Town's thresholds, but it is nevertheless essential that the TDM plan be strengthened with a trip reduction target, monitoring, and enforcement.

3) Project trip generation could be higher than assumed. Given the large uncertainty in the project's trip generation, the applicant should take one of two paths -either a) applying a significantly higher and more conservative trip generation rate, or b) requesting as a condition of approval that trip generation will not exceed the number assumed in the EIR, and this be certified prior to beginning construction.

4) Any trip generation underestimation translates into underestimated GHG and other emissions. In addition, truck trip lengths are critical to estimating emissions and cannot be accurately established at this time. The 40-mile average truck trip length assumed in the DEIR excludes most important truck origins and destinations, including major freight transfer points, food producing areas, food-processing facilities, and population centers. A higher and more conservative value should be used.

The DEIR Demonstrates that the Project Will Generate Excessive VMT

The DEIR demonstrates that the proposed project is in a highly VMT-inefficient location. As shown in DEIR Table 4.12-2 (p. 4.12-13) reproduced below, the County's Screening Tool shows the project Transportation Analysis Zone ("TAZ") as more than double the County average.

Table 4.12-2. Summary of Project Traffic Analysis Zone Vehicle Miles Traveled

Base Year (2022)	VMT
VMT Per Service Population	
Project TAZ	67.6
Jurisdiction	33.3
% Difference (Project TAZ – Jurisdiction)	**+102.87%**
Threshold	33.3

Source: SBCTA VMT Screening Tool (Appendix J).
Notes: VMT = vehicle miles traveled; TAZ = traffic analysis zone.

After failing the screening by a wide margin, additional modeling was done in the DEIR. This modeling demonstrates that the project would have a significant VMT impact.

The Town's VMT guidelines state:

> A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:
>
> 1. The baseline project-generated VMT per service population exceeds the Town of Apple Valley General Plan Buildout VMT per service population, or
> 2. The cumulative project-generated VMT per service population exceeds Town of Apple Valley General Plan Buildout VMT per service population
>
> The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:
>
> 3. The baseline link-level boundary Town-wide VMT per service population increases under the plus project condition compared to the no project condition, or
> 4. The cumulative link-level boundary Town-wide VMT per service population increases un[1]der the plus project condition compared to the no project condition.

DEIR Table 4.12-3 (p. 4-12-14) reproduced below demonstrates that the project fails condition #1 by 20.8% and condition #2 by 80.4%. The text states that if either condition is met that **the "project would result in a significant project-generated VMT impact."**

[1] Apple Valley Town Council May 11, 2021 Agenda package, p. 100 of 156. https://pub-applevalley.escribemeetings.com/FileStream.ashx?DocumentId=310

Table 4.12-3. Project-Generated Vehicle Miles Traveled

Scenario	Baseline	Cumulative
Service Population	904	904
Total OD VMT	36,250	54,180
OD VMT per Service Population	40.1	59.9
Town Threshold	33.2	33.2
Percent Above Threshold	20.8%	80.4%
Potential Significant?	**Yes**	**Yes**

Source: Appendix J.
Note: OD = origin destination; VMT = vehicle miles traveled.

The DEIR claims that the project the Project's "cumulative effect on VMT would be less than significant" (DEIR, p. 4-12-14) by satisfying conditions #3 and #4. This misrepresents the Town's guidelines which state that there is a significant impact if any of the four conditions (#1 - #4) are met. The guidelines state: "The evaluation of both the project-generated and project effect on VMT are considered to provide a comprehensive review of potential impacts on the environment." No part of the guidelines indicates that satisfying a portion a single element of comprehensive review is sufficient.

Furthermore, the boundary method (#3 and #4) is clearly inadequate as a sole SB 743 VMT metric as it only measures VMT within the Town of Apple Valley.

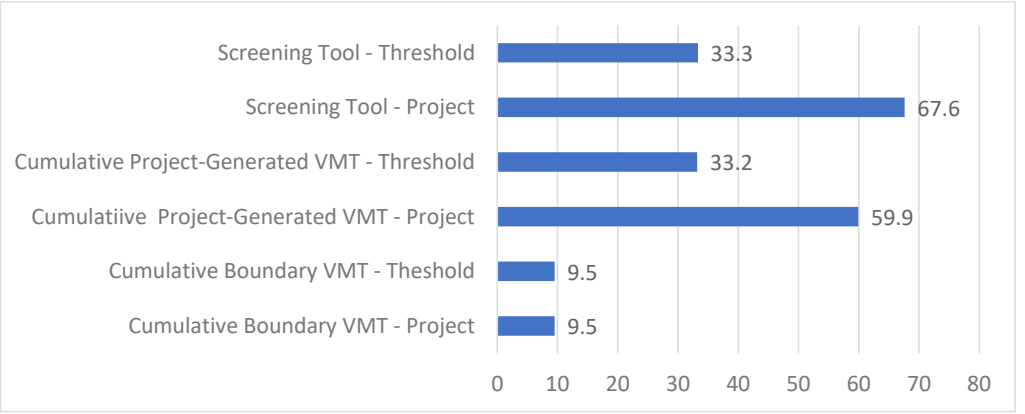
> The boundary method estimates VMT by multiplying vehicle trips on each roadway segment within the boundary by that segment's length. This approach consists of all trips, including those trips that do not begin or end in the designated boundary. Consistent with Town VMT Guidelines, the Town of Apple Valley was used as the boundary for this assessment. (DEIR, Appendix J, p. 431 of 502)

The boundary method is not standard in SB 743 analyses and fails to satisfy the intent of SB 743. The boundary method is not included in San Bernardino County's Transportation Impact Study Guidelines (July 9, 2019)[2] which outline how VMT analyses should be performed with the San Bernardino County Transportation Analysis Model ("SBTAM"), the model used in the DEIR. It has some limited value as an additional VMT check but does not replace the more important VMT criteria that the project fails to meet.

[2] https://www.sbcounty.gov/uploads/DPW/docs/Traffic-Study-Guidelines.pdf

As shown in Figure 1, the boundary method only counts a small proportion of project VMT – about 1/7 of total project VMT in the Screening Tool analysis and about 1/6 of total project VMT in the Cumulative Project-Generated VMT modeling. The reason that the boundary method VMT per service population doesn't change with the project is that it is mostly a measure of the geographical size of the Town, i.e., 9.5 VMT per service population is computed because both existing Apple Valley trips and project trips are truncated at the Town boundary with most of the VMT occurring outside the Town boundaries. SB 743 requires that the VMT outside the Town boundaries be included in the impact analysis.

Figure 1: Summary of VMT Information in DEIR



Additional VMT Mitigation is Required

The DEIR includes transportation demand management under Mitigation Measure MM-AQ-1:

> The Transportation Demand Management Plan shall apply to Project tenants through tenant leases. The TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. Examples of trip reduction measures may include, but are not limited to:
>
> - Transit passes
> - Car-sharing programs
> - Telecommuting and alternative work schedules
> - Ride sharing programs (DEIR, p. 1-8)

This DEIR language is generic and mostly not applicable to the proposed project because:

- All demand management is complicated by the 24/7 operation of the project - ". . .this EIR assumes that the facility could be operated 24 hours a day, 7 days a week." (DEIR, p. 3-14)
- Warehouse workers cannot "telecommute."
- Alternative work schedules tailored to individual employees are inconsistent with warehouse jobs.
- Carsharing as a means for regular commuting would be more expensive than ownership.
- There is no acceptable transit service to and from the project site. The DEIR identifies Victor Valley Transit Authority Route 42 as the closest bus route, but the closest stop is 1.4 miles from the project site and only operating with one-hour headways. Therefore "transit passes" are irrelevant to this project.
- Very few of the workers will live close enough for walking or biking to be a viable commute mode, even if there were better pedestrian and bike infrastructure in the project area.

The most realistic options for demand management at this site are ridesharing and vanpooling.

The California Air Pollution Control Officers Association (CAPCOA) provides on quantifying VMT mitigation measures in its publication *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity: Designed for Local Governments, Communities, and Project Developers (Final Draft, December 2021)*.

This Handbook states that up to an 8% VMT reduction is possible with ridesharing. (Handbook, p. 92) The Handbook states that up to 20.4% reduction is possible with vanpooling when the employer covers "… the capital costs of vehicle acquisition and the labor costs of drivers, either through incentives to current employees or the hiring of dedicated drivers." (Handbook, p. 104)

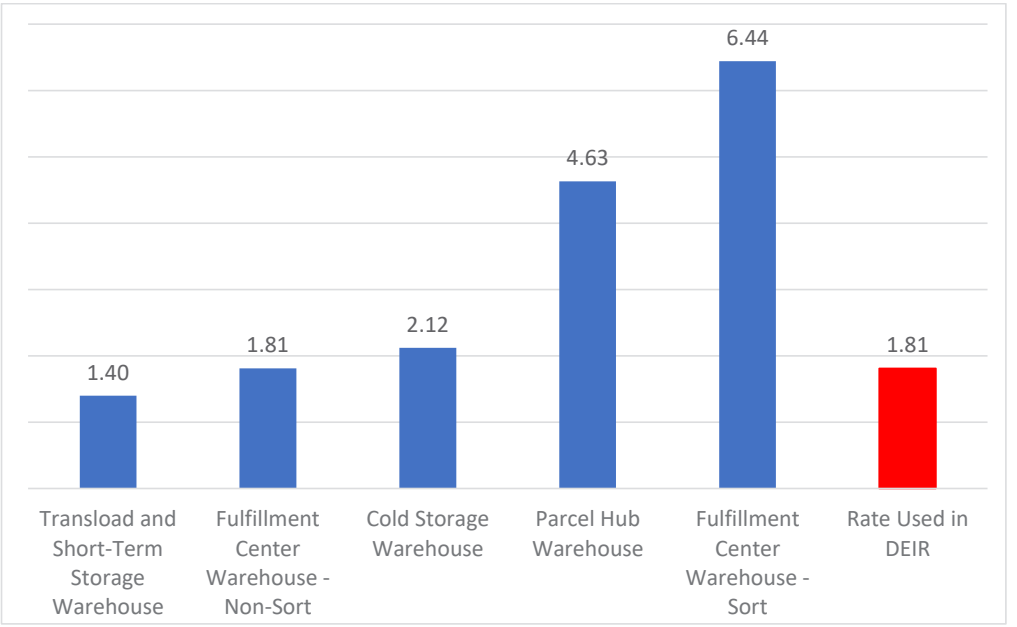
This DEIR language fails to commit the project to any level of mitigation. Even though it is highly unlikely that the project's VMT impacts can be reduced below the Town's thresholds, it is nevertheless essential that the TDM plan be strengthened with a trip reduction target, monitoring, and enforcement.

Trip Generation Could Be Higher than the DEIR Assumes

The project includes 1,080,125 square feet. (DEIR, Appendix J, p. 23) The tenants have not been identified, and the nature of the operations are unknown at this time. The DEIR states that this would produce 1,955 trips per day by applying the Institute of Transportation Engineers (ITE) *Trip Generation Handbook, 11th Edition* (2021) rate for "High Cube Fulfillment Center Warehouse (non-sort)" – 1.81 trips per 1000 square feet per day. (DEIR: Appendix J, p. 23)

The Institute of Transportation Engineers ("ITE") *Trip Generation* manual. *Trip Generation* includes different "high-cube warehouse" categories. As shown in Figure 2, the trip generation rate applied in the DEIR is much lower than rates for some other warehouse categories.

Figure 2: Trip Generation Rates for Different Warehouse Categories (Trips Per 1000 Square Feet per Day)



The Parcel Hub Warehouse trip generation rate is 2.6 times the rate used in the DEIR, which would add 3,046 trips per day over the rate assumed in the DEIR. The Fulfillment Center Warehouse with Sorting rate is 3.6 times the rate used in the DEIR, and would add 5,001 trips per day to the rate assumed in the DEIR.

Given the large uncertainty in the project's trip generation, the applicant should take one of two paths - either a) applying a significantly higher and more conservative trip generation rate, or b) requesting as a condition of approval that trip generation will not exceed the number assumed in the EIR, and this be certified prior to beginning construction.

GHG and Other Emissions are Likely Underestimated

Any trip generation underestimation will translate into underestimated GHG and other emissions.

In addition, trip length assumptions are critical in the GHG and other air emission estimates – particularly truck trip lengths. The DEIR estimates that 17.2% of all trips will be from heavy 4+-axle trips and another 10.3% of trips will be made by smaller commercial trucks. (DEIR, Appendix J, p. 23) These estimates are factored by trip distance to estimate GHG and other emissions using CalEEMod.

The DEIR states:

> For method 2, the truck trip lengths were based on the SCAQMD recommendation of 40 miles and assumed to be 100% of primary trips. (DEIR, p. 4.2-27)

The DEIR misstates that these truck trip distances are "recommended" by SCAQMD. The truck trip lengths are used in calculations of possible mitigation in *Second Draft Staff Report Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program. And Proposed Rule 316 -Fees for Rule 2305*.[3] The reference for these numbers is the 2016 SCAG travel demand model (p. 117) and there is no indication that these numbers are intended for any use beyond this single document. The 40-mile heavy truck trip length also appears in a 2014 slide presentation.[4] In neither case, are these numbers presented as general recommendations for warehouse EIRs.

The Attorney General's September 2022 guidance: *Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act*[5] states:

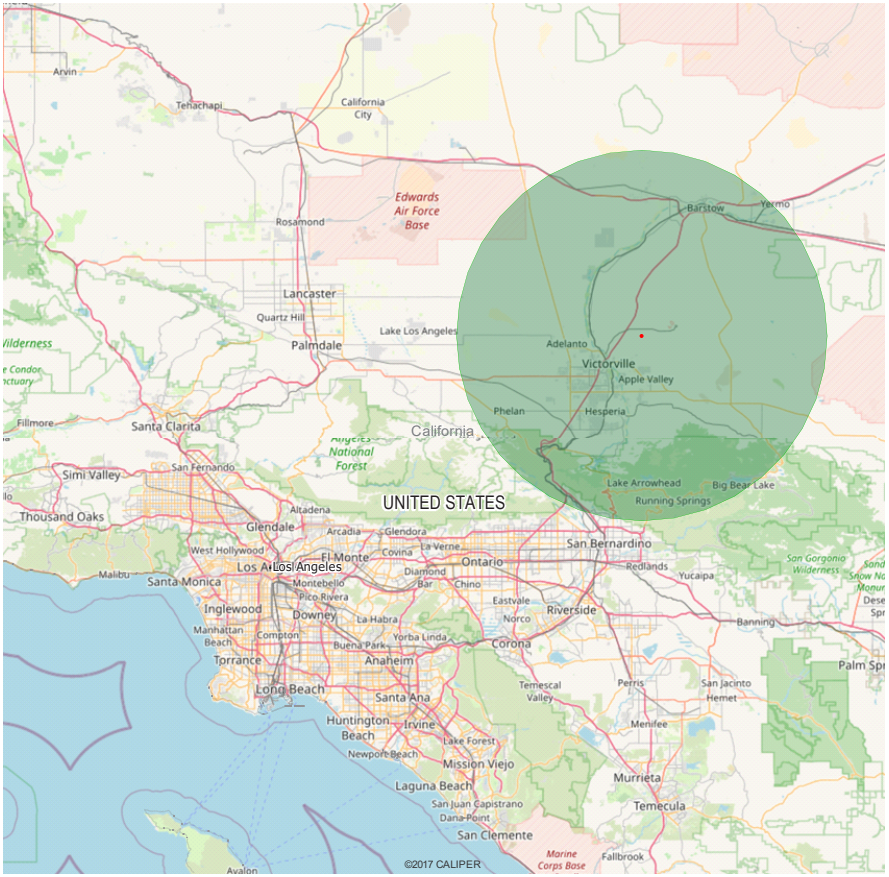
> CEQA requires full public disclosure of a project's anticipated truck trips, which entails calculating truck trip length based on likely truck trip destinations, rather than the distance from the facility to the edge of the air basin, local jurisdiction, or other truncated endpoint. All air pollution associated with the project must be considered, regardless of where those impacts occur. (p. 7)

While it is too early to determine truck trip origins and destinations, it is notable that important major freight origins and destinations are considerably further away than the trip lengths assumed in the DEIR. These include the Ports of Los Angeles and Long Beach that are about 110 miles away. It would be more conservative to assume longer average truck distances in the air quality and GHG analyses.

[3] www.aqmd.gov/docs/default-source/planning/fbmsm-docs/pr-2305_sr_2nd-draft_4-7-21_clean.pdf
[4] https://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/sclc_warehouse-presentation-final.pdf
[5] https://oag.ca.gov/system/files/media/warehouse-best-practices.pdf

Figure 3 shows the area that is within 40 miles of the proposed site, with distances measured "as the crow flies" rather than along roadways. The area that can be reached within 40 miles via roadways is significantly smaller.

Figure 3: 40-Mile Radius Around Project Site



This 40-mile area excludes most important truck origins and destinations, including major freight transfer points, food producing areas, food-processing facilities, and population centers.

Sincerely,

Norman L. Marshall

Norman L. Marshall

NORMAN L. MARSHALL, PRESIDENT

nmarshall@smartmobility.com

EDUCATION:

Master of Science in Engineering Sciences, Dartmouth College, Hanover, NH, 1982
Bachelor of Science in Mathematics, Worcester Polytechnic Institute, Worcester, MA, 1977

PROFESSIONAL EXPERIENCE: (33 Years, 19 at Smart Mobility, Inc.)

Norm Marshall helped found Smart Mobility, Inc. in 2001. Prior to this, he was at RSG for 14 years where he developed a national practice in travel demand modeling. He specializes in analyzing the relationships between the built environment and travel behavior and doing planning that coordinates multi-modal transportation with land use and community needs.

Regional Land Use/Transportation Scenario Planning

Portland Area Comprehensive Transportation System (PACTS) – the Portland Maine Metropolitan Planning Organization. Updating regional travel demand model with new data (including AirSage), adding a truck model, and multiclass assignment including differentiation between cash toll and transponder payments.

Loudoun County Virginia Dynamic Traffic Assignment – Enhanced subarea travel demand model to include Dynamic Traffic Assignment (Cube). Model being used to better understand impacts of roadway expansion on induced travel.

Vermont Agency of Transportation-Enhanced statewide travel demand model to evaluate travel impacts of closures and delays resulting from severe storm events. Model uses innovate Monte Carlo simulations process to account for combinations of failures.

California Air Resources Board – Led team including the University of California in $250k project that reviewed the ability of the new generation of regional activity-based models and land use models to accurately account for greenhouse gas emissions from alternative scenarios including more compact walkable land use and roadway pricing. This work included hands-on testing of the most complex travel demand models in use in the U.S. today.

Climate Plan (California statewide) – Assisted large coalition of groups in reviewing and participating in the target setting process required by Senate Bill 375 and administered by the California Air Resources Board to reduce future greenhouse gas emissions through land use measures and other regional initiatives.

Chittenden County (2060 Land use and Transportation Vision Burlington Vermont region) – led extensive public visioning project as part of MPO's long-range transportation plan update.

Flagstaff Metropolitan Planning Organization – Implemented walk, transit and bike models within regional travel demand model. The bike model includes skimming bike networks including on-road and off-road bicycle facilities with a bike level of service established for each segment.

Chicago Metropolis Plan and Chicago Metropolis Freight Plan (6-county region)— developed alternative transportation scenarios, made enhancements in the regional travel demand model, and used the enhanced model to evaluate alternative scenarios including development of alternative regional transit concepts.

Developed multi-class assignment model and used it to analyze freight alternatives including congestion pricing and other peak shifting strategies.

Municipal Planning

City of Grand Rapids – Michigan Street Corridor – developed peak period subarea model including non-motorized trips based on urban form. Model is being used to develop traffic volumes for several alternatives that are being additional analyzed using the City's Synchro model

City of Omaha - Modified regional travel demand model to properly account for non-motorized trips, transit trips and shorter auto trips that would result from more compact mixed-use development. Scenarios with different roadway, transit, and land use alternatives were modeled.

City of Dublin (Columbus region) – Modified regional travel demand model to properly account for non-motorized trips and shorter auto trips that would result from more compact mixed-use development. The model was applied in analyses for a new downtown to be constructed in the Bridge Street corridor on both sides of an historic village center.

City of Portland, Maine – Implemented model improvements that better account for non-motorized trips and interactions between land use and transportation and applied the enhanced model to two subarea studies.

City of Honolulu – Kaka'ako Transit Oriented Development (TOD) – applied regional travel demand model in estimating impacts of proposed TOD including estimating internal trip capture.

City of Burlington (Vermont) Transportation Plan – Led team that developing Transportation Plan focused on supporting increased population and employment without increases in traffic by focusing investments and policies on transit, walking, biking and Transportation Demand Management.

Transit Planning

Regional Transportation Authority (Chicago) and Chicago Metropolis 2020 – evaluated alternative 2020 and 2030 system-wide transit scenarios including deterioration and enhance/expand under alternative land use and energy pricing assumptions in support of initiatives for increased public funding.

Capital Metropolitan Transportation Authority (Austin, TX) Transit Vision – analyzed the regional effects of implementing the transit vision in concert with an aggressive transit-oriented development plan developed by Calthorpe Associates. Transit vision includes commuter rail and BRT.

Bus Rapid Transit for Northern Virginia HOT Lanes (Breakthrough Technologies, Inc and Environmental Defense.) – analyzed alternative Bus Rapid Transit (BRT) strategies for proposed privately-developing High Occupancy Toll lanes on I-95 and I-495 (Capital Beltway) including different service alternatives (point-to-point services, trunk lines intersecting connecting routes at in-line stations, and hybrid).

Roadway Corridor Planning

I-30 Little Rock Arkansas – Developed enhanced version of regional travel demand model that integrates TransCAD with open source Dynamic Traffic Assignment (DTA) software, and used to model I-30 alternatives. Freeway bottlenecks are modeled much more accurately than in the base TransCAD model.

South Evacuation Lifeline (SELL) – In work for the South Carolina Coastal Conservation League, used Dynamic Travel Assignment (DTA) to estimate evaluation times with different transportation alternatives in coastal South Caroline including a new proposed freeway.

Hudson River Crossing Study (Capital District Transportation Committee and NYSDOT) – Analyzing long term capacity needs for Hudson River bridges which a special focus on the I-90 Patroon Island Bridge where a microsimulation VISSIM model was developed and applied.

PUBLICATIONS AND PRESENTATIONS (partial list)

DTA Love: Co-leader of workshop on Dynamic Traffic Assignment at the June 2019 Transportation Research Board Planning Applications Conference.

Forecasting the Impossible: The Status Quo of Estimating Traffic Flows with Static Traffic Assignment and the Future of Dynamic Traffic Assignment. *Research in Transportation Business and Management* 2018.

Assessing Freeway Expansion Projects with Regional Dynamic Traffic Assignment. Presented at the August 2018 Transportation Research Board Tools of the Trade Conference on Transportation Planning for Small and Medium Sized Communities.

Vermont Statewide Resilience Modeling. With Joseph Segale, James Sullivan and Roy Schiff. Presented at the May 2017 Transportation Research Board Planning Applications Conference.

Assessing Freeway Expansion Projects with Regional Dynamic Traffic Assignment. Presented at the May 2017 Transportation Research Board Planning Applications Conference.

Pre-Destination Choice Walk Mode Choice Modeling. Presented at the May 2017 Transportation Research Board Planning Applications Conference.

A Statistical Model of Regional Traffic Congestion in the United States, presented at the 2016 Annual Meeting of the Transportation Research Board.

MEMBERSHIPS/AFFILIATIONS

Associate Member, Transportation Research Board (TRB)

Member and Co-Leader Project for Transportation Modeling Reform, Congress for the New Urbanism (CNU)

EXHIBIT C

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #23-002.31

October 27, 2023

Kevin T. Carmichael
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814

SUBJECT: Comments on 1M Warehouse Project Noise Analysis in Apple Valley, CA

Dear Mr. Carmichael,

Per your request, we have reviewed the subject matter document for the *1M Warehouse Project* in Apple Valley, California, based on the Environmental Impact Report (EIR) dated September 2023 and Appendix I: Noise Attachments from Dudek. The proposed project involves the construction and operation of a 1,080,125-square-foot industrial/warehouse building on a 67.3-acre undeveloped site located at the northeast corner of Central Road and Lafayette Street in the Town of Apple Valley, California. The Project is surrounded primarily by open land, with a limited number of noise sensitive residential buildings to east and south, with the closest being about 730 feet from the project.

Wilson Ihrig is an acoustical consulting firm that has practiced exclusively in the field of acoustics since 1966. During our almost 57 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Roadway Construction Noise Model (RCNM), SoundPLAN, and CadnaA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise[1]

Although the health effects of noise are not taken as seriously in the United States as they are in other countries, they are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads

[1] More information on these and other adverse effects of noise may be found in *Guidelines for Community Noise*, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (https://www.who.int/docstore/peh/noise/Comnoise-1.pdf)

to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result.

Sleep Disturbance. Noise can disturb sleep by making it more difficult to fall asleep, by waking someone after they are asleep, or by altering their sleep stage, e.g., reducing the amount of rapid eye movement (REM) sleep. Noise exposure for people who are sleeping has also been linked to increased blood pressure, increased heart rate, increase in body movements, and other physiological effects. Not surprisingly, people whose sleep is disturbed by noise often experience secondary effects such as increased fatigue, depressed mood, and decreased work performance.

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes) and it makes reading, paying attention, solving problems, and memorizing more difficult. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments.

Inadequate Ambient Noise Measurements:

The ambient noise measurements were conducted over a brief 10-minute period at each location, likely not during peak-hour traffic at most locations. For example, the measurement at the ST1 location was taken from 3:24 pm to 3:34 pm. This time frame is insufficient to calculate a Ldn/CNEL level, which is essential for assessing cumulative increases. The FTA's 2018 Transit Noise and Vibration Impact Assessment Manual (FTA Manual) - Appendix E recommends a minimum of three one-hour Leq noise measurements, including during peak-hour roadway traffic, midday, and nighttime recordings, to estimate the Ldn/CNEL. The report itself mentions that Leq noise levels are typically averaged over at least 15 minutes for environmental studies (pg 4-10-2).

Furthermore, the noise analysis relies on these short-term measurements without any discussion of how typical these data were for daytime conditions or how they would apply to evening or nighttime conditions. There is no evidence provided that the time selected for noise measurements is representative of the entire day. Environmental noise can vary widely throughout the day (perhaps +/-10 dBA or more for areas with intermittent local traffic) and relying on measurements that represent only 2% of the daytime hours (7 AM to 7 PM) leaves quite a lot for interpretation.

Table 4.10-10 appears to list existing CNEL levels without specifying how these levels were determined or their relationship to the direct Leq measurements in Table 4.10-2. We believe that valid existing Ldn/CNEL cannot be determined from the existing noise measurement data presented in Appendix I. The criteria outlined in Table 4.10-6 rely on existing Ldn/CNEL measurements to define the acceptable increase in the Ldn/CNEL for transportation noise sources. Without a valid existing Ldn/CNEL level, it is unclear which criteria level is applicable.

In the case of *King & Gardiner Farms LLC v County of Kern*, the Court of Appeal ruled that an agency cannot rely solely on compliance with local noise regulations to conclude that there will be no significant noise impacts without considering the effects of noise increases. Therefore, without measuring or calculating the existing Ldn/CNEL level using generally accepted methodology, it is infeasible to assess the increase in the Ldn/CNEL level due to the Project. The EIR should be updated to include appropriate existing noise measurements for the analysis.

Inadequate Evaluation of Operational Noise Increase:

The report fails to evaluate the cumulative increase in Project operational noise over the existing conditions, a requirement under CEQA. Table 4.10-11 solely compares the predicted daytime and nighttime operational Leq noise levels to the Apple Valley Municipal Code, without considering the increase over the existing ambient condition.

For instance, the existing CNEL at Receiver M1 is listed as 29 dBA in Table 4.10-10. As previously discussed, it remains unclear how this existing 24-hour CNEL was determined from a single 10-minute measurement. Nonetheless, when using the predicted operational noise levels from Table 4.10-11 at Receiver M1, which are 35.6 dBA Leq for daytime and 29.8 dBA Leq for nighttime, we calculate an estimated Project CNEL of 38.3 dBA. This indicates an increase of more than 9 dBA CNEL over the existing ambient condition at Receiver M1. This magnitude of increase could be deemed a significant impact, supported by the transportation noise criteria outlined in Table 4.10-6, which categorizes increases of +5 dBA as significant.

Therefore, given the relatively low existing ambient noise levels, we assert that simply comparing the estimated Project noise to the Town of Apple Valley's exterior noise criteria is insufficient in addressing the potential noise impacts during Project operations. We believe that the level of noise increase predicted by the report could qualify as a significant impact that necessities mitigation measures, such as a sound barrier blocking line of sight from operational noise uses to impacted receivers.

Inadequate Evaluation of Construction Noise Increase:

While the report compares the predicted construction noise levels to the Town of Apple Valley's 75 dBA Leq construction noise criteria, it lacks an evaluation of the increase in construction noise over the ambient level, a requirement under CEQA.

For instance, at receiver M1, the existing Leq registers at 39 dBA, while the estimated construction noise during the grading phase measures 61 dBA Leq for nearby construction activity or 57 dBA Leq for typical construction activity. This signifies an increase over the measured ambient conditions of 22 dBA and 18 dBA, respectively. A 20 dB increase is perceptible as a four-fold increase in loudness and carries a substantial risk of adverse community reaction[2]. Typically increases of +5 dBA or more are considered significant, supported by the transportation noise criteria outlined in Table 4.10-6, which categorizes increases of +5 dBA as significant.

Therefore, considering the low existing ambient noise levels, we assert that merely comparing the estimated construction noise to the Town of Apple Valley's construction noise criteria is inadequate for addressing the potential noise impacts during construction. We believe that the level of noise

[2] https://www.nps.gov/subjects/sound/understandingsound.htm

increase predicted by the report could classify as a significant impact that necessitates mitigation measures, such as a temporary sound barrier blocking line of sight from construction noise sources to impacted receivers.

Incorrect Application of Vibration Limits:

The Town of Apple Valley municipal code stipulates a vibration limit of 0.01 inches/second over a 1 to 100 Hz range, **applying at or beyond the private property boundary**[3], as detailed in Section 4.10.2 of the report. However, the impact assessment only computed estimated construction vibration levels at 760 ft, the distance to the nearest sensitive receptor. This represents an incorrect application of the Town of Apple Valley's vibration criteria.

Notably, all the construction equipment modeled has the potential to exceed the Apple Valley municipal code limit of 0.01 inches/second when operating near the site's boundary. The report itself indicates that a bulldozer would produce a vibration level of approximately 0.089 inches/second measured at 25 ft, which would exceed the 0.01 inches/second criteria. However, it should be noted that a vibration level of 0.01 inches/second is the threshold for human perception and is unlikely to result in adverse effects given the lack of sensitive receivers in the surrounding area.

Since the report indicates that "Quantitative thresholds of significance have been established for the purposes of this analysis based on the local polices and regulations described in Section 4.10.2" (pg 4.10-9), we believe that exceeding the Town of Apple Valley's vibration criteria during the Project's construction could qualify as an undisclosed significant impact and should be addressed in the report.

Conclusions

The analysis includes several errors, including insufficient ambient noise measurements, failing to address the substantial increase in noise levels over the existing condition, and incorrect application of vibration criteria. Correcting these would potentially identify several significant impacts which require mitigation.

Very truly yours,

WILSON IHRIG

Luke Watry
Senior Consultant

[3]https://library.municode.com/ca/apple_valley/codes/code_of_ordinances?nodeId=TIT9DECO_CH9.73NOCO_9.73.060PRNOVI

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

LUKE WATRY

Senior Consultant

Luke joined Wilson Ihrig in 2016 and is involved in a wide array of projects including building acoustic design, construction monitoring, modal analysis, as well as transit noise and vibration mitigation. He works out of our Seattle office, has been an important team member on several multi-year transit expansion projects, and has experience on the full breadth of project design work from conception to certification. He is well versed in the use of SoundPLAN, ME'scope, ArcGIS, MATLAB, AutoCAD, Envy, Excel, and experimental design concepts.

Education

- B.S. Mechanical Engineering, University of Colorado, Boulder, CO

Project Experience

BNSF Cowlitz River Bridge Replacement Hydroacoustic Monitoring, WA
Provided hydroacoustic monitoring and reporting services for pile driving activities during the construction of a new rail bridge.

BNSF Northern Pacific Depot Vibration Assessment, Sandpoint, ID
Provided hydroacoustic monitoring and reporting services for pile driving activities in the Pend Oreille River during the construction of a new BNSF rail bridge.

CAHSR EIR/EIS: San Francisco to San Jose & San Jose to Merced Segments, CA
Provided noise modeling and mitigation design services for over 120 miles of high-speed rail alignment through densely populated areas of the San Francisco Peninsula, San Jose, Gilroy, and the Central Valley. Noise impact to sensitive wildlife was also analyzed alongside the standard human-centric criteria.

CTA CRCC 7000-Series Vehicle Noise Consulting, Chicago, IL
Certified the noise and vibration specifications of a new range of CRRC 7000-series "L" vehicles. The specifications included ride quality, exterior vibration, interior noise, and exterior noise across a variety of track types.

Fred Hutchinson Cancer Center, Seattle, WA
Documented the existing acoustic conditions prior to a renovation of animal research laboratories. Developed acoustic criteria and control recommendations for the new laboratories and support facilities.

Houston METRO University BRT, Houston, TX
Conducted an environmental noise and vibration assessment for a new 25-mile BRT project. Provided the client with a technical report outlining the assessment and recommended noise and vibration control measures.

North Mercer Island/Enatai Sewer Upgrade, WA
Provided construction vibration monitoring in accordance with county permit requirements. Remote vibration monitors were installed at residential properties adjacent to construction sites.

Metropolitan Atlanta Rapid Transit Authority (MARTA) On-Call Task, Atlanta, GA
Performed a full modal analysis on five bridges owned by MARTA. The results from the field-testing were analyzed and compared against AISC and AASHTO engineering standards.

Microsoft Building 87 Redmond Link Extension Noise and Vibration, Redmond, WA
Analyzed the potential for ground borne noise and vibration disruption due to Redmond Link Extension. The building contains multiple anechoic chambers, including the "quietest room on earth," as well as sensitive prototype manufacturing facilities.

Microsoft Building 87 Redmond Link Extension Ballast Mat Installation, Redmond, WA
Provided daily construction quality inspections during the installation of a high-performance ballast mat system. Quality issues identified during construction were resolved with the contractor and the completed installation was approved by the ballast mat manufacturer and Sound Transit.

MicroSurgical Technology, Redmond, WA
Conducted a noise survey in a surgical instrument production facility. Developed a report assessing the workers daily noise exposure and provided noise control recommendations.

Mount Bay Apartments, Tacoma, WA
Provided noise and vibration mitigation services for the design of a mid-rise apartment building located adjacent to a busy rail corridor. Specific recommendations for wall construction and windows were provided to the client.

Nisqually Tribe / Joint Base Lewis-McChord Test Noise Monitoring Review, Olympia, WA
Recorded and analyzed rocket artillery being tested at Joint Base Lewis-McChord, adjacent to the Nisqually Indian Community.

Safeway #2870 Claremont / College Avenue Construction, Oakland, CA
Drafted reports and addressed noise exceedances during demolition and reconstruction of a Safeway and shopping complex.

San Francisco Department of Public Works On-Call Tasks, San Francisco, CA
Implemented construction noise and vibration monitoring for various pipe improvement projects. Long-term monitors were positioned based on predicted work scheduling; short-term attended monitoring was conducted during high-risk activities such as pile driving.

SLAC National Accelerator Laboratory, San Mateo, CA
Generated a site-specific vibration propagation model and analyzed the potential for vibration impacts to ongoing scientific experiments during the construction of a new building on the SLAC campus. Testing included measuring transfer mobilities, determining the vibration response of particle beamline equipment, and vibration generated by construction equipment.

Sound Transit Auburn Parking Garage, Auburn, WA
Measured existing long-term vibration levels inside a medical facility adjacent to the site of a future Sound Transit parking garage. The medical facility contains sensitive equipment including a Varian linear accelerator.

Sound Transit Redmond Link Extension, Redmond, WA
Produced vibration prediction models and mitigation design for future light rail track extending through the Microsoft campus and into Downtown Redmond.

Sound Transit Northgate Link Extension, Seattle, WA
Monitored construction vibration and ground-borne noise created by a tunnel boring machine drilling under the University of Washington and surrounding neighborhoods.

Sound Transit Northgate Link Extension Performance Certification, Seattle, WA
Certified the performance of a 5 Hz floating slab constructed in the tunnels underneath the University of Washington (UW) as a part of Sound Transit's Northgate Link Extension. Tests were conducted before, during, and after the floating slab construction. One test included measuring vibration levels simultaneously at 16 locations spread across UW and the transit tunnels below.

Sound Transit Rolling Noise Investigation, Seattle, WA
Assisted in developing a computational model of light rail noise. Wheel roughness, rail roughness, and track decay rates were measured for use as model inputs. Wayside noise measurements were used to validate the noise model.

Sound Transit Tacoma Link Expansion, Tacoma, WA
Provided vibration modeling and mitigation design services for a 2.4-mile expansion of streetcar service. Building vibration response testing was conducted at various residences, medical centers, and community buildings to improve modeling accuracy.

Sound Transit, Siemens Mobility LRV Testing, Seattle, WA
Certified the noise and vibration specifications of a new range of Siemens LRVs. In addition to certifying ride quality, interior noise, and exterior noise specifications, force density levels of the new vehicles were measured and compared to the existing Kinkisharyo fleet.

State Route 520 Interchange Hydroacoustics, Seattle, WA
Provided hydroacoustic monitoring and reporting services for pile driving activities in Lake Washington during the construction of SR520.

Valley Metro, Siemens Mobility LRV Testing, Phoenix, AZ
Certified the noise and vibration specifications of a new range of LRVs. The specifications included ride quality, exterior vibration, interior noise, and exterior noise.

Comment Letter J

Header with Tribal Seal

TWENTY-NINE PALMS BAND OF MISSION INDIANS

46-200 Harrison Place. Coachella, CA. 92236. Ph. 760.863.2444. Fax: 760.863.2449

December 1, 2023

Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

RE: Notice of Availability of a Draft Environmental Impact Report for 1M Warehouse Project

Dear Planning Department,

This letter is in regards to an informal consultation and in compliance with CEQA CUP and Notice of Availability of a Draft Environmental Impact Report for 1M Warehouse Project.

After reviewing the proposed project, the Twenty-Nine Palms Band of Mission Indians has determined: The project is outside of the known Chemehuevi Traditional Use Area. The other tribes who do have cultural affiliation with the project area should be contacted.

J-1

If you have any questions, please do not hesitate to contact the Tribal Historic Preservation Office at (760) 775-3259 or by email at Christopher.Nicosia@29palmsbomi-nsn.gov.

Sincerely,

Christopher Nicosia
Cultural Resources Manager, Twenty-Nine Palms Band of Mission Indians

Comment Letter K

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May 16, 2024

VIA EMAIL

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

RE: Notice of Settlement - 1M Warehouse Project (SCH No. 2023020285)

Dear Mr. Alcayaga:

This firm represents Californians Allied for a Responsible Economy ("CARE CA") with regard to the above-referenced 1M Warehouse Project (SCH No. 2023020285) ("Project"). On October 30, 2023, CARE CA submitted comments to the Town stating objections and concerns regarding the Draft Environmental Impact Report ("DEIR") prepared for the Project.

We are pleased to report that, as a result of direct discussions with the Applicant, the Applicant has agreed to additional measures beyond the measures currently proposed in the DEIR to address the potential air quality, public health and greenhouse gas emissions impacts identified in CARE CA's comments. CARE CA requests that the Town incorporate the Additional Measures as mitigation in the Final EIR for the Project. These include the following:

K-1

A. Air Quality, Public Health and Transportation

1.1 Emissions

1.1.1 Diesel off-road construction equipment shall meet USEPA Tier 4 Final off-road emissions standards for equipment rated at 25 horsepower or greater wherever and whenever available. In the

K-2

event that Tier 4 Final construction equipment is not available, Applicant may utilize Tier 4 Interim or Tier 3 construction equipment outfitted with Best Available Control Technology ("BACT") devices, including but not limited to a CARB certified Level 3 Diesel Particulate Filters ("DPF"). K-2 Cont.

1.1.2 Applicant shall install at minimum two Level 3 electric chargers at the Project site in a place convenient for heavy-duty truck access prior to beginning Project operation. K-3

1.2 Valley Fever

1.2.1 Injury Prevention Program shall include measures to prevent exposure to Valley Fever spores and the worker awareness training described in Labor Code Section 6709(c) and (d).

1.2.2 Applicant shall (a) provide National Institute for Occupational Safety and Health (NIOSH)-approved respirators for workers with a history of Valley Fever; and (b) provide half-face respirators equipped with a minimum N-95 protection factor for workers engaged in or working near soil disturbance activities.

1.2.3 Applicant shall prevent transport of cocci outside the Project area during Project construction by (a) thoroughly cleaning vehicles and equipment before they are moved off-site to other work locations; (b) provide workers with coveralls, lockers or other daily changing facilities to keep work and street clothing and shoes separate; and (d) post warnings of potential Valley Fever exposure onsite and consider limiting access to visitors, especially those without adequate training and respiratory protection. K-4

1.2.4 Applicant shall provide prompt access to medical care to construction workers who have symptoms of Valley Fever.

1.3 Transportation

1.3.1 The Transportation Demand Management Plan shall include a commute trip reduction program which provides either (a) on-site ridesharing and vanpooling, or (b) financial incentives to workers for use of alternate transportation.

K-5

With the adoption of these measures, CARE CA's objections to the Project and the DEIR are fully resolved, and we respectfully request that the Town approve the Project.

Please let me know if you have any questions.

Sincerely,

Kevin Carmichael

KTC:ljl

6756-010j