FINAL ENVIROMENTAL IMPACT REPORT

Poplar 18 Project

State Clearinghouse No. 2022080248
January 2023

Prepared for:

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FINAL

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JANUARY 2023

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1 Introduction

1.1 Introduction

This Final Environmental Impact Report (EIR) was prepared for the Poplar 18 Project (Project) in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code Sections 21000-21177).

Project Overview

The Project would involve construction and operation of an industrial/warehouse building and associated improvements on 17.87 acres of vacant land. The Project would provide 414,700 square feet of industrial/ warehouse space and include associated improvements, such as loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater detention basins, and landscape area. Office space within the building would be distributed among four individual office spaces in each of the corners of the building. The Project would also include off-site improvements along Mesa Linda Street, Lassen Street, and Poplar Street, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse buildings and throughout the Project site. A detailed description of the Project is contained in the Draft EIR in Chapter 3, Project Description. As described below, the Draft EIR is incorporated herein as part of the Final EIR but provided under a separate cover.

Contents and Use of a Final EIR

As described in CEQA and the CEQA Guidelines, public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, with consideration of other conditions, including economic, social, technological, legal, and other benefits. As required by CEQA, this Final EIR assesses the significant direct and indirect environmental effects of the Project, as well as the significant cumulative impacts that could occur from implementation of the Project. This Final EIR is an informational document only, the purpose of which is to identify the significant effects of the Project on the environment; to indicate how those significant effects could be avoided or significantly lessened, including feasible mitigation measures; to identify any significant and unavoidable adverse impacts that cannot be mitigated to less than significant; and to identify reasonable and feasible alternatives to the Project that would avoid or substantially lessen any significant adverse environmental effects associated with the Project and achieve the fundamental objectives of the Project.

Before approving a project, CEQA requires the lead agency to prepare and certify a Final EIR. The contents of a Final EIR are specified in Section 15132 of the CEQA Guidelines, as follows:

1. The draft EIR or a revision of the draft.
2. Comments and recommendations received on the draft EIR either verbatim or in summary.
3. A list of persons, organizations, and public agencies commenting on the draft EIR.
4. The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
5. Any other information added by the Lead Agency.

In accordance with the above-listed requirements, this Final EIR for the Project incorporates the publicly circulated Draft EIR, which is provided under a separate cover, and consists of the following:

1. All agency and public comments received during the public review comment period for the Project.
2. Responses to public comments.
3. Changes to the Draft EIR since it was circulated for public review.
4. The Project's Mitigation Monitoring and Reporting Program.

This Final EIR, in combination with the Draft EIR, as amended by text changes, constitute the EIR that will be considered for certification by the City and may be used to support approval of the proposed Project, either in whole or in part, or one of the alternatives to the Project discussed in the Draft EIR.

As required by Section 15090 (a) (1)-(3) of the CEQA Guidelines, a lead agency, in certifying a Final EIR, must make the following three determinations:

1. The Final EIR has been completed in compliance with CEQA.
2. The Final EIR was presented to the decision-making body of the lead agency, and the decision-making body reviewed and considered the information in the Final EIR prior to approving the project.
3. The Final EIR reflects the lead agency's independent judgment and analysis.

As required by Section 15091 of the CEQA Guidelines, no public agency can approve or carry out a project for which an EIR has been certified that identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings (Findings of Fact) for each of those significant effects, accompanied by a brief explanation of the rationale for each finding, supported by substantial evidence in the record. The possible findings are as follows:

1. Changes or alterations have been required in, or incorporated into the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

Additionally, pursuant to Section 15093(b) of the CEQA Guidelines, when a lead agency approves a project that would result in significant unavoidable impacts that are disclosed in the Final EIR, the agency must state in writing the reasons supporting the action. The Statement of Overriding Considerations must be supported by substantial evidence in the lead agency's administrative record.

The Draft Findings of Fact and Statement of Overriding Considerations are provided as a separate document that may be considered for adoption by the City at the time at which the Project is considered.

1.2 Contents and Organization

The Final EIR will be used by the City as an informational document for the proposed Project. The Final EIR, in compliance with Section 15132 of the CEQA Guidelines, is organized as follows:

Chapter 1, Introduction. This chapter provides general information on, and the procedural compliance of, the proposed Project and the Final EIR.

Chapter 2, Changes to the Draft Environmental Impact Report. This chapter contains a summary of changes made to the document since publication of the Draft EIR as a result of comments received. Revisions clarify information presented in the Draft EIR, and only minor technical changes or additions have been made. These text changes provide additional clarity in response to comments received on the Draft EIR, but do not change the significance of the conclusions presented in the Draft EIR. Changes are signified by strikeout text (i.e., ~~strikeout~~) where text was removed and by underlined text (i.e., underline) where text was added.

Chapter 3, Responses to Comments. This chapter includes a list of public agencies and individuals who provided comments on the Draft EIR during the public review period. Appendix A includes the comments received on environmental issues raised during the public review process for the Draft EIR and the City's responses to these comments. Each comment letter is numbered and presented with brackets indicating how the letter has been divided into individual comments. Each comment is given a binomial with the number of the comment letter appearing first, followed by the comment number. Responses to specific comments are included in Chapter 3 of this Final EIR, each with binomials that correspond to the bracketed comments.

Chapter 4, Mitigation Monitoring and Reporting Program. This chapter provides the Mitigation Monitoring and Reporting Program for the proposed Project. The Mitigation Monitoring and Reporting Program is presented in table format and identifies mitigation measures for the proposed Project, the party responsible for implementing the mitigation measures, the timing of implementing the mitigation measures, and the monitoring and reporting procedures for each mitigation measure. Project design features that were identified in the EIR are also included in this chapter to verify that these features are incorporated within the Project.

Draft EIR (Under Separate Cover). This Final EIR incorporates the Draft EIR as circulated during public review. The Draft EIR includes a detailed description of the Project, an analysis of the Project's environmental impacts, and a discussion of alternatives to the Project. The Draft EIR is available for review on the City's website at https://www.cityofhesperia.us/312/Planning. Copies of the Draft EIR are also available for public review at the following locations:

Hesperia City Hall, Planning Department
9700 Seventh Avenue
Hesperia, California 92345

1.3 California Environmental Quality Act Review

In accordance with Section 15082 of the CEQA Guidelines, the City released an Initial Study and Notice of Preparation on August 11, 2022, for the required 30-day review period to interested agencies, organizations, and individuals. The purpose of the Notice of Preparation is to provide notification that an EIR for the Project was being prepared, and to solicit guidance on the scope and content of the document. The Notice of Preparation was sent to the State Clearinghouse

at the California Governor's Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2022080248) to the Project. The Notice of Preparation was also posted at the County Clerk's office and on the City's website at https://www.cityofhesperia.us/312/Planning. Copies of the Notice of Preparation were distributed to all applicable agencies and tribes on the City's noticing list, as well as surrounding property owners within 900 feet of the Project site. Hard copies of the Initial Study and Notice of Preparation were made available for review at both the City's Planning Department, located at 9700 Seventh Avenue, Hesperia, California 92345, and at the Hesperia Branch Library, located at 9650 Seventh Avenue, Hesperia, California 92345. A public scoping meeting was held on August 24, 2022, at Hesperia City Hall to gather additional public input on the scope of the environmental document. During the scoping meeting, the City did not receive any substantive comments on the scope of the environmental analysis to be included in the Draft EIR.

The 30-day public scoping period ended on September 9, 2022. Comments received during the 30-day public scoping period were considered during preparation of the Draft EIR. Copies of the comment letters received in 2022 are provided in Appendix A of the Draft EIR, and included comments from the following:

- Native American Heritage Commission
- Mojave Desert Air Quality Management District
- Center for Biological Diversity

Comments focused on potential impacts and issues related to the air quality, tribal and cultural resources, and biological resources. Issues, concerns, and potential impacts raised in comment letters received during the 2022 public scoping period were discussed and addressed in the Draft EIR, and no further response to these comments is needed in this Final EIR.

A Notice of Availability of the Draft EIR was sent to agencies and interested parties on November 30, 2022, and the Draft EIR was circulated for a public review period from November 30, 2022, through January 13, 2023. The Notice of Availability was also posted at the County Clerk's office and both the Notice of Availability and Draft EIR were posted on the City's website. Copies of the Notice of Availability were distributed to all applicable agencies and tribes on the City's noticing list, as well as surrounding property owners within 900 feet of the Project site. Hard copies of the Draft EIR were made available for review at both the City's Planning Department, located at 9700 Seventh Avenue, Hesperia, California 92345, and at the Hesperia Branch Library, located at 9650 Seventh Avenue, Hesperia, California 92345.

The City received two (2) comments letter during the 2022-2023 Draft EIR public review period. A list of the comments received, copy of the comment letter received, and responses to comments are included in Chapter 2 of this Final EIR.

Per CEQA Guidelines Section 15088, responses to comments submitted by public agencies are required to be provided to the commenting agency at least 10 days prior to the public hearing at which the EIR and Project will be considered. However, no comments were received by the City from public agencies. Notwithstanding, the City has distributed a NOA of a Final EIR to all parties that were previously provided a NOA of the Draft EIR, as well as parties that commented on the Draft EIR. The City has also posted this Final EIR on the City's website. Hard copies of the Final EIR were made available for review at the City's Planning Department, located at 9700 Seventh Avenue, Hesperia, California 92345.

2 Changes to the Draft Environmental Impact Report

2.1 Introduction

As provided in Section 15088(c) of the CEQA Guidelines, responses to comments may take the form of a revision to a Draft EIR or may be a separate section in the Final EIR. This section complies with the latter option and provides changes to the Draft EIR in this chapter shown as strikethrough text (i.e., ~~strikethrough~~) signifying deletions and underlined text (i.e., underline) signifying additions. These changes are meant to provide clarification, corrections, or minor revisions made to the Draft EIR initiated by the Lead Agency, City of Hesperia, reviewing agencies, the public, and/or consultants based on their review. Text changes are presented in the section and page order in which they appear in the Draft EIR. None of the corrections or additions constitutes significant new information or substantial project changes that, in accordance with CEQA Guidelines Section 15088.5, would trigger the need to recirculate portions or all of the Draft EIR.

2.2 Changes to the Draft Environmental Impact Report

2.2.1 Chapter 3, Project Description

Cumulative Setting

Location: Table 3.1. Cumulative Projects, (pp. 3-3 through 3-4).

Explanation for Change and Discussion:

The size of project H10, I-15 Industrial Park Project was revised to show the correct square footage of development.

Changes to DEIR:

H10	I-15 Industrial Park Project	High-Cube Fulfillment Center Warehouse	~~647,500~~ 1,850,000

2.2.2 Section 4.2, Air Quality & Section 4.6, Greenhouse Gas Emissions

Air Quality and Greenhouse Gas Emissions Mitigation Measures

Location: Section 4.2.5, Mitigation Measures and Level of Significance (pp. 4.2-37) and Section 4.6.5, Mitigation Measures and Level of Significance (pp. 4.6-37 through 4.6-39).

Explanation for Change and Discussion:

Since circulation of the Draft EIR, consideration was given to ways in which mitigation measures could be strengthened and/or improved. In particular, additional Applicant Proposed Measures (APMs) to further reduce the Project's air pollutant and greenhouse gas emissions (GHG) were considered. These APMs are aimed at reducing both construction and operational emissions. It should be noted that while the Draft EIR determined that the Project's air quality construction and operational emissions were below the applied thresholds of significance and mitigation is not required, the developer has requested that the suggested APMs nonetheless be included within the EIR and tracked within the Mitigation Monitoring and Reporting Program (MMRP). As such, APM- 1 through APM-8 shall be included in the EIR and MMRP.

In addition, the Draft EIR included three Project Design Features (PDFs) that would reduce air quality and GHG emissions. For consistency, these PDFs have been relabeled as APMs and will be tracked within the MMRP. This change is implemented globally throughout the Draft EIR wherever PDF-AQ-1, PDF-GHG-1 and PDF-GHG-2 are mentioned and will be labeled as APM-6, APM-7, and APM-8, respectively.

Changes (Additions to DEIR):

APM-1 The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible:

- Only haul trucks meeting California Air Resources Board (CARB) model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site.

APM-2 The Project shall implement the following measures in order to reduce construction air pollutant emissions to the extent feasible:

- Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. After either (1) the completion of grading or, (2) the completion of an electrical hookup at the site, whichever is first, require all generators and all diesel-fueled off-road construction equipment, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the City in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment.[1] Before an exemption may be considered by the City, the applicant shall be required to demonstrate that at least two

[1] For example, if a Tier 4 Final piece of equipment is not reasonably available at the time of construction and a lower tier equipment is used instead (e.g., Tier 4 interim), another piece of equipment could be upgraded from a Tier 4 Final to a higher tier (i.e., Tier 5) or replaced with an alternative-fueled (not diesel-fueled) equipment to offset the emissions associated with using a piece of equipment that does not meet Tier 4 Final standards.

construction fleet owners/operators in the San Bernadino Region were contacted and that those owners/operators confirmed Tier 4 Final or better equipment could not be located within the San Bernardino Region. To ensure that Tier 4 Final construction equipment or better would be used during the proposed Project's construction, the applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.

- On days when the hourly average wind speed for the City of Hesperia exceeds 20 miles per hour, additional dust control measures shall be implemented, such as increased surface watering. Grading and excavation shall be prohibited when sustained wind speed exceeds 30 miles per hour.
- Use paints, architectural coatings, and industrial maintenance coatings for all interior painting that have volatile organic compound levels of less than 10 grams per liter (g/L).

APM-3 Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that the occupants of the Project site have been provided documentation that:

- Recommends the use of electric or alternatively fueled sweepers with high efficiency particulate air (HEPA) filters; and
- Recommends the use of water-based or low-VOC cleaning.

APM-4 The Project shall be designed to:

- Include the application of surface treatments (such as PURETi Coat or PlusTi) on impervious ground surfaces that lessen impervious surface-related radiative forcing.
- Include HVAC and/or HEPA air filtration systems within in all warehouse facilities.

APM-5 The Project shall provide rooftop solar array that has the capacity to provide a minimum of 2,000 AMPS (which is the maximum peak power amount of the project). However, the rooftop solar system will not be designed or constructed to exceed the annual energy consumption of the Project facilities.

2.2.3 Section 4.3, Biological Resources

Burrowing Owl Mitigation Measure

Location: Section 4.3.5, Mitigation Measures and Level of Significance (page 4.3-35)

Explanation for Change and Discussion:

Since circulation of the Draft EIR, consideration was given to ways in which mitigation measures could be strengthened and/or improved. MM-BIO-3, which includes requirements for pre-construction burrowing owl surveys and procedures to avoid burrowing owl if present, was identified as a mitigation measure that could be improved. The Project site is fragmented from larger contiguous undeveloped areas, and passive owl relocation techniques would push owls into undeveloped areas that would provide poor habitat for owls. Moreover, these areas are primarily small pockets of undeveloped land surrounded by industrial and commercial development. U.S. Highway

395 and Interstate 15 would also be barriers for owls to reach adjacent larger blocks of undeveloped areas. As such, it was suggested that active owl relocation be considered should owls be present on site, in consultation with the California Department of Fish and Wildlife (CDFW). As such, MM-BIO-3 has been modified below to account for the possibility of using active owl relocation techniques, if approved by CDFW.

Change:

MM-BIO-3 Pre-Construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife] in 2012) or current version.

If burrowing owls are detected, the Burrowing Owl Relocation Plan shall be implemented in consultation with the California Department of Fish and Wildlife (CDFW). The Burrowing Owl Relocation Plan shall identify procedures for both active and passive owl relocation. CDFW shall be consulted to approve any relocation activities and identify the appropriate method of relocation (i.e., active or passive relocation). As required by the Burrowing Owl Relocation Plan disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers will be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation or current version. No Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, ~~passive~~ owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The Project area shall be monitored daily for one week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the Staff Report on Burrowing Owl Mitigation or current version.

Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

3 Response to Comments

This chapter of the Final Environmental Impact Report (EIR) for the Poplar 18 Project (Project) includes a copy of all comment letters that were submitted during the public review period for the Draft EIR, along with responses to comments in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15088. The 30-day review period for the Draft EIR began on November 30, 2022 and ended on January 13, 2023.

The responses amplify or clarity information provided in the Draft EIR and/or refer the reader to the appropriate place in the document where the requested information can be found. Comments that are not directly related to environmental issues (e.g., opinions on the merits of the Project unrelated to its environmental impacts) are noted for the record. Where text changes in the Draft EIR are warranted based on comments received, updated Project information, or other information provided by City staff, those changes are noted in the response to comment and the reader is directed to Chapter 2, Changes to the Draft EIR, of this Final EIR.

These changes to the analysis contained in the Draft EIR represent only minor clarifications/amplifications and do not constitute significant new information. In accordance with CEQA Guidelines Section 15088.5, recirculation of the Draft EIR is not required.

All written comments on the Draft EIR are listed in Table 3-1. All comment letters received on the Draft EIR have been coded with a number to facilitate identification and tracking. The comment letters were reviewed and divided into individual comments, with each comment containing a single theme, issue, or concern. Individual comments and the responses to them were assigned corresponding numbers. To aid readers and commenters, electronically bracketed comment letters have been reproduced in this document and are included as Appendix A, with the corresponding responses provided immediately following each comment letter. The interested parties listed in Table 3-1 submitted letters during the public review period for the Draft EIR.

Table 3-1. Comments Received on the Draft EIR

Comment Letter	Commenter	Date
1	Golden State Environmental Justice Alliance	January 10, 2023
2	Golden State Environmental Justice Alliance	January 25, 2023

To finalize the EIR for the Project, the following responses were prepared to comments that were received during the public review period.

Response to Comment Letter 1

Golden State Environmental Justice Alliance
Gary Ho, Blum Collins & Ho, LLP
January 10, 2023

1-1 The comment notes that the comment letter has been submitted by Blum Collins on behalf of the Golden State Environmental Justice Alliance. Additionally, the comment requested to be added to the public interest list for the Project. This comment serves as an introduction to comments that follow.

1-2 This comment summarizes the proposed Project and does not identify specific areas where the EIR is inadequate; therefore, no further response is required

1-3 The comment states that preparing a single, standalone EIR for the Project is piecemealing because the City of Hesperia (City) should prepare an EIR for the Project, Hesperia Commerce Center I, Hesperia Commerce Center II, and I-15 Industrial Park. The Hesperia Commerce Center project is an approximately 3.5-million-square-foot warehouse project located approximately 0.8 miles southwest of the Project. The Hesperia Commerce Center project was approved in 2013 (and a comprehensive EIR was certified) and is currently under construction. The Hesperia Commerce Center II project is an approximately 3.75-million-square-foot warehouse project located approximately 0.6 miles northwest of the Project. The Hesperia Commerce Center II project was approved in 2022 (and a comprehensive EIR was certified) and construction is planned to commence in early 2024, pending final engineering designs. The I-15 Industrial Park project is an approximately 1,850,000 square foot warehouse/distribution center located 0.4 miles northeast of the Project. The I-15 Industrial Park project was published in 2021 and the EIR was published for review in 2022. According to *Banning Ranch Conservancy v. City of Newport Beach*, no piecemealing occurs when projects can be implemented independently. Here, the Hesperia Commerce Center project, the Hesperia Commerce Center II project, I-15 Industrial Park project, and the proposed Project are four separate disconnected projects that each have independent utility, meaning that neither project is dependent on the other. Additionally, the EIR accounted for the Hesperia Commerce Center project, Hesperia Commerce Center II project, and I-15 Industrial Park project in its list of cumulative development projects. Because an EIR has already been certified for the Hesperia Commerce Center project, for the Hesperia Commerce Center II project, and for I-15 Industrial Park project these three projects and the Project are separate, individual projects, and because the Project's EIR fully accounts for the cumulative impacts of the Hesperia Commerce Center project, Hesperia Commerce Center II project, I-15 Industrial Park project and the proposed Project, preparation of a single, standalone EIR for the Project does not constitute piecemealing under CEQA.

1-4 This comment expresses a concern that the Project is piecemealed portion of a larger project which included a SPLA to change the existing land use designations of the project site. Please refer to Responses to Comment 1-3 above. In addition, the Project does not propose a change in land use or zoning as it is already designated as Commercial Industrial Business Park (CIBP) and the project is an allowed use with the issuance of a Conditional Use Permit. No further analysis related to land use is required.

1-5 The comment states that the Draft EIR does not include the accurate information regarding the Cumulative Projects provided in Table 3-1. The comment goes on to state cumulative project H10, which is identified as the I-15 Industrial Park project in Table 3-1, Cumulative Projects, has the incorrect

square footage listed and therefore the cumulative impacts are understated. The square footage of the I-15 Industrial Park Project has been revised in Table 3-1, Cumulative Projects, of the Final EIR to accurately reflect the project's 1,850,000 square foot of warehouse space. This change however does not impact the cumulative analysis of the Project as the development of the full 1,850,000 square feet of warehouse space was correctly analyzed in the Draft EIR as can be seen in Table 2, Cumulative Development Land Use Summary in Attachment A, Scoping Memo of Appendix I, Transportation of the Draft EIR. This cumulative development summary was used for all technical analysis within the Draft EIR. All projects included within Table 3-1 have the project name, type of development, and size of the project and, if appropriate, can be found under the City's Environmental Documents along with their location and APN. As such, the Draft EIR has evaluated the project's consistency with all applicable cumulative projects and no revisions are necessary. Because no new environmental issues were identified, no further analysis is necessary

1-6 The comment states that the Draft EIR does not include any floorplans, detailed grading plan, or a detailed site plan for the Project. The comment also states that the site plan provided in Figure 3-11 does not provide any pertinent information such as earthwork quantity notes, parking requirements, or floor area ratio calculations. The comment claims that the Draft EIR has excluded these details from public review, "which does not comply with CEQA's requirements for adequate informational documents and meaningful disclosure," and that the project's gross floor ratio exceeds in size of the MSFCP, and states that the EIR must be revised to include these items.

The Draft EIR includes a detailed, 49-page project description that provides the necessary information to adequately evaluate the Project's environmental impacts. This project description includes parking spaces (54 loading dock positions, approximately 54 tractor-trailer stalls, and approximately 182 passenger vehicle parking spaces [pp. 3-7]), and floor area ratio of 53.3% [pp. 3-6]), please refer to Comment 1-11 in which the floor area ratio concern is addressed.

Additionally, specific floor plans are not available because, as stated in the Draft EIR, "an end user of the building has not yet been identified"; therefore, the floor plan has not been finalized. The presentation of any floor plan also would not affect the analysis of potential project environmental impacts in the Draft EIR. However, the Draft EIR states that "for the purposes of CEQA and to ensure full disclosure on all potential allowable uses on the project site, this EIR assumes development of… a blend of "high-cube" warehouse and general light industrial uses" (pp. 3-9). Therefore, the analysis contained in the Draft EIR accurately reflects the potential worst-case impacts of the project as proposed, and no further analysis is required. Because no new environmental issues were identified, no further analysis is necessary.

1-7 The comment refers to comments provided by SWAPE, which are included as an attachment to the comment letter. Refer to Responses to Comments 1-17 through 1-28 in which these comments are addressed.

1-8 This comment expresses a concern regarding the VMT methodology used to evaluate the Project's potential impact on VMT. The following response presents information supporting the methodology used to evaluate the Project's potential impact on VMT. The information includes guidance from the Governor's Office of Planning and Research (OPR), a summary of the City of Hesperia's VMT Significance Thresholds, a description of the nature of warehouse facilities and related travel; and a summary of the air quality analysis conducted for the Project. Senate Bill 743 (SB-743), which was codified in Public Resources Code section 21099, was signed by the Governor in 2013 and directed the Governor's Office of Planning

and Research (OPR) to identify alternative metrics for evaluating transportation impacts under CEQA. Per Section 21099 of the Public Resource Code, the selection of the VMT criteria for determining the significance of transportation impacts was intended to promote reductions of greenhouse gas emissions (GHG); to develop multimodal transportation networks; and to diversify land uses. In addition, there are various legislative mandates and state policies that establish quantitative GHG emission reduction targets. Pursuant to Senate Bill 375, the California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) call for reductions in GHG emissions only from cars and light trucks. The changes to the CEQA Guidelines in response to Section 21099 include a new section (15064.3) that specifies that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. In addition, Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." As a result, the VMT criteria and thresholds in the CEQA Guidelines and this chapter related to employment generating uses do not apply to those components of proposed projects that involve commercial vehicles. However, the VMT criteria and thresholds would apply to those components that involve passenger vehicles.

A separate Technical Advisory (TA) issued by OPR provides additional technical details on calculating VMT and assessing transportation impacts for various types of projects. The OPR Technical Advisory states that "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. It does not include heavy-duty trucks, semi-trailers, construction equipment, or other commercial-type vehicles. While the OPR TA allows for heavy duty truck VMT to be included in modeling, it is important to note that this allowance was provided for modeling convenience and ease of calculation. The TA also states that the analysis should be based on an apples-to-apples comparison, wherein the same VMT (e.g., with trucks or without trucks) should be reported for both the threshold and the project. This was also clarified and noted during an informational question and answer session conducted by OPR to provide information and guidance on conducting project-level VMT analysis (OPR 2020), that it is automobile VMT (i.e. cars and light duty trucks) that should to be quantified.

The following example from the County of Santa Barbara Environmental Thresholds Update summarizes the issue concisely: For example, *a proposed oil production or agricultural processing facility may involve significant numbers of commercial trucks and semitrailers that would haul supplies and products to and from the facility. The project may also involve employees and others who would travel to and from the facility in passenger vehicles. In this case, the VMT analysis would not address potential VMT generated by the commercial trucks and semi-trailers and, therefore, would not consider such VMT a significant transportation impact. Rather, the VMT analysis would focus on VMT generated by passenger vehicles traveling to and from the facility*[1].

[1] Santa Barbara County Environmental Thresholds and Guidelines Manual, http://www.countyofsb.org/uploadedFiles/plndev/Content/Projects/FINAL%20Ch.%2018%20Environmental%20Thresholds%20Update.pdf

City of Hesperia Thresholds

The City of Hesperia has adopted VMT impact thresholds[2] and has identified following recommended threshold:

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 San Bernardino County regional average** baseline of 32.7% VMT per service population, or
2. The cumulative project-generated VMT per service population **exceeds the San Bernardino County regional average** baseline of 32.7% 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:

1. The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition, or
2. The cumulative link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition

The VMT metric used for measuring the Project's transportation impact is Home-based Work VMT/ employee, an efficiency metric which does not include trucks or trucks equivalents. As such, trucks were not included for measuring against SB 743 VMT which is the threshold adopted by the City of Hesperia. In addition, to evaluate the Project's effect on VMT for the region, link based total VMT per service population was also calculated for both San Bernardino County and Unincorporated San Bernardino County without and with the project.

In keeping with the intent of Section 21099 of the Public Resource Code and Section 15064.3, subdivision (a) of the CEQA Guidelines (which specify that automobile VMT is the primary metric that should be evaluated), the extra step of removing heavy truck VMT from the SBTAM was undertaken to identify applicable thresholds as well as to provide for a project level analysis that most appropriately meets the intent of SB 743. The numbers reported in the transportation section of the Draft EIR are based on automobile (i.e. cars and light trucks) VMT for both the applicable threshold and the Project VMT, allowing for an apples-to apples comparisons of VMT generated by vehicle types across project assessment, significance thresholds, and mitigation (if any).

Finally, the VMT analysis is consistent with City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and has been reviewed and approved by the City's engineering department after a lengthy review process. As such, the EIR's VMT analysis is adequate as presented.

1-9 This comment expresses a concern that the EIR did not include a consistency analysis with the City's Specific Plan and lists several policies within the Specific Plan that are believed to be applicable to the Project. While the Draft EIR did indeed include an analysis of the Project's consistency with the Specific

[2] City of Hesperia. 2020. City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS).

Plan, it did not analyze consistency with each and every Specific Plan policy. Rather, the analysis focused on goals and policies that have been adopted by the City to avoid or mitigate environmental effects of new development projects. As such, the Draft EIR has evaluated the project's consistency with all applicable Specific Plan land use policies and no revisions are necessary. Because no new environmental issues were identified, no further analysis is necessary.

Additional this comment expresses a concern that the Project is inconsistent with the Specific Plan, General Plan, SCAQMD 2016 Air Quality Management Plan, SCAG 2020-2045 RTP/SCS, and SB 330. Please refer to Responses to Comment 1-8. Additionally, the Project site is not located within the jurisdiction of the SCAQMD and the SCAQMD 2016 Air Quality Management Plan is not applicable to the Project. Consistency with the SCAG 2020-2045 RTP/SCS was included within Table 5-1 of the Effects Found Not to be Significant chapter of the Draft EIR. The comment also expresses a concern regarding the EIR's air quality, GHG, and transportation analysis. Please refer to Response to Comment 1-8 in which these concerns are addressed.

1-10 This comment expresses a concern that the EIR did not include a consistency analysis with the City's General Plan and lists several policies within the General Plan that are believed to be applicable to the Project. The Draft EIR did indeed include a consistency analysis with applicable General Plan policies within each impact analysis chapter, and the Effects Found Not to be Significant chapter included a more focused analysis of the City's General Plan policies. The EIR did not include a consistency analysis for each and every goal, policy, and implementation policy of the General Plan because many of the goals and policies in the General Plan are City-level planning efforts that are not applicable to the Project and would not be the responsibility of the Project Applicant to implement. In addition, the thresholds used to determine the significance of a Project's land use impacts (per Appendix G of the CEQA Guidelines) ask whether a project would "Cause a significant environmental impact due to a conflict with any *applicable* land use plan, policy, or regulation adopted *for the purpose of avoiding or mitigating an environmental effect*" (emphasis added). Therefore, the Draft EIR included an analysis of the Project's consistency with each of the applicable General Plan goals and policies that have been adopted by the City to avoid or mitigate environmental effects of new development projects. As such, the Draft EIR has evaluated the project's consistency with all applicable General Plan land use policies and no revisions are necessary. Because no new environmental issues were identified, no further analysis is necessary.

1-11 This comment expresses a concern that the EIR does not include a consistency with the MSFCSP maximum gross floor area ratio of 50%. The Draft EIR did indeed include that the MSFCSP requires review and approval of a Conditional Use Permit (CUP) for warehousing and wholesale distribution centers over 200,000 square feet located in the MSFCSP [pp. 3-13]. As such, the Draft EIR has evaluated the project's consistency with all applicable Specific Plan land use policies and no revisions are necessary. Because no new environmental issues were identified, no further analysis is necessary.

1-12 This comment expresses a concern regarding the Draft EIR's population and housing analysis. As discussed in the Draft EIR, a future tenant of the warehouse has not yet been identified, and thus, the number of jobs that the Project would generate cannot be precisely determined. Thus, the Draft EIR relied on employment estimates were based on Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition (ITE 2017) and the *Transportation Uniform Mitigation Fee (TUMF) High-Cube Warehouse Trip Generation Study* (WSP, January 29, 2019). Based off of these employment generation estimates, the Draft EIR concluded that the Project could generate approximately 2,309

employees, which is line with growth projections in the City's General Plan and SCAG 2020-2045 RTP/SCS. These growth projections were based on existing and planned land use patterns, which assumed that the Project site would be developed for industrial and employment generating uses. Moreover, as discussed within the Draft EIR and Response to Comment Letter 1, the High Desert/Victor Valley region has long been identified as an area having a low jobs–housing ratio (i.e., an area that has more potential workers living in a community than there are jobs for them),[3] resulting in high numbers of residents commuting out of the region for work. The has estimated that approximately 73% of workers residing in Hesperia commute out of the area to the southern Inland Empire cities and the broader Los Angeles region (City of Hesperia 2016). Although these conditions can be attributed to a number of factors, the most notable variable in the jobs-to-housing ratio is the lack of jobs growth in the region. A low jobs-to-housing ratio can result in adverse environmental and economic effects on local communities. For example, long-distance commutes result in increased traffic and air quality and greenhouse gas emissions. By developing an employment-generating use, the Project would provide job opportunities for those living in the area that may commute out of the area for work. Moreover, the applicable threshold of significance with regard to population and housing raises the question of whether a project would result in substantial unplanned population growth such that new housing would be required and the construction of such housing would result in environmental effects. Given the substantial jobs-housing imbalance and given that the Project site is designated for employment-generating uses, the Project would not result in unplanned population growth and would not require the construction of new housing. While the City is planning for population growth, it will require that future residential projects undergo a complete environmental analysis, which would be completely independent of the Project.

With regard to the concern regarding the labor force that would be needed to construct the Project, the number of construction workers needed during any given period would largely depend on the specific stage of construction but would likely fluctuate between a few and several dozen workers on a daily basis. Based on information provided by the Project Applicant, they intend to construct the Project using a licensed general contractor with full-time staff that are assigned to construction projects on a rotating basis, depending on the nature of the construction phase and the required worker skillsets. As such, the Project's construction labor needs would be met by a pool of existing construction workers in the region. The environmental effects (i.e., air pollutant and greenhouse emissions associated with vehicle miles traveled for worker trips) have been accounted for throughout the Draft EIR within the Project's air quality and greenhouse gas emission analyses. In summary, because the Draft EIR's employment generation estimates are based on substantial evidence, the Draft EIR analysis with regard to population and housing is adequate as provided.

1-13 This comment expresses a concern regarding the EIR's findings of significance and cumulative impact analysis. The Draft EIR addressed findings of significance with regard to the proposed land use changes in the Effects Found Not to be Significant chapter of the Draft EIR and within the Mandatory Findings of Significance section of the Draft EIR. Cumulative impacts were discussed for each resource topic and a comprehensive list of cumulative projects was compiled. The Draft EIR made the appropriate

[3] A jobs–housing ratio is a commonly used economic metric used to determine whether or not a community or region provides a sufficient number of jobs for its residents. The metric is calculated by finding the relationship between where people work ("jobs") and where they live ("housing"). As of 2016, the City had a jobs/housing ratio of 0.44, well off of regional targets ranging from 1.25–1.50 (City of Hesperia 2016).

findings regarding the Project's significant and unavoidable impact determinations and feasible mitigation measures were applied where available.

1-14 This comment expresses a concern regarding the Draft EIR's conclusions regarding significant and irreversible changes, primarily in the context of the proposed land use change and the Project's significant and unavoidable impacts. Please refer to Responses to Comments 1-9 through 1-10 for a discussion of the Project's proposed land use changes. Significant and irreversible changes, including the proposed land use changes were discussed in the Other CEQA Considerations chapter of the Draft EIR. As discussed, the Project would overall be consistent with the intent and design goals of the Main Street/Interstate-15 District in the Main Street and Freeway Corridor Specific Plan and the City has already committed the site to industrial/warehouse (and similar) uses when the City adopted the Main Street and Freeway Corridor Specific Plan.

1-15 This comment expresses a concern regarding the Draft EIR's alternatives analysis. The Draft EIR included a comprehensive alternatives analysis that included alternative land uses and alternative sites. For alternative uses, given that the Project site is zoned for commercial and industrial business park uses, uses that are either permitted by right or conditionally permitted were considered. Many of these uses would result in higher trip generation rates than the project, including but not limited to general office, building material and rental, automobile parts and service center, and car wash. Notably, residential uses were considered but rejected due to incompatibility issues with the existing industrial, transportation-related, and commercial land uses within the area. In addition, an alternative that would reduce all of the Project's significant and unavoidable impacts was considered; however, this would equate to a project 15% the size of the proposed Project, which would clearly not be feasible. The Draft EIR's alternatives analysis thus met CEQA's requirement to evaluate a reasonable range of alternatives and is therefore adequate as provided.

1-16 The comment serves as a conclusion to the letter, and requests that the City add the commenter to the City's public interest list for the Project. The comment is noted and the City has added the commenter to its list of parties to be notified for the Project. The comment does not identify specific areas where the EIR is inadequate; therefore, no further response is required.

1-17 The comment serves as an introduction to the attached SWAPE letter, introduces the Project, and summarizes the conclusion of the letter. The comment does not raise any specific issues concerning the adequacy of the EIR.

1-18 Comments were received regarding the modeling inputs in the California Emissions Estimator Model (CalEEMod) that questioned changes to model default parameters. However, as specifically identified in the CalEEMod User's Tips documentation, "Users are encouraged to understand the defaults and provide site specific data (e.g., construction schedule, construction equipment type, results of traffic study, predicted water usage, etc.), if available, for a more accurate analysis"(CAPCOA 2021). As such, the changes to the default CalEEMod assumptions for the project emissions modeling were appropriate based on applicant input and project-specific information. CalEEMod provides default values for input parameters such as for warehouse building square footage. After the minimum project characteristic and land use information is inputted, CalEEMod provides default values so that the model may still be used to evaluate emissions from a land use development project in the event that such detailed information is not yet known (for instance, for a project in the planning stage). Similarly, CalEEMod provides a host of default values for the construction emissions analysis. Construction default values

were utilized where proposed project information was not readily available. Default inputs that were updated according to information provided by the Project Applicant include construction schedule phase dates for major activities (e.g., demolition, grading, building construction, paving, and architectural coating), construction truck and vehicle worker trips, and grading/excavation quantities.

Furthermore, the Project Applicant and their contractor(s) represent 'experts' in estimating construction activities for the project based on their experience with similar projects and their need to estimate construction activities, such as duration of construction and equipment needed, for budgeting. Substantial evidence is defined in the CEQA statute to mean "facts, reasonable assumptions predicated on facts, and expert opinion supported by facts" (14 CCR 15384(b)). Because assumptions provided the Project Applicant and their team represent an expert opinion supported by facts, these assumptions constitute substantial evidence under CEQA that can be used to more accurately estimate project-generated emissions.

Therefore, the use of project-specific data in CalEEMod is appropriate and fully in line with the CalEEMod User's Guide and the EIR's analysis is based on substantial evidence and is adequate as presented.

1-19 The commenter speculates that the Project will use architectural coatings with volatile organic compound (VOC) limits higher than 50 grams per liter and that the model may have underestimated VOC emissions. Like typical construction projects, the Project would use flat and non-flat coatings. Per MDAQMD's Rule 111, flat and non-flat coatings, which would be used for interior and exterior paint for the project, have a VOC limit of 50 grams per liter, which the Project would be required to comply with. Therefore, the EIR's analysis is adequate as presented.

1-20 As discussed in Response to Comment 1-18 and 1-19, the EIR's analysis and modification of CalEEMod default values is appropriate and substantiated. Therefore, the EIR's analysis is adequate as presented.

1-21 As discussed in Responses to Comments 1-18 and 1-19, the non-default CalEEMod values for architectural coating emission factors and the off-road construction equipment are substantiated and accurate. Therefore, the commenters cursory re-modeling of VOC emissions is based on inaccurate assumptions and the EIR's analysis is adequate as presented.

1-22 This comment provides a discussion on the disproportionate health risk impacts of warehouses on surrounding communities and cites the SCAQMD that those living within a half mile of warehouses are more likely to include communities of color, have heath impacts, and greater environmental burden. The commentor goes on to cite several sources documenting environmental justice challenges with the continued development of industrial warehouses. Finally, the commentor provides figures showing there are two schools within one-mile of the project site.

As outlined in the Mojave Desert Air Quality Management District (MDAQMD)'s *CEQA and Federal Conformity Guidelines* (MDAQMD 2016), a project would result in a significant environmental impact if it:

1. Would generate total emissions (direct and indirect) in excess of the established significance thresholds (presented as Table 4.2-4 of the Draft EIR)
2. Would generate a violation of any ambient air quality standard when added to the local background
3. Does not conform with the applicable attainment or maintenance plan

4. Would expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million (10×10^{-6}) and/or a hazard index (noncarcinogenic) greater than or equal to 1

Residences, schools, daycare centers, playgrounds, and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned sensitive receptor land use must be evaluated using Threshold 4:

- any industrial project within 1,000 feet
- a distribution center (40 or more trucks per day) within 1,000 feet
- a major transportation project (50,000 or more vehicles per day) within 1,000 feet
- a dry cleaner using perchloroethylene within 500 feet
- a gasoline dispensing facility within 300 feet

Neither the Canyon Ridge High School nor the Mission Crest Elementary School are within these distances of project development. As discussed in Section 4.2, Air Quality, under Threshold C of the Draft EIR, the project would not expose sensitive receptor, including schools, to substantial pollutant concentrations. Both a Construction and Operational Health Risk Assessment was prepared for the project and results were determined to be less than significant with no mitigation required.

The CEQA Guidelines require the analysis of a project's potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. As noted by the commentor, the Canyon Ridge High School and the Mission Crest Elementary School are not located within one-quarter mile of an existing or proposed school. Therefore, the analysis within the Draft EIR remains adequate as presented.

1-23 The comment uses a screening model, known as AERSCREEN, to evaluate health risk impacts from diesel emissions during construction of the proposed project. While the AERSCREEN model is an acceptable model by the EPA and MDAQMD, it is a screening model. As a screening model, it overestimates impacts with the general understanding that if AERSCREEN does not show impacts, then impacts would also not occur if a more detailed analysis is conducted using a more refined model. AERSCREEN is a simplified model in that it does not consider meteorological data or topographical data. AERSCREEN assumes calm wind conditions at all times and a stable atmosphere (i.e., no atmospheric mixing). AERSCREEN also has simplified emissions input fields such that it typically overestimates emission impacts from varying construction activities. Construction health risks were evaluated in the Draft EIR using the EPA and SCAQMD refined model, known as AERMOD. This model takes into account meteorological data and topographical data. It also accounts for the geography of a project site, locations of emissions sources, the time of day emissions would occur, locations of sensitive receptors, and other factors to a much greater degree than AERSCREEN, which better represents the real world environment. Based on the construction HRA using this refined model, AERMOD, using AERMOD methodologies from the MDAQMD, and using the age sensitivity factors and other health risk evaluation parameters recommended by the MDAQMD and the Office of Environmental Health Hazard Assessment (OEHHA), health risk impacts were determined to be less than the MDAQMD significance thresholds for cancer risk and non-cancer chronic risk for diesel particulate matter. Therefore, the EIR's analysis is adequate as presented.

1-24 The comment reiterates previous concerns regarding including the Draft EIR's quantitative analysis of emissions and states that additional feasible mitigation measures should have been implemented. As discussed in Response to Comment 1-18 and 1-19, the EIR's analysis and modification of CalEEMod default values is appropriate and substantiated. Additionally, it is important to note, CEQA does not require adoption of every imaginable feasible mitigation measure. CEQA's requirement applies only to feasible mitigation that will "substantially lessen" a project's significant effects. (Public Resources Code, § 21002.) As explained by one court: A lead agency's "duty to condition project approval on incorporation of feasible mitigation measures only exists when such measures would [avoid or] 'substantially lessen' a significant environmental effect." (San Franciscans for Reasonable Growth v. City and County of San Francisco (1989) 209 Cal.App.3d 1502, 1519.) "Thus, the agency need not, under CEQA, adopt every nickel and dime mitigation scheme brought to its attention or proposed in the project EIR." (Ibid.) Rather, an EIR should focus on mitigation measures that are feasible, practical, and effective. (Napa Citizens for Honest Government v. Napa County Board of Supervisors (2001) 91 Cal.App.4th 342, 365.). Notwithstanding, please refer to Chapter 2, Changes to the Draft EIR where, several Applicant Proposed Measures (APMs) have been added that would further reduce the Project's impacts.

1-25 This comment provides a list of mitigation measures that are suggested to be included within the EIR. Please refer to Chapter 2, Changes to the Draft EIR.

1-26 This comment states the Project should not be approved without incorporating on-site renewable energy production such as solar or wind based on the States targets for renewable energy production for 2045. Please refer to Responses to Comments 1-24 and 1-25 and to Chapter 2, Changes to the Draft EIR.

1-27 The comment provides a disclaimer regarding limited knowledge of the Project and the limits of SWAPE's analysis. The comment does not address any inadequacies of the EIR and not further response is required.

1-28 This comment includes technical modeling outputs and the commenter's qualifications and experience. The comment does not raise any specific issues concerning the adequacy of the EIR, and no further response is required.

Response to Comment Letter 2

Golden State Environmental Justice Alliance
Joe Bourgeois, Executive Director
January 25, 2023

2-1 This comment introduces the Golden State Environmental Justice Alliance (GSEJA) and references its comment letter submitted on the Draft EIR, dated January 10, 2023 (Comment Letter 1). The comment states that after further review, GSEJA is withdrawing its original comment letter in response to actions taken by the Project Applicant to address GSEJA's environmental concerns with the Project. The environmental concerns raised by GSEJA are included in Comment Letter 1, above. While GSEJA's original letter was rescinded, responses to these concerns, as well as additional actions that will be undertaken by the Project Applicant to address these concerns (i.e., additional Applicant Proposed Measures that have been added to the Final EIR), are provided in Response to Comment Letter 1, above.

References Cited

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Appendix A
Draft EIR Comment Letters

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January 10, 2023

Ryan Leonard, Senior Planner
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9700 Seventh Avenue
Hesperia, California 92345

VIA EMAIL TO:
rleonard@cityofhesperia.us

Subject: Comments on Poplar 18 EIR (SCH NO. 2022080248)

Dear Mr. Leonard,

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the proposed Poplar 18 Project. Please accept and consider these comments on behalf of Golden State Environmental Justice Alliance (GSEJA). 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. 1-1

1.0 Summary

The project proposes the construction and operation of one 414,700 square foot (sf) industrial/warehouse building on 17.87 acres of vacant land. The building includes 54 truck/trailer loading dock doors, 43 truck/trailer parking stalls, and 211 passenger vehicle parking stalls. The building has a maximum height of 50 feet and a gross floor area ratio of 53.3%. 1-2

1.2 Project Piecemealing

The EIR does not accurately or adequately describe the project, meaning "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" (CEQA § 15378). The project proposed by Poplar 18 is a piecemealed portion of a larger overall project to be developed within the City by the project applicant, Covington Group. The proposed project is preceded by at least three other industrial projects known as Hesperia Commerce Center I, Hesperia Commerce Center II, and I-15 Industrial Park. Hesperia Commerce Center I (3.5 million square foot 1-3

warehouse/distribution center) was approved by the Planning Commission on November 14, 2013[1] and the City Council on December 17, 2013[2]. Hesperia Commerce Center II (3,745,429 square foot warehouse/distribution center) was approved on May 17, 2022[3]. A Notice of Preparation of an EIR[4] for the I-15 Industrial Park (1,850,000 square foot warehouse/distribution center) was published on June 17, 2021 and the EIR was published for public review on July 20, 2022[5]. Including the proposed Poplar 18 project, these four piecemealed development projects will construct and operate approximately 9,510,129 sf of industrial warehousing.

1-3 Cont.

CEQA Section 15161 describes project EIRs as examining "the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation." The specific development project is the construction and operation of all Covington industrial buildings as a whole, including at minimum Hesperia Commerce Center I, Hesperia Commerce Center II, I-15 Industrial Park, and Poplar 18.

Notably, the Poplar 18 project site is immediately adjacent to the I-15 Industrial Park sites as shown below in the I-15 Industrial Park site plan[6]:

[1] November 14, 2013 PC Agenda http://www.cityofhesperia.us/ArchiveCenter/ViewFile/Item/1106
[2] December 17, 2013 CC Agenda http://www.cityofhesperia.us/ArchiveCenter/ViewFile/Item/1118
[3] Hesperia Commerce Center II Notice of Determination https://ceqanet.opr.ca.gov/2019110418/6
[4] I-15 Industrial Park EIR NOP https://files.ceqanet.opr.ca.gov/270818-1/attachment/QuD5mx5_AtDAvaQRMNzKedc9zqAyMkqt89ANZs4VE_maReuNGSHfFLsr0hE3DHNPLqYa1OQLwRCWS6hN0
[5] I-15 Industrial Park EIR NOA https://files.ceqanet.opr.ca.gov/270818-3/attachment/InJjVgv0dazvg5OCDXQ2C70BXYy60jPBxbrMz3hgKsNrNWAv_drSR7ZpLhEzdjKD3CBjT2krzE8_oZFQ0
[6] Figure 3-11: Site Plan I-15 Industrial Park EIR https://files.ceqanet.opr.ca.gov/270818-3/attachment/yoVtQTeuFzXyJu_AKctPpXpD9tWieEkn4U-K0GztNoX-9lKA0E-TbEjO2QtA0E-q0aqBOPgc4FI7RWDn0

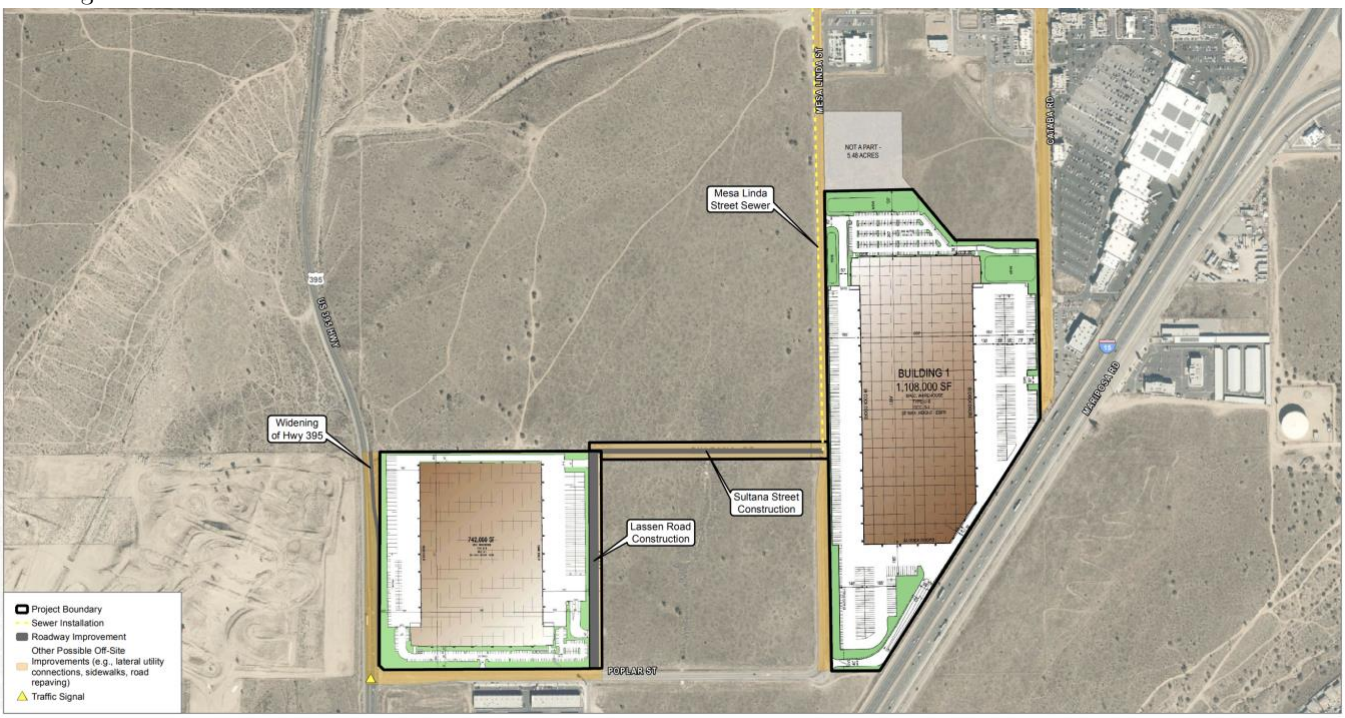


FIGURE 3-11
Site Plan
I-15 Industrial Park Project

Additionally, CEQA Section 15146 requires that the degree of specificity in an EIR "will correspond to the degree of specificity involved in the underlying activity which is described in the EIR. (a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy." Because there are at least four developments as part of a single construction project, the project EIR must be more detailed in the specific effects of the project.

1-3 Cont.

A project EIR must be prepared which accurately represents the whole of the action without piecemealing the project into separate, smaller development projects to present unduly low environmental impacts. This is vital as the EIR for Hesperia Commerce Center I found that the project will result in significant and unavoidable considerable Air Quality and cumulatively Greenhouse Gas Emissions impacts; Hesperia Commerce Center II will result in significant and unavoidable cumulatively considerable Air Quality, Noise, and Transportation impacts; I-15 Industrial Park will result in significant and unavoidable cumulatively considerable Air Quality, Greenhouse Gas Emissions, and Transportation impacts; and the Poplar 18 project will result in significant and unavoidable cumulatively considerable Greenhouse Gas

Poplar 18 Project Site

Emissions and Transportation impacts. The EIR must be revised to comply with CEQA § 15161 by preparing a Project EIR to adequately and accurately disclose the project-specific and cumulative impacts of all proposed Covington Group projects. 1-3 Cont.

Further, the EIR does not accurately or adequately describe the project, meaning the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" (CEQA § 15378) for an additional reason. The Poplar 18 and 1-15 Industrial Park projects are a piecemealed portion of a larger overall project which included a SPLA to change the existing land use designations of the project sites from Regional Commercial (RC) to Commercial Industrial Business Park (CIBP). SPLA19-00005 was approved by the City Council on January 7, 2020[7]. The Analysis portion of the November 14, 2019 Planning Commission Staff Report for SPLA19-00005[8] states that:

"Over the past few months **several developers have approached the City** and expressed interest in **developing the subject parcels**. The development proposals range from light industrial uses, manufacturing uses and warehouse distribution centers. Because these types of uses are restricted in the Regional Commercial (RC) zone, staff has informed the prospective developers that a **change of zone would be required for a development application to proceed.**" 1-4

It is clear that SPLA 19-00005 is a separate project that was facilitated in order to accommodate the Poplar 18 and I-15 Industrial projects as the analysis references contact from a developer, express interest in development of industrial and warehousing uses on the specific sites that correspond to both projects, and that staff informed the prospective developers that a **change of zone would be required for a development application to proceed.** The EIR misleads the public and decision makers by circumventing adequate and accurate environmental analysis for the whole of the action - changing the land use designations on the project sites from RC to CIBP to accommodate industrial development and construction/operation of all Covington Group proposed projects. A project EIR must be prepared which accurately represents the whole of the action without piecemealing the project into separate legislative changes and a development project to present unduly low environmental impacts and avoid an adequate, accurate environmental analysis.

3.0 Project Description

The list of cumulative projects provided in Table 3-1: Cumulative Projects is not accurate and does not provide useful meaningful project information to the public and decision makers. For example, 1-5

[7] January 7, 2020 City Council Staff Report and attachments for SPLA 19-00005 https://hesperia.legistar.com/LegislationDetail.aspx?ID=4288931&GUID=6854D3F5-466A-4DCF-A7CA-B734FB618386&Options=&Search=

[8] November 14, 2019 Planning Commission Staff Report and attachments for SPLA19-00005

Project H10 represents the I-15 Industrial Park project. Project H10 models 647,500 sf of building while the I-15 Industrial Park project is actually 1,850,000 sf of industrial space. This skews the environmental analysis to present unduly low environmental impacts and avoid an adequate, accurate environmental analysis. Further, Projects H1, H3, H4, H7, H8, H13, H14, and H15 are only referenced by their entitlement numbers, which does not allow the public and decision makers to verify the accuracy of the information provided for each of those projects. Additionally, none of the projects have a listed address or APN for the public and decision makers to verify the location of each project and research associated pertinent project information. A revised EIR must be prepared to include all revisions listed above in order to provide an adequate and accurate environmental analysis.

1-5 Cont.

Additionally, the Project Description states that the gross floor area ratio is 53.3%. This exceeds the MSFCSP maximum gross floor area ratio of 50%. The EIR must be revised to include this information for discussion and analysis and include a finding of significance due to this inconsistency and the project's size exceeding of the overall buildout of the MSFCP.

The EIR does not include a floor plan or detailed site plan for the proposed project. The basic components of a Planning Application include a detailed site plan, floor plan, grading plan, and elevations. The site plan provided in Figure 3-11: Site Plan has been edited for public review and does not provide any detailed information such as the earthwork quantity notes, parking requirements, building heights, or site coverage. The edited version of the site plan inserted for public review is meaningless and provides no useful information. The EIR has excluded the proposed floor plan and detailed site plan from public review, which does not comply with CEQA's requirements for adequate informational documents and meaningful disclosure (CEQA § 15121 and 21003(b)). Incorporation by reference (CEQA § 15150 (f)) is not appropriate as the floor plan, grading plan, and detailed site plan contribute directly to analysis of the problem at hand. The EIR must be revised to include all application items for review, analysis, and comment by the public and decision makers.

1-6

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 for analysis relevant environmental justice issues in reviewing potential impacts, including cumulative impacts from the proposed project. According to CalEnviroScreen 4.0[9], CalEPA's screening tool that ranks each census tract in the state for pollution and

1-7

[9] CalEnviroScreen 4.0 https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

socioeconomic vulnerability, the proposed project's census tract (6071010017) experiences high rates of pollution burden. The surrounding community, including residences to the east and south, bears the impact of multiple sources of pollution and is more polluted than average on several pollution indicators measured by CalEnviroScreen. For example, the project census tract ranks in the 97th percentile for ozone burden, the 63rd percentile for traffic impacts, and the 46th percentile for PM 2.5 burden; all of these environmental factors are typically attributed to heavy truck activity in the area. Traffic impacts represent the vehicles in a specified area, resulting in human exposures to chemicals that are released into the air by vehicle exhaust, as well as other effects related to large concentrations of motor vehicles[10]. Ozone can cause lung irritation, inflammation, and worsening of existing chronic health conditions, even at low levels of exposure[11]. The very small particles of diesel PM can reach deep into the lung, where they can contribute to a range of health problems. These include irritation to the eyes, throat and nose, heart and lung disease, and lung cancer[12].

1-7 Cont.

Further, the census tract is a diverse community including 72% Hispanic, 4% African-American, and 4% Asian-American residents that are especially vulnerable to the impacts of pollution. The community has a high rate of low educational attainment, meaning 59% 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. Medical care is vital for this census tract as it ranks in the 80th percentile for incidence of cardiovascular disease and 45th percentile for incidence of asthma.

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[13]. CalEEMod is not listed as an approved software. The CalEEMod-based modeling in the EIR and appendices 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.

[10] OEHHA CalEnviroScreen Report https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf
[11] OEHHA Ozone https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone
[12] OEHHA Diesel Particulate Matter https://oehha.ca.gov/calenviroscreen/indicator/diesel-particulate-matter
[13] 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

4.10 Transportation

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. There are no exhibits depicting the available space onsite throughout the project site to accommodate heavy truck maneuvering. There are also no exhibits depicting emergency vehicle access. Deferring this environmental analysis required by CEQA to the construction permitting phase is improper mitigation and does not comply with CEQA's requirement for meaningful disclosure and adequate informational documents. A revised EIR must be prepared for the proposed project with this analysis in order to provide an adequate and accurate environmental analysis. This is especially vital given the EIR's conclusion that the project will result in significant and unavoidable cumulatively considerable impacts due to increasing a hazardous condition due to queuing impacts at the intersections #1, #3, #5, #6, and #7 under the Horizon Year (2040) plus Project analysis scenario.

The EIR has provided VMT modeling to include the project's heavy truck activity. The EIR concludes the project generated VMT including heavy truck activity is 37.0 VMT per service population under baseline (Year 2016) conditions, which exceeds the baseline threshold of 30.6 VMT per service population. Under the cumulative (Year 2040) conditions, the County average VMT (including automobiles and heavy trucks) is 32.1 VMT per service population. The Project generated VMT is 36.6 VMT service population under cumulative conditions, which also exceeds the cumulative baseline threshold. The EIR must be revised to include a finding of significance because the project exceeds the baseline thresholds. 1-8

Further, the EIR sources the OPR s 2018 Technical Advisory[14] as its methodology for VMT analysis, which states that "here, the term automobile" refers to on-road passenger vehicles, specifically cars and light trucks." However, the purpose of the OPR Technical Advisory document is purely advisory, stating in its introduction:

"The purpose of this document is to provide advice and recommendations, which agencies and other entities may use at their discretion. This document does not alter lead agency discretion in

[14] Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA https://opr.ca.gov/ceqa/docs/20190122-743_Technical_Advisory.pdf

preparing environmental documents subject to CEQA. This document should not be construed as legal advice."

The OPR document is not a legal interpretation, court decision, or amendment to the CEQA statute that clarifies the definition of automobile. The term "automobile" is not defined in the CEQA statute and application of the OPR interpretation is speculative and does not provide an analysis of the "worst-case scenario" for environmental impacts. Widespread public understanding and perception indicates that trucks, including medium/heavy-duty trucks associated with the industrial nature of warehouse operations, are automobiles. The EIR must be revised to include a finding of significance because the project exceeds the baseline VMT thresholds when heavy truck activity is included for analysis. Notably, including the heavy truck activity still underrepresents the VMT impacts of the proposed project. The operational nature of industrial/warehouse uses involves high rates of truck/trailer/delivery van VMT due to traveling from large regional distribution centers to smaller industrial parks and then to their final delivery destinations. Once employees arrive at the industrial building for work, they will conduct their jobs by driving truck/trailer/delivery vans across the region as part of the daily operations as a warehouse facility, which will drastically increase project-generated VMT. The project's truck/trailer/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. A revised EIR must be prepared to reflect a quantified VMT analysis that includes all truck/trailer/delivery van activity to adequately and accurately analyze the potentially significant project transportation impacts. 1-8 Cont.

The EIR is also internally inconsistent in its analysis of the proposed project, rendering it an inadequate informational document. The Transportation analysis concludes that VMT per worker will be 25.7 VMT in cumulative year 2040 conditions. Alternatively, the Population and Housing analysis relies upon the unemployment rate of San Bernardino County as a whole in order to conclude the project will have less than significant impacts. The Transportation analysis relies upon a workforce in close proximity to the project in order to artificially reduce impacts, yet the Population and Housing analysis relies on the entire available workforce/unemployment rates of San Bernardino County to demonstrate there will be no significant impacts. The VMT analysis only assumed a 25.7 mile trip for employees. The Transportation analysis must be revised to reflect longer trip distances that employees will realistically travel to work at the proposed project, including but not limited to 54 miles from Chino Hills, 54 miles from Yucaipa, 88 miles from Twentynine Palms, 103 miles from Baker, and 181 miles from Needles. The revised EIR must also include a construction worker employment trip analysis must also be included to adequately and accurately analyze all potentially significant environmental impacts.

5.0 Effects Found Not to be Significant

5.5 Land Use and Planning

The EIR does not include a consistency analysis with all applicable goals and policies of the Main Street and Freeway Corridor Specific Plan. A revised EIR must be prepared which includes an analysis of the project in conjunction with all applicable goals and policies, including the following:

1. Goal LU-1a: Respond to market trends and development pressures by creating a forward looking and responsible development plan for the Specific Plan area.
2. Policy LU-1.3: Mix land uses to create a vibrant and more active environment and make the most efficient use of available land.
3. Policy LU-2.3: Maximize the economic impact of available industrial land by careful use of industrial properties, giving priority to clean enterprises that yield large numbers of highly skilled high-paying jobs relative to site size.
4. Goal LU-3: Create a regional shopping draw of development at the intersection of Interstate-15 and Main Street.
5. Policy LU-3.1: Designate areas around the intersection of Interstate-15 and Main Street for commercial and retail development.
6. Policy LU-3.2: Attract high quality retail, office, hotel and mixed-use projects near the intersection of Interstate-15 and Main Street where freeway visibility and accessibility are highest.

1-9

The proposed project is directly inconsistent with several of the MSFCSP and General Plan goals and policies listed above. The consistency analysis (where present) does not include any discussion of the required SPLA19-00005 to change the existing land use designations of the project sites from Regional Commercial (RC) to Commercial Industrial Business Park (CIBP). The EIR's analysis for consistency with the MSFC SP CIBP designation is reliant upon the January 7, 2020 approval of the piecemealed SPLA19-00005. As noted above, a Project EIR must be prepared which analyzes the environmental impacts of the whole of the project, including piecemealed SPLA19-00005 to change the land use designations of the project site and all Covington Group buildings as a whole, and the project's significant and unavoidable environmental impacts.

Table 5-2. Regional Transportation Plan/Sustainable Communities Strategy Consistency Analysis finds that the project is consistent with nine goals of Connect SoCal, resulting in less than significant impacts. The consistency analysis provided within the table is misleading to the public and decision makers and does not provide an adequate analysis of the proposed project. Due to errors in modeling, modeling without supporting evidence (as noted throughout this comment letter and attachments), and the EIR's conclusion that the project will result in significant and unavoidable cumulatively considerable impacts to Greenhouse Gas Emissions and Transportation,

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. There is no discussion of the project's significant and unavoidable cumulatively considerable impacts to Greenhouse Gas Emissions and Transportation. The EIR's consistency analysis is misleading and does not provide any meaningful supporting evidence within SCAG's 2020-2045 Connect SoCal RTP/SCS to support this conclusion, in violation of CEQA's requirements for meaningful disclosure. The EIR must be revised to include revised modeling and an accurate consistency analysis with all goals of SCAG's 2020-2045 Connect SoCal RTP/SCS, including a finding of significance due to the project's direct inconsistency with these goals due to its significant and unavoidable cumulatively considerable impacts to Greenhouse Gas Emissions and Transportation.

1-9 Cont.

Further, 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 General Plan:

1. Goal LU-1 Regulate development so that the density of residential development and the intensity of non-residential development are appropriate to the property, surrounding properties, and the general neighborhood.
2. Implementation Policy LU-1.1 Require that new construction, additions, renovations, and infill developments be sensitive to neighborhood context and building form and scale.
3. Implementation Policy LU-1.3 Require that new construction, additions, renovations, and infill developments be sensitive to the intent of the land use designations, incorporating neighborhood context as well as building form and scale.
4. Implementation Policy LU-1.4 Encourage architecture which breaks massive buildings into smaller parts. Focus on maintaining a human scale when creating common spaces or amenities.
5. Goal LU-3 Promote balanced, efficient commercial development that is functional, safe, attractive and convenient to users, and which will strengthen the local economy.
6. Implementation Policy LU-3.1 Encourage a diverse mix of commercial and service businesses that support the local tax base, are beneficial to residents, and support the economic need of the community.
7. Implementation Policy LU-3.2 Sufficient lands should be designated to provide a full range of commercial services to the community and surrounding areas to serve the residential properties at build-out.
8. Implementation Policy LU-3.5 Require the separation or buffering of residential areas from businesses which produce noise, odors, high traffic volumes, light or glare, and parking through the use of landscaping, setbacks, and other techniques.

1-10

9. Goal LU-7 Facilitate a self-contained community with a well designed and maintained community with a full range of densities and uses within the capacity of infrastructure and services.
10. Implementation Policy LU-7.2 Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code, and encourage energy-efficient design elements, consistent with Policy LU-6.1.
11. Implementation Policy CI-1.10 Ensure that new development provides for adequate road improvements to serve internal circulation needs, as well as to mitigate impacts of increased traffic on the existing road system.
12. Implementation Policy CI-2.1 Strive to achieve and maintain a LOS D or better on all roadways and intersections: LOS E during peak hours shall be considered acceptable through freeway interchanges and major corridors (Bear Valley Road, Main Street/Phelan Road, Highway 395).
13. Implementation Policy CI-2.2 Work with regional agencies which have authority over roadways within the City to ensure a minimum Level of Service D for roadways and a minimum Level of Service E for intersections.
14. CI Policy 2.4 Develop policies and regulations to ensure that future development does not reduce the Level of Service of roadways and intersections below the minimum Levels of Service goals.
15. Goal: CN-7 Develop, promote and implement policies to reduce and limit Greenhouse Gas Emissions
16. Goal: CN- 8 Implement policies and measures to reduce air pollution and emissions of pollutants.

1-10 Cont.

A revised EIR must be prepared to include an analysis of the project's potential inconsistency with these goals and policies. The revised EIR must also include information and analysis regarding the EIR's conclusion that the project will result in significant and unavoidable cumulatively considerable impacts to Greenhouse Gas Emissions and Transportation and also required a piecemealed SPLA to change the site's land use designations from RC to CIBP.

Additionally, the Project Description states that the gross floor area ratio is 53.3%. This exceeds the MSFCSP maximum gross floor area ratio of 50%. The EIR must be revised to include this information for discussion and analysis and include a finding of significance due to this inconsistency and the project's size exceeding of the overall buildout of the MSFCP.

1-11

5.7 Population and Housing

The EIR has not provided any calculation of the construction jobs generated by the project. Additionally, the EIR has not presented any evidence that the City s workforce is qualified for or interested in work in the industrial sector. The EIR also utilizes uncertain language that the

1-12

project's construction employment needs are "short-term positions are *anticipated* to be filled *primarily* by construction workers who reside in the *Project site s vicinity*," which is notably problematic as the geographic boundaries of the "vicinity" of the project site are undefined. The same is true for the project's operational jobs as the EIR concludes that for both construction and operations the project's "temporary and permanent employment requirements could *likely* be met by the *City s* existing labor force without people needing to relocate into the *Project region*," even though the EIR relies on the unemployment rate for San Bernardino County as a whole to demonstrate that an adequate labor pool is available.

Relying on the entire labor force within San Bernardino County to fill the project's construction and operational jobs will increase VMT and emissions during all phases of construction and operations and the EIR must be revised to account for longer worker trip distances. For example, Hesperia is approximately 54 miles from Chino Hills, 54 miles from Yucaipa, 88 miles from Twentynine Palms, 103 miles from Baker, and 181 miles from Needles while the VMT analysis determines that the project generated VMT is 25.7 VMT per service population (per employee) under cumulative conditions, which is below the cumulative threshold. The revised EIR must also include a construction worker employment analysis to adequately and accurately analyze all potentially significant environmental impacts.

1-12 Cont.

SCAG's Connect SoCal Demographics and Growth Forecast[15] notes that the City will add 23,600 jobs between 2016 - 2045. Utilizing the EIR's calculation of 657 employees, the project represents 2.7% of the City s employment growth from 2016 - 2045. A single project accounting for this amount of projected growth over 29 years represents a significant amount of growth. The EIR must be revised to includes 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 growth forecast for the City. For example, other recent industrial projects such as US Cold Storage (913 employees), Hesperia Commerce Center I (2,928 employees), Hesperia Commerce Center II (3,959 employees), Dara Industrial (628 employees), and I-15 Industrial Park (2,309 employees) combined with the proposed project will cumulatively generate 11,394 employees. This represents 48.2% of the City s job growth over 29 years accounted for by only six industrial projects. These totals increase exponentially when commercial development activity is added to the brief list of industrial activity above. The EIR must be revised 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

[15] 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

the employment/population growth forecasts by SCAG, the City's General Plan, and/or the MSFCSP and its EIR. 1-12 Cont.

6.0 Other CEQA Considerations

6.1 Growth Inducing Impacts and 6.2 Significant Irreversible Changes

The EIR does not discuss or analyze that the project is a piecemealed portion of a larger overall project that required approval SPLA19-00005 to change the existing land use designations of the project site from Regional Commercial (RC) to Commercial Industrial Business Park (CIBP). This increased the developable industrial area of the MSFCSP without providing any information or analysis on the buildout conditions of the MSFCSP area. This is misleading to the public and decision makers. The EIR must be revised to include the required Specific Plan Amendment for discussion and analysis and include a finding of significance as the project will contribute to growth that was not included as part of growth forecasts in Connect SoCal, the General Plan, the AQMP, and/or the MSFCSP. The EIR must also include discussion for the precedence setting action that approval of the Specific Plan Amendment sets for future land use changes in the area. 1-13

The EIR must also include a cumulative analysis discussion here to demonstrate the impact of the proposed project in a cumulative setting. For example, other recent industrial projects such as US Cold Storage (913 employees), Hesperia Commerce Center I (2,928 employees), Hesperia Commerce Center II (3,959 employees), Dara Industrial (628 employees), and I-15 Industrial Park (2,309 employees) combined with the proposed project will cumulatively generate 11,394 employees. This represents 48.2% of the City s job growth over 29 years accounted for by only six industrial projects. These totals increase exponentially when commercial development activity is added to the brief list of industrial activity above. The EIR must be revised 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 City's General Plan, and/or the MSFCSP and its EIR. 1-14

7.0 Alternatives

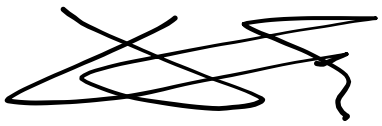
The EIR is required to evaluate a reasonable range of alternatives to the proposed project which will avoid or substantially lessen any of the significant effects of the project (CEQA § 15126.6.) The only alternatives chosen for analysis include the CEQA required "No Project" alternative and only two other alternatives - Other Development Project Alternative and a Reduced Development Intensity Alternative. The EIR does not evaluate a reasonable range of alternatives as only two alternatives beyond the required No Project alternative are analyzed. The EIR must be revised to include analysis of a reasonable range of alternatives and foster informed decision making (CEQA 1-15

§ 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, or a mixed-use project that provides affordable housing and local-serving commercial uses, which would reduce VMT, GHG emissions, and improve Air Quality. 1-15 Cont.

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. 1-16

Sincerely,



Gary Ho
Blum Collins & Ho, LLP

Attachments:
1. SWAPE Analysis

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

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January 10, 2023

Gary Ho
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Los Angeles, CA 90017

Subject: Comments on the Poplar 18 Project (SCH No. 2022080248)

Dear Mr. Ho,

We have reviewed the November 2022 Draft Environmental Impact Report ("DEIR") for the Poplar 18 Project ("Project") located in the City of Hesperia ("City"). The Project proposes to construct 414,700-square-feet ("SF") of warehouse space and 236 parking spaces on the 17.87-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 are underestimated and inadequately addressed. A revised 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. 1-17

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with California Emissions Estimator Model ("CalEEMod") Version 2020.4.0 (p. 4.2-21).[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 can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence. Once all the values are inputted into the model, the Project's construction and operational emissions are calculated, and 1-18

[1] "CalEEMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* http://www.aqmd.gov/caleemod/download-model.

"output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Air Quality and GHG Emission Estimates ("AQ & GHG Report") and Health Risk Assessment ("HRA Report") as Appendix B-1 and B-2 to the DEIR, respectively, we found that several model inputs were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions may be underestimated. A revised EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality. 1-18 Cont.

Unsubstantiated Reductions to Architectural and Area Coating Emission Factors

Review of the CalEEMod output files demonstrates that the "I-15 Industrial Phase II" model includes several changes to the architectural and area coating emission factors (see excerpt below) (Appendix B-1, pp. 89, 124, 150; Appendix B-2, pp. 221).

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50

As demonstrated above, the nonresidential exterior, interior, and parking emission factors are reduced from their default values of 250- to 50- grams per liter ("g/L"). As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[2] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is: 1-19

> "Based on applicant provided information. Low-VOC coatings 50 g/L" (Appendix B-1, pp. 89, 124, 150; Appendix B-2, pp. 221).

Furthermore, the DEIR states:

> "The MDAQMD rules applicable to the Project may include, but are not limited to, the following: […]
>
> - Rule 1113 – Architectural Coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories" (p. 4.2-18).

[2] "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.

However, these changes remain unsupported as we cannot verify the accuracy of the revised architectural and area coating emission factors based on MDAQMD Rule 1113 alone. The MDAQMD Rule 1113 Table of Standards provides the required VOC limits (grams of VOC per liter of coating) for 44 different coating categories.[3] The VOC limits for each coating varies from a minimum value of 50 g/L to a maximum value of 730 g/L. As such, we cannot verify that MDAQMD Rule 1113 substantiates reductions to the default coating values without more information regarding what category of coatings will be used. As the DEIR and associated documents fail to explicitly require the use of specific types of coatings, we are unable to verify the revised emission factors included in the model.

1-19 Cont.

These unsubstantiated reductions present an issue, as CalEEMod uses the architectural and area coating emission factors to calculate the Project's volatile organic compound ("VOC") emissions.[4] Thus, by including unsubstantiated reductions to the default architectural and area coating emission factors, the model may underestimate the Project's construction-related and operational VOC emissions and should not be relied upon to determine Project significance. An updated EIR should be prepared which requires the use of low VOC architectural and area coatings in a formal mitigation measure.

Unsubstantiated Reductions to Off-Road Construction Equipment Unit Amounts

Review of the CalEEMod output files demonstrates that the "I-15 Industrial Phase II" model includes two changes to the off-road construction equipment unit amounts (see excerpt below) (Appendix B-1, pp. 91, 126, 152; Appendix B-2, pp. 223).

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00

1-20

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[5] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

> "Based on applicant provided information" (Appendix B-1, pp. 89, 124, 150; Appendix B-2, pp. 221).

Furthermore, the DEIR provides the following construction scenario assumptions (see excerpt below) (p. 4.2-22, Table 4.2-5):

[3] "Rule 1113 Architectural Coatings." MDAQMD, October 2020, *available at:* https://www.mdaqmd.ca.gov/home/showpublisheddocument/8480/637393276806270000, p. 1113-28 – 1113-29, Table 1.
[4] "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.
[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. 2, 9.

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Site Preparation	10	0	0	Rubber-tired dozers	1	8
				Tractors/loaders/ backhoes	1	8
Grading	30	0	0	Excavators	2	8
				Graders	1	8
				Rubber-tired dozers	1	8
				Scrapers	2	8
				Tractors/loaders/ backhoes	2	8
Building Construction	328	128	0	Cranes	1	7
				Forklifts	3	8
				Generator sets	1	8
				Tractors/loaders/ backhoes	3	7
				Welders	1	8
Paving	16	0	0	Pavers	2	8
				Paving equipment	2	8
				Rollers	2	8
Architectural Coating	66	0	0	Air compressors	1	6

Source: Appendix B-1.

1-20 Cont.

However, the reductions remain unsupported, as the source for the above-mentioned construction equipment unit amounts are the CalEEMod output files themselves. This is incorrect, as CalEEMod should not be used to substantiate the Project documents, instead, the Project documents should substantiate the changes included in the CalEEMod model.[6] As the DEIR fails to provide an adequate source for the off-road construction equipment unit amounts, we cannot verify the changes.

These unsubstantiated reductions present an issue, as CalEEMod uses the off-road equipment unit amounts to calculate the emissions associated with off-road construction equipment.[7] By including unsubstantiated changes to the default off-road construction equipment unit amounts, the model may underestimate the Project's construction-related 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 construction-related and operational emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the DEIR.

1-21

[6] "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.

[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.

In our updated model, we omitted the unsubstantiated changes to the architectural and area coating emission factors and the off-road construction equipment unit amounts.[8]

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. 4.2-20, Table 4.2-4) (see table below).

SWAPE Criteria Air Pollutant Emissions	
Construction	**VOC** (lbs/day)
DEIR	98.5
SWAPE	492.7
% Increase	400%
MDAQMD Threshold	**137**
Exceeds?	***Yes***

1-21 Cont.

As demonstrated above, the construction-related VOC emissions, as estimated by SWAPE, increase by approximately 400% and exceed the applicable MDAQMD significance threshold. Thus, 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.

Disproportionate Health Risk Impacts of Warehouses on Surrounding Communities

Upon review of the DEIR, we have determined that the development of the proposed Project would result in disproportionate health risk impacts on community members living, working, and going to school within the immediate area of the Project site. According to the SCAQMD:

> "Those living within a half mile of warehouses are more likely to include communities of color, have health impacts such as higher rates of asthma and heart attacks, and a greater environmental burden."[9]

1-22

In particular, the SCAQMD found that more than 2.4 million people live within a half mile radius of at least one warehouse, and that those areas not only experience increased rates of asthma and heart attacks, but are also disproportionately Black and Latino communities below the poverty line.[10] Another study similarly indicates that "neighborhoods with lower household income levels and higher percentages of minorities are expected to have higher probabilities of containing warehousing

[8] See Attachment B for updated air modeling.
[9] "South Coast AQMD Governing Board Adopts Warehouse Indirect Source Rule." SCAQMD, May 2021, *available at:* http://www.aqmd.gov/docs/default-source/news-archive/2021/board-adopts-waisr-may7-2021.pdf?sfvrsn=9.
[10] "Southern California warehouse boom a huge source of pollution. Regulators are fighting back." Los Angeles Times, May 2021, *available at:* https://www.latimes.com/california/story/2021-05-05/air-quality-officials-target-warehouses-bid-to-curb-health-damaging-truck-pollution.

facilities."[11] Additionally, a report authored by the Inland Empire-based People's Collective for Environmental Justice and University of Redlands states:

> "As the warehouse and logistics industry continues to grow and net exponential profits at record rates, more warehouse projects are being approved and constructed in low-income communities of color and serving as a massive source of pollution by attracting thousands of polluting truck trips daily. Diesel trucks emit dangerous levels of nitrogen oxide and particulate matter that cause devastating health impacts including asthma, chronic obstructive pulmonary disease (COPD), cancer, and premature death. As a result, physicians consider these pollution-burdened areas 'diesel death zones."[12]

1-22 Cont.

It is evident that the continued development of industrial warehouses within these communities poses a significant environmental justice challenge. However, the acceleration of warehouse development is only increasing despite the consequences on public health. The Inland Empire alone is adding 10 to 25 million SF of new industrial space each year.[13]

In April 2022, the American Lung Association ranked San Bernadino County as the worst for ozone pollution in the nation.[14] The Los Angeles Times also reported that San Bernardino County had 130 bad air days for ozone pollution in 2020, violating federal health standards on nearly every summer day.[15] Downtown Los Angeles, by comparison, had 22 ozone violation days in 2020. This year, the County continues to face the worst ozone pollution, as it has seen the highest recorded Air Quality Index ("AQI") values for ground-level ozone in California.[16] The U.S. Environmental Protection Agency ("EPA") indicates that ozone, the main ingredient in "smog," can cause several health problems, which includes aggravating lung diseases and increasing the frequency of asthma attacks. The U.S. EPA states:

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[11] "Location of warehouses and environmental justice: Evidence from four metros in California." Metro Freight Center of Excellence, January 2018, *available at:* https://www.metrans.org/assets/research/MF%201.1g_Location%20of%20warehouses%20and%20environmental%20justice_Final%20Report_021618.pdf, p. 21.

[12] "Warehouses, Pollution, and Social Disparities: An analytical view of the logistics industry's impacts on environmental justice communities across Southern California." People's Collective for Environmental Justice, April 2021, *available at:* https://earthjustice.org/sites/default/files/files/warehouse_research_report_4.15.2021.pdf, p. 4.

[13] "2020 North America Industrial Big Box Review & Outlook." CBRE, 2020, *available at:* https://www.cbre.com/-/media/project/cbre/shared-site/insights/local-responses/industrial-big-box-report-inland-empire/local-response-2020-ibb-inland-empire-overview.pdf, p. 2.

[14] "State of the Air 2022." American Lung Association, April 2022, *available at:* https://www.lung.org/research/sota/key-findings/most-polluted-places.

[15] "Southern California warehouse boom a huge source of pollution. Regulators are fighting back." Los Angeles Times, May 2021, *available at:* https://www.latimes.com/california/story/2021-05-05/air-quality-officials-target-warehouses-bid-to-curb-health-damaging-truck-pollution.

[16] "High Ozone Days." American Lung Association, 2022, *available at:* https://www.lung.org/research/sota/city-rankings/states/california.

"Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure. Children are also more likely than adults to have asthma."[17]

Furthermore, regarding the increased sensitivity of early-life exposures to inhaled pollutants, the California Air Resources Board ("CARB") states:

"Children are often at greater risk from inhaled pollutants, due to the following reasons:

- Children have unique activity patterns and behavior. For example, they crawl and play on the ground, amidst dirt and dust that may carry a wide variety of toxicants. They often put their hands, toys, and other items into their mouths, ingesting harmful substances. Compared to adults, children typically spend more time outdoors and are more physically active. Time outdoors coupled with faster breathing during exercise increases children's relative exposure to air pollution.

- Children are physiologically unique. Relative to body size, children eat, breathe, and drink more than adults, and their natural biological defenses are less developed. The protective barrier surrounding the brain is not fully developed, and children's nasal passages aren't as effective at filtering out pollutants. Developing lungs, immune, and metabolic systems are also at risk.

- Children are particularly susceptible during development. Environmental exposures during fetal development, the first few years of life, and puberty have the greatest potential to influence later growth and development."[18]

1-22 Cont.

A Stanford-led study also reveals that children exposed to high levels of air pollution are more susceptible to respiratory and cardiovascular diseases in adulthood.[19] Thus, given children's higher propensity to succumb to the negative health impacts of air pollutants, and as warehouses release more smog-forming pollution than any other sector, it is necessary to evaluate the specific health risk that warehouses pose to children in the nearby community.

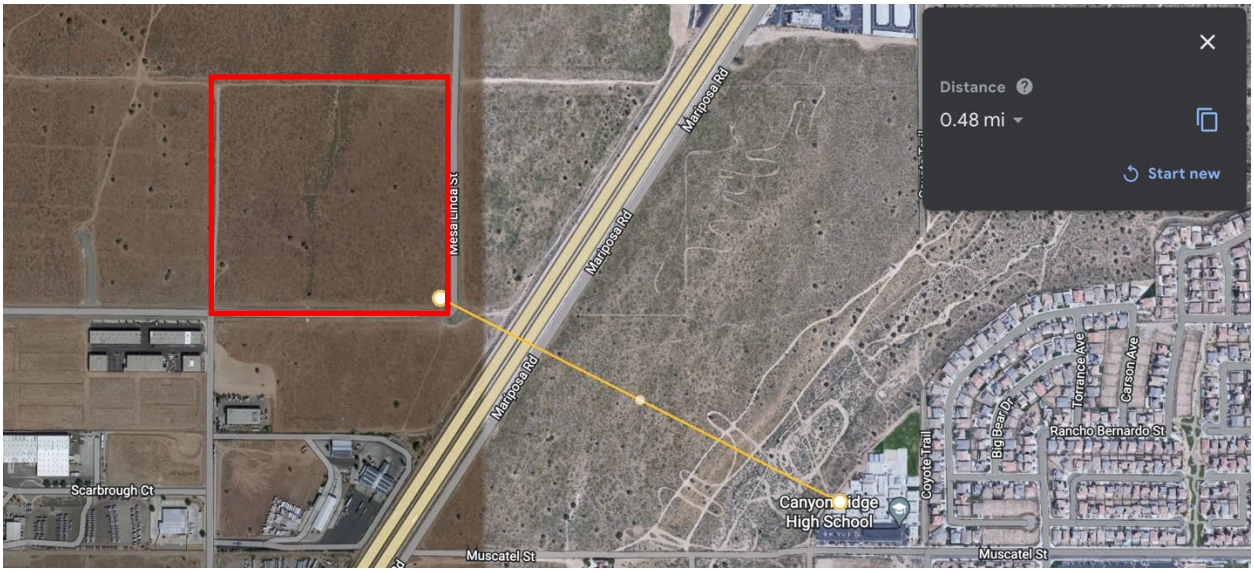
According to the above-mentioned study by the People's Collective for Environmental Justice and University of Redlands, there are 640 schools in the South Coast Air Basin that are located within half a mile of a large warehouse, most of them in socio-economically disadvantaged areas.[20] Regarding the

[17] "Health Effects of Ozone Pollution." U.S. EPA, May 2021, *available at:* https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.
[18] "Children and Air Pollution." California Air Resources Board (CARB), *available at:* https://ww2.arb.ca.gov/resources/documents/children-and-air-pollution.
[19] "Air pollution puts children at higher risk of disease in adulthood, according to Stanford researchers and others." Stanford, February 2021, *available at:* https://news.stanford.edu/2021/02/22/air-pollution-impacts-childrens-health/.
[20] "Warehouses, Pollution, and Social Disparities: An analytical view of the logistics industry's impacts

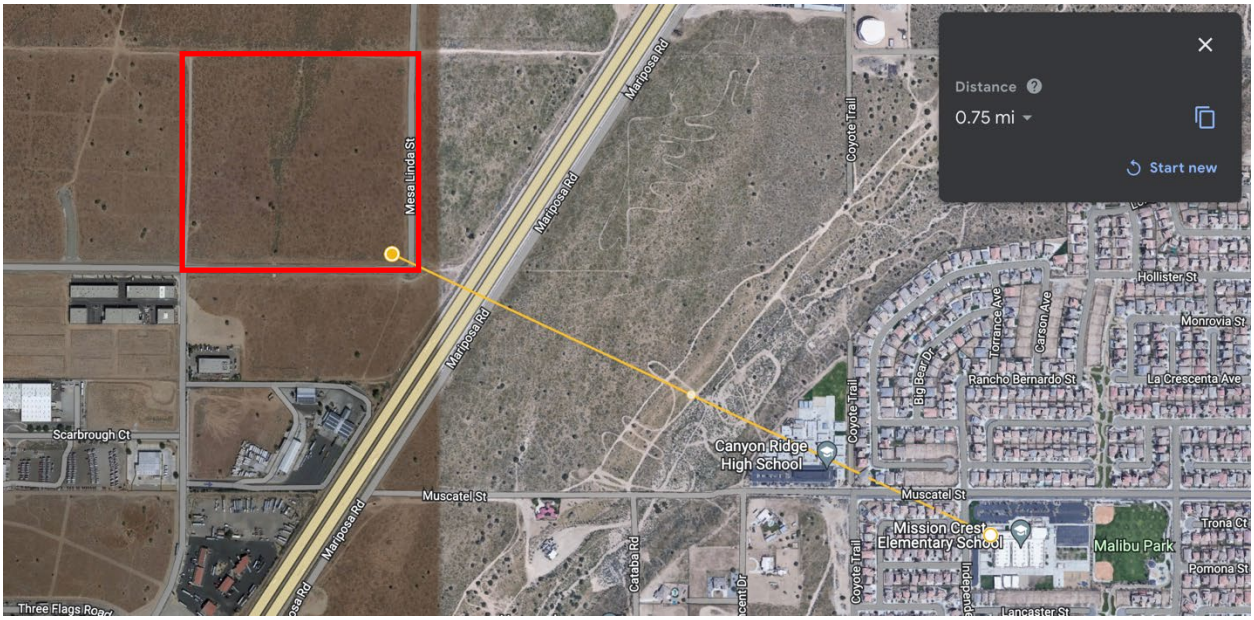
proposed Project itself, the DEIR states that "[t]he nearest school to the Project site is San Joaquin Valley College (9331 Mariposa Road), which is located approximately 1.4 miles southeast of the site" (p. 5-4). However, review of Google Earth demonstrates that there are Canyon Ridge High School and Mission Crest Elementary School are 0.48- and 0.75-miles from the Project site, respectively (see excerpts below).

1-22 Cont.

Canyon Ridge High School:



Mission Crest Elementary School:



on environmental justice communities across Southern California." People's Collective for Environmental Justice, April 2021, *available at:* https://earthjustice.org/sites/default/files/files/warehouse_research_report_4.15.2021.pdf, p. 4.

As demonstrated above, there are two additional schools within a mile from the Project site. The DEIR fails to disclose that this high school and elementary school are near the site and instead erroneously claims that the closest school is the San Joaquin Valley College. This poses a significant threat because, as outlined above, children are a vulnerable population that are more susceptible to the damaging side effects of air pollution. As such, the Project would have detrimental short-term and long-term health impacts on local children if approved.

A revised EIR should be prepared to evaluate the disproportionate impacts of the proposed warehouse on the community adjacent to the Project, including an analysis of the impact on children and people of color who live and attend school in the surrounding area. Finally, in order to evaluate the cumulative air quality impact from the several warehouse projects proposed or built in a one-mile radius of the Project site, the revised EIR should prepare a cumulative health risk assessment ("HRA") to quantify the adverse health outcome from the effects of exposure to multiple warehouses in the immediate area.

1-22 Cont.

Diesel Particulate Matter Emissions Inadequately Evaluated

The DEIR conducts two HRAs evaluating the impacts as a result of exposure to diesel particulate matter ("DPM") emissions from 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 0.38- and 0.71- in one million, respectively, which would not exceed the SCAQMD significance threshold of 10 in one million (see excerpts below) (p. 4.2-35, Table 4.2-11, 4.2-12).

Table 4.2-11. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	0.38	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0005	1.0	Less than Significant

1-23

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

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	0.71	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0002	1.0	Less than Significant

Source: Appendix B-2.
Notes: CEQA = California Environmental Quality Act.

However, the DEIR's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for three reasons.

First, the DEIR fails to mention the sensitive receptors used for the Project's HRA. This is incorrect, as according to the modeling protocol listed in the *Risk Assessment Guidelines* provided by the Office of Environmental Health Hazard Assessment ("OEHHA"), the Project must:

> "Identify and describe the location(s) of known or anticipated potential sensitive receptors, the point of maximum impact (PMI), and the maximum exposed individual residential (MEIR) and worker (MEIW) receptors." [21]

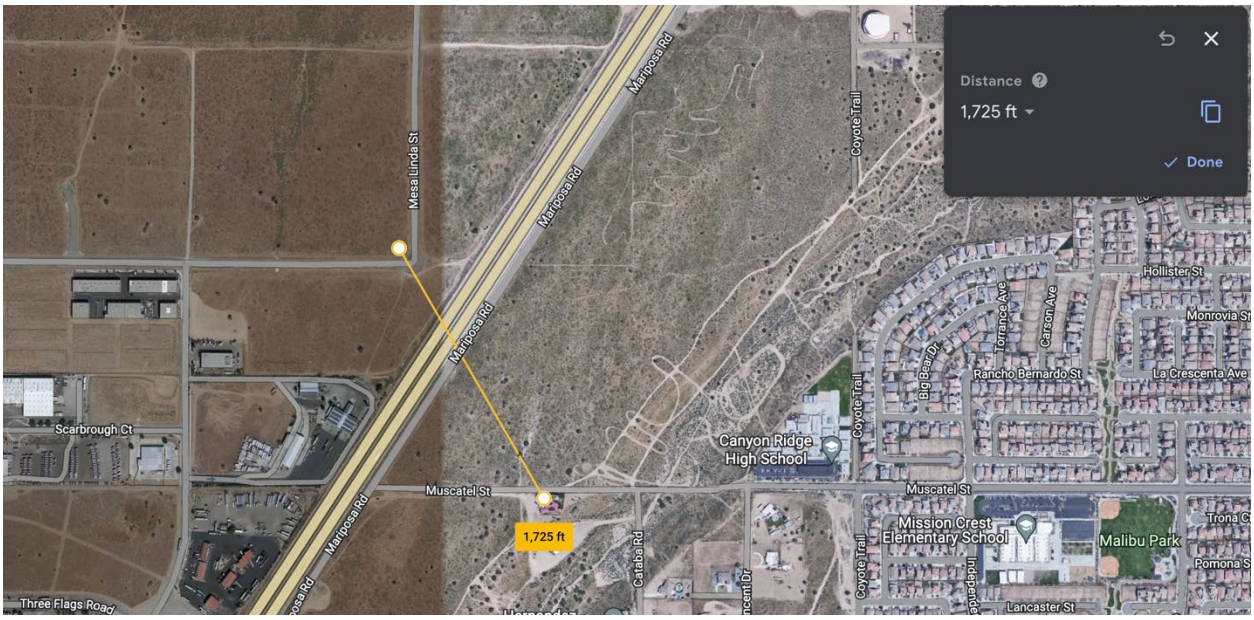
As demonstrated above, the DEIR is required to identify the location of the nearest sensitive receptor and the maximally exposed receptor ("MEIR"). Without disclosing the location of the sensitive receptor utilized in the HRA, the assessment is unsubstantiated and may underestimate the DPM concentration at the correct receptor location. Furthermore, review of the DEIR demonstrates that sensitive receptors are only mentioned in the context of noise impacts. Specifically, the DEIR states:

> "Sensitive receptors in the vicinity of the Project site include residential uses to the north, and two motels (i.e., transient residential uses) located to the north-northwest. These sensitive receptors represent the nearest residential land uses with the potential to be impacted by construction and operation of the Project. Non-sensitive land uses (commercial and industrial) exist in proximity to the Project site, and construction noise levels at these receptors were also estimated for informational purposes. Project construction would take place both near and far from existing land uses. For example, construction would take place as near as approximately 3,500 feet from residential land uses north of the Project boundary, but (because of the Project's size) construction work for Building 1 would also take place as far as 4,000 feet from the same residential uses. Most construction activities associated with the Project would occur at an average distance of approximately 3,700 feet from the residential uses to the north, which represents activities both near and far, as is typical for construction projects" (p. 4.9-11).

1-23

However, while the DEIR claims that the closest residential land uses are 3,500 feet away, review of Google Earth demonstrates that there is a sensitive receptor approximately 1,725 feet away (see excerpt below).

[21] "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. 4-57.



Furthermore, the Canyon Ridge High School, as previously discussed, is approximately 2,500 feet from the Project site. As the DEIR does not acknowledge or discuss the Project's closest sensitive receptors, the DEIR's HRA may overestimate the distance to nearest receptor, and thus underestimate the DPM concentration that the receptors would be exposed to, and the associated cancer risk.

Second, upon review of the HRA, we found that the exposure parameters, such as the daily breathing rates ("BR/BW"), exposure duration ("ED"), age sensitivity factors ("ASF"), fraction of time at home ("FAH"), and exposure frequency ("EF") are not disclosed. Additionally, the DEIR and associated documents fail to disclose the equations used to calculate the Project's construction and operational cancer risk. In order to verify the DEIR's purported cancer risks are substantiated, the DEIR must show that the following equation was utilized, per OEHHA guidance:[22] 1-23

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)

[22] "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.

Without such information, we cannot verify the calculation of the Project's cancer risk is accurate. As a result, the Project's cancer risk may be underestimated and should not be relied upon to determine Project significance.

Third, while the DEIR includes two HRAs evaluating the health risk impacts to nearby, existing receptors as a result of Project construction and operation, the DEIR fails to evaluate the combined lifetime cancer risk to nearby receptors as a result of Project construction and operation together. According to OEHHA guidance, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location." [23] However, the DEIR fails to sum the total cancer risks in order to evaluate the combined cancer risk over the course of the Project's total construction and operation. This is incorrect and, as such, an updated analysis should quantify and sum the Project's construction and operational cancer risks to compare to the MDAQMD threshold of 10 in one million. 1-23

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 6,334.60-metric tons of carbon dioxide equivalents per year ("MT CO_2e/year") (see excerpt below) (p. 4.6-29, Table 4.6-4). 1-24

Table 4.6-4. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area Source	0.02	<0.01	0.00	0.02
Energy Source	652.81	0.04	0.01	656.39
Mobile Sources	5,016.14	0.05	0.51	5,170.66
On-Site Equipment Sources	143.52	0.01	<0.01	144.21
Solid Waste	22.00	1.30	0.00	54.51
Water/Wastewater	206.67	2.52	0.06	287.7
Annual construction-related emissions amortized over 30 years				*21.11*
Total Project Emissions				6,334.60

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; PDFs = Project design features.
See Appendix I for complete results.

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 shown in Table 4.6-4, with applicable regulatory requirements and PDFs, the Project would result in approximately 6,335 MT CO_2e per year, which would exceed the SCAQMD GHG threshold of 3,000 MT CO_2e per year. Therefore, the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and this would represent a cumulatively potentially significant impact. Mitigation measures would be required that would reduce Project-generated construction and operational GHG emissions.

[23] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4.

> Mitigation measures MM-GHG-1 through MM-GHG-4 would reduce construction and operation-related GHG emissions. However, the effectiveness of the required mitigation measures cannot be accurately quantified at this time. No other feasible mitigation is available to further reduce GHG emissions from the Project. Therefore, Project generated GHG emissions would still exceed the applied threshold of 3,000 MT CO_2e per year and impact would be significant and unavoidable" (p. 4.6-29).

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."[24]

1-24 Cont.

As indicated above, an impact can only be labeled as significant-and-unavoidable after all available, feasible mitigation is considered. Here, while the DEIR implements MM-GHG-1 through MM-GHG-4, the DEIR fails to implement *all* feasible mitigation (p. 4.6-37 – 4.6-39). 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." Thus, the Project should not be approved until a revised EIR is prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in significant air quality and greenhouse gas impacts that should be mitigated further. As such, in an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in the Department of Justice Warehouse Project Best Practices document.[25] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

1-25

- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Designating an area in the construction site where electric-powered construction vehicles and equipment can charge.

[24] "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.

[25] "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.

- 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.
- 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.
- Forbidding trucks from idling for more than three minutes and requiring operators to turn off engines when not in use.
- 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.
- 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.
- 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

1-25

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.
- 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.

1-25 Cont.

Furthermore, we recommend consideration of SCAG's 2020 *RTP/SCS* PEIR's Greenhouse Gas Project Level Mitigation Measures ("PMM-GHG-1"), as described below: [26]

SCAG RTP/SCS 2020-2045
Greenhouse Gas Project Level Mitigation Measures – PMM-GHG-1 In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency:
c) Include off-site measures to mitigate a project's emissions.

[26] "4.0 Mitigation Measures." Connect SoCal Program Environmental Impact Report Addendum #1, September 2020, available at: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_addendum_4_mitigationmeasures.pdf?1606004420, p. 4.0-2 – 4.0-10; 4.0-19 – 4.0-23; See also: "Certified Final Connect SoCal Program Environmental Impact Report." Southern California Association of Governments (SCAG), May 2020, *available at:* https://scag.ca.gov/peir.

e) Measures that encourage transit use, carpooling, bike-share and car-share programs, active transportation, and parking strategies, including, but not limited to the following:

i. Promote transit-active transportation coordinated strategies;
ii. Increase bicycle carrying capacity on transit and rail vehicles;
iii. Improve or increase access to transit;
iv. Increase access to common goods and services, such as groceries, schools, and day care;
v. Incorporate affordable housing into the project;
vi. Incorporate the neighborhood electric vehicle network;
vii. Orient the project toward transit, bicycle and pedestrian facilities;
viii. Improve pedestrian or bicycle networks, or transit service;
ix. Provide traffic calming measures;
x. Provide bicycle parking;
xi. Limit or eliminate park supply;
xii. Unbundle parking costs;
xiii. Provide parking cash-out programs;
xiv. Implement or provide access to commute reduction program;

f) Incorporate bicycle and pedestrian facilities into project designs, maintaining these facilities, and providing amenities incentivizing their use; and planning for and building local bicycle projects that connect with the regional network;

g) Improving transit access to rail and bus routes by incentives for construction and transit facilities within developments, and/or providing dedicated shuttle service to transit stations; and

h) Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs including but not limited to measures that:

i. Provide car-sharing, bike sharing, and ride-sharing programs;
ii. Provide transit passes;
iii. Shift single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services;
iv. Provide incentives or subsidies that increase that use of modes other than single-occupancy vehicle;
v. Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms;
vi. Provide employee transportation coordinators at employment sites;
vii. Provide a guaranteed ride home service to users of non-auto modes.

i) Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles;

j) Land use siting and design measures that reduce GHG emissions, including:

i. Developing on infill and brownfields sites;
ii. Building compact and mixed-use developments near transit;
iii. Retaining on-site mature trees and vegetation, and planting new canopy trees;
iv. Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse.

k) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities. The measures provided above are also intended to be applied in low income and minority communities as applicable and feasible.

1-25 Cont.

l) Require at least five percent of all vehicle parking spaces include electric vehicle charging stations, or at a minimum, require the appropriate infrastructure to facilitate sufficient electric charging for passenger vehicles and trucks to plug-in.
m) Encourage telecommuting and alternative work schedules, such as: i. Staggered starting times ii. Flexible schedules iii. Compressed work weeks
n) Implement commute trip reduction marketing, such as: i. New employee orientation of trip reduction and alternative mode options ii. Event promotions iii. Publications
o) Implement preferential parking permit program
p) Implement school pool and bus programs
q) Price workplace parking, such as: i. Explicitly charging for parking for its employees; ii. Implementing above market rate pricing; iii. Validating parking only for invited guests; iv. Not providing employee parking and transportation allowances; and v. Educating employees about available alternatives.

1-25 Cont.

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

Furthermore, 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.

1-26

A revised EIR should be prepared to include all feasible mitigation measures, as well as include updated air quality 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.

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

1-27

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.

1-27 Cont.

Sincerely,

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

Paul E. Rosenfeld, Ph.D.

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

1-28

to end

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

I-15 Industrial Phase II

Mojave Desert Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	145.15	1000sqft	3.33	145,150.00	0
Unrefrigerated Warehouse-No Rail	134.78	1000sqft	3.09	134,780.00	0
Unrefrigerated Warehouse-Rail	134.78	1000sqft	3.09	134,780.00	0
Other Asphalt Surfaces	219.14	1000sqft	5.03	219,142.00	0
Parking Lot	182.00	Space	1.64	72,800.00	0
Parking Lot	43.30	1000sqft	0.99	43,300.00	0
City Park	2.20	Acre	2.20	95,832.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - Consistent with the DEIR's model.

Construction Phase - Consistent with the DEIR's model.

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Reductions to Off-Road Construction Equipment Unit Amounts"

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Reductions to Off-Road Construction Equipment Unit Amounts"

Trips and VMT - Consistent with the DEIR's model.

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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

Architectural Coating - See SWAPE comment regarding "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors." Architectural coating areas consistent with the DEIR's model.

Vehicle Trips - Consistent with the DEIR's model.

Fleet Mix - Consistent with the DEIR's model.

Area Coating - See SWAPE comment regarding "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors." Area coating areas consistent with the DEIR's model.

Construction Off-road Equipment Mitigation - Consistent with the DEIR's model.

Area Mitigation - See SWAPE comment regarding "Incorrect Application of Area-Related Operational Mitigation Measures"

Water Mitigation - Consistent with the DEIR's model.

Waste Mitigation - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	207,355.00	207,353.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	622,065.00	622,058.00
tblAreaCoating	Area_Nonresidential_Exterior	207355	207353
tblAreaCoating	Area_Nonresidential_Interior	622065	622058
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	131.00
tblConstructionPhase	PhaseEndDate	7/12/2024	10/23/2023
tblConstructionPhase	PhaseEndDate	5/17/2024	8/28/2023
tblConstructionPhase	PhaseEndDate	3/24/2023	2/24/2023
tblConstructionPhase	PhaseEndDate	6/14/2024	9/25/2023
tblConstructionPhase	PhaseEndDate	2/10/2023	1/13/2023
tblConstructionPhase	PhaseStartDate	6/15/2024	9/26/2023
tblConstructionPhase	PhaseStartDate	3/25/2023	2/25/2023
tblConstructionPhase	PhaseStartDate	2/11/2023	1/14/2023
tblConstructionPhase	PhaseStartDate	5/18/2024	8/29/2023
tblConstructionPhase	PhaseStartDate	1/28/2023	1/1/2023
tblFleetMix	HHD	0.02	0.57
tblFleetMix	HHD	0.02	0.00

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

tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDA	0.53	0.70
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.23
tblFleetMix	LHD1	0.03	0.29
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.7960e-003	0.08
tblFleetMix	LHD2	7.7960e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.7520e-003	0.00
tblFleetMix	MH	5.7520e-003	0.00
tblFleetMix	MHD	7.1140e-003	0.06
tblFleetMix	MHD	7.1140e-003	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	SBUS	1.1600e-003	0.00
tblFleetMix	SBUS	1.1600e-003	0.00
tblFleetMix	UBUS	1.9400e-004	0.00
tblFleetMix	UBUS	1.9400e-004	0.00
tblLandUse	LandUseSquareFeet	219,140.00	219,142.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00

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

tblVehicleTrips	CC_TL	6.60	40.00
tblVehicleTrips	CC_TL	6.60	16.60
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TL	6.60	16.60
tblVehicleTrips	CW_TL	14.70	40.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	ST_TR	1.74	1.88
tblVehicleTrips	ST_TR	1.74	7.63
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	SU_TR	1.74	1.88
tblVehicleTrips	SU_TR	1.74	7.63
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblVehicleTrips	WD_TR	1.74	1.88
tblVehicleTrips	WD_TR	1.74	7.63

2.0 Emissions Summary

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	492.7130	34.6007	33.9317	0.0931	19.7847	1.4263	21.0514	10.1363	1.3122	11.3016	0.0000	9,343.3013	9,343.3013	1.9524	0.4679	9,500.6415
Maximum	**492.7130**	**34.6007**	**33.9317**	**0.0931**	**19.7847**	**1.4263**	**21.0514**	**10.1363**	**1.3122**	**11.3016**	**0.0000**	**9,343.3013**	**9,343.3013**	**1.9524**	**0.4679**	**9,500.6415**

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	492.7130	34.6007	33.9317	0.0931	19.7847	1.4263	21.0514	10.1363	1.3122	11.3016	0.0000	9,343.3013	9,343.3013	1.9524	0.4679	9,500.6415
Maximum	**492.7130**	**34.6007**	**33.9317**	**0.0931**	**19.7847**	**1.4263**	**21.0514**	**10.1363**	**1.3122**	**11.3016**	**0.0000**	**9,343.3013**	**9,343.3013**	**1.9524**	**0.4679**	**9,500.6415**

	ROG	NOx	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**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Energy	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188
Mobile	3.1767	40.0020	45.6308	0.3059	20.3718	0.5306	20.9024	5.5157	0.5057	6.0214		31,750.3978	31,750.3978	0.2901	3.1592	32,699.0831
Total	**15.0349**	**41.4088**	**46.8997**	**0.3144**	**20.3718**	**0.6378**	**21.0096**	**5.5157**	**0.6129**	**6.1286**		**33,437.7789**	**33,437.7789**	**0.3229**	**3.1901**	**34,396.5027**

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	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Energy	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188
Mobile	3.1767	40.0020	45.6308	0.3059	20.3718	0.5306	20.9024	5.5157	0.5057	6.0214		31,750.3978	31,750.3978	0.2901	3.1592	32,699.0831
Total	**15.0349**	**41.4088**	**46.8997**	**0.3144**	**20.3718**	**0.6378**	**21.0096**	**5.5157**	**0.6129**	**6.1286**		**33,437.7789**	**33,437.7789**	**0.3229**	**3.1901**	**34,396.5027**

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	2/24/2023	5	30	
3	Building Construction	Building Construction	2/25/2023	8/28/2023	5	131	
4	Paving	Paving	8/29/2023	9/25/2023	5	20	
5	Architectural Coating	Architectural Coating	9/26/2023	10/23/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 7.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 622,058; Non-Residential Outdoor: 207,353; Striped Parking Area: 20,115 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41

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

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	30.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	355.00	139.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	71.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0461	0.0284	0.4328	1.1600e-003	0.1277	6.1000e-004	0.1283	0.0339	5.6000e-004	0.0344		116.8087	116.8087	2.7100e-003	2.7900e-003	117.7076
Total	**0.0461**	**0.0284**	**0.4328**	**1.1600e-003**	**0.1277**	**6.1000e-004**	**0.1283**	**0.0339**	**5.6000e-004**	**0.0344**		**116.8087**	**116.8087**	**2.7100e-003**	**2.7900e-003**	**117.7076**

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0461	0.0284	0.4328	1.1600e-003	0.1277	6.1000e-004	0.1283	0.0339	5.6000e-004	0.0344		116.8087	116.8087	2.7100e-003	2.7900e-003	117.7076
Total	**0.0461**	**0.0284**	**0.4328**	**1.1600e-003**	**0.1277**	**6.1000e-004**	**0.1283**	**0.0339**	**5.6000e-004**	**0.0344**		**116.8087**	**116.8087**	**2.7100e-003**	**2.7900e-003**	**117.7076**

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1383	0.0851	1.2983	3.4700e-003	0.3832	1.8200e-003	0.3850	0.1016	1.6800e-003	0.1033		350.4259	350.4259	8.1400e-003	8.3700e-003	353.1227
Total	**0.1383**	**0.0851**	**1.2983**	**3.4700e-003**	**0.3832**	**1.8200e-003**	**0.3850**	**0.1016**	**1.6800e-003**	**0.1033**		**350.4259**	**350.4259**	**8.1400e-003**	**8.3700e-003**	**353.1227**

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1383	0.0851	1.2983	3.4700e-003	0.3832	1.8200e-003	0.3850	0.1016	1.6800e-003	0.1033		350.4259	350.4259	8.1400e-003	8.3700e-003	353.1227
Total	**0.1383**	**0.0851**	**1.2983**	**3.4700e-003**	**0.3832**	**1.8200e-003**	**0.3850**	**0.1016**	**1.6800e-003**	**0.1033**		**350.4259**	**350.4259**	**8.1400e-003**	**8.3700e-003**	**353.1227**

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

3.4 Building Construction - 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					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.1960	4.7107	2.3247	0.0251	0.8527	0.0408	0.8935	0.2456	0.0390	0.2846		2,641.3844	2,641.3844	0.0120	0.3689	2,751.6163
Worker	1.6361	1.0070	15.3630	0.0410	4.5344	0.0216	4.5560	1.2025	0.0199	1.2224		4,146.7070	4,146.7070	0.0963	0.0990	4,178.6191
Total	**1.8321**	**5.7177**	**17.6877**	**0.0661**	**5.3872**	**0.0623**	**5.4495**	**1.4481**	**0.0588**	**1.5069**		**6,788.0914**	**6,788.0914**	**0.1083**	**0.4679**	**6,930.2355**

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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

3.4 Building Construction - 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					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.1960	4.7107	2.3247	0.0251	0.8527	0.0408	0.8935	0.2456	0.0390	0.2846		2,641.3844	2,641.3844	0.0120	0.3689	2,751.6163
Worker	1.6361	1.0070	15.3630	0.0410	4.5344	0.0216	4.5560	1.2025	0.0199	1.2224		4,146.7070	4,146.7070	0.0963	0.0990	4,178.6191
Total	**1.8321**	**5.7177**	**17.6877**	**0.0661**	**5.3872**	**0.0623**	**5.4495**	**1.4481**	**0.0588**	**1.5069**		**6,788.0914**	**6,788.0914**	**0.1083**	**0.4679**	**6,930.2355**

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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

3.5 Paving - 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					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0362**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0737	0.0454	0.6924	1.8500e-003	0.2044	9.7000e-004	0.2053	0.0542	9.0000e-004	0.0551		186.8938	186.8938	4.3400e-003	4.4600e-003	188.3321
Total	**0.0737**	**0.0454**	**0.6924**	**1.8500e-003**	**0.2044**	**9.7000e-004**	**0.2053**	**0.0542**	**9.0000e-004**	**0.0551**		**186.8938**	**186.8938**	**4.3400e-003**	**4.4600e-003**	**188.3321**

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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

3.5 Paving - 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					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0362**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0737	0.0454	0.6924	1.8500e-003	0.2044	9.7000e-004	0.2053	0.0542	9.0000e-004	0.0551		186.8938	186.8938	4.3400e-003	4.4600e-003	188.3321
Total	**0.0737**	**0.0454**	**0.6924**	**1.8500e-003**	**0.2044**	**9.7000e-004**	**0.2053**	**0.0542**	**9.0000e-004**	**0.0551**		**186.8938**	**186.8938**	**4.3400e-003**	**4.4600e-003**	**188.3321**

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

3.6 Architectural Coating - 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					
Archit. Coating	492.1941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**492.3858**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3272	0.2014	3.0726	8.2100e-003	0.9069	4.3100e-003	0.9112	0.2405	3.9700e-003	0.2445		829.3414	829.3414	0.0193	0.0198	835.7238
Total	**0.3272**	**0.2014**	**3.0726**	**8.2100e-003**	**0.9069**	**4.3100e-003**	**0.9112**	**0.2405**	**3.9700e-003**	**0.2445**		**829.3414**	**829.3414**	**0.0193**	**0.0198**	**835.7238**

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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

3.6 Architectural Coating - 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					
Archit. Coating	492.1941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**492.3858**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3272	0.2014	3.0726	8.2100e-003	0.9069	4.3100e-003	0.9112	0.2405	3.9700e-003	0.2445		829.3414	829.3414	0.0193	0.0198	835.7238
Total	**0.3272**	**0.2014**	**3.0726**	**8.2100e-003**	**0.9069**	**4.3100e-003**	**0.9112**	**0.2405**	**3.9700e-003**	**0.2445**		**829.3414**	**829.3414**	**0.0193**	**0.0198**	**835.7238**

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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	3.1767	40.0020	45.6308	0.3059	20.3718	0.5306	20.9024	5.5157	0.5057	6.0214		31,750.3978	31,750.3978	0.2901	3.1592	32,699.0831
Unmitigated	3.1767	40.0020	45.6308	0.3059	20.3718	0.5306	20.9024	5.5157	0.5057	6.0214		31,750.3978	31,750.3978	0.2901	3.1592	32,699.0831

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Heavy Industry	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	253.39	253.39	253.39	3,440,555	3,440,555
Unrefrigerated Warehouse-Rail	1,028.37	1,028.37	1028.37	5,795,521	5,795,521
Total	1,281.76	1,281.76	1,281.76	9,236,075	9,236,075

4.3 Trip Type Information

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	40.00	40.00	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-Rail	16.60	16.60	16.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
General Heavy Industry	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Other Asphalt Surfaces	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Parking Lot	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.290000	0.076100	0.060900	0.573000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-Rail	0.696000	0.074700	0.229300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188
NaturalGas Unmitigated	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188

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					
City Park	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
General Heavy Industry	12856.7	0.1387	1.2605	1.0588	7.5600e-003		0.0958	0.0958		0.0958	0.0958		1,512.5542	1,512.5542	0.0290	0.0277	1,521.5426
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	742.213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Unrefrigerated Warehouse-Rail	742.213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Total		**0.1547**	**1.4060**	**1.1810**	**8.4400e-003**		**0.1069**	**0.1069**		**0.1069**	**0.1069**		**1,687.1926**	**1,687.1926**	**0.0323**	**0.0309**	**1,697.2188**

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					
City Park	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
General Heavy Industry	12.8567	0.1387	1.2605	1.0588	7.5600e-003		0.0958	0.0958		0.0958	0.0958		1,512.5542	1,512.5542	0.0290	0.0277	1,521.5426
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	0.742213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Unrefrigerated Warehouse-Rail	0.742213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Total		**0.1547**	**1.4060**	**1.1810**	**8.4400e-003**		**0.1069**	**0.1069**		**0.1069**	**0.1069**		**1,687.1926**	**1,687.1926**	**0.0323**	**0.0309**	**1,697.2188**

6.0 Area Detail

6.1 Mitigation Measures Area

I-15 Industrial Phase II - Mojave Desert Air Basin, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Unmitigated	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008

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	2.6970					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.1100e-003	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Total	**11.7035**	**8.0000e-004**	**0.0878**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1885**	**0.1885**	**4.9000e-004**		**0.2008**

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	2.6970					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.1100e-003	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Total	**11.7035**	**8.0000e-004**	**0.0878**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1885**	**0.1885**	**4.9000e-004**		**0.2008**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

I-15 Industrial Phase II

Mojave Desert Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	145.15	1000sqft	3.33	145,150.00	0
Unrefrigerated Warehouse-No Rail	134.78	1000sqft	3.09	134,780.00	0
Unrefrigerated Warehouse-Rail	134.78	1000sqft	3.09	134,780.00	0
Other Asphalt Surfaces	219.14	1000sqft	5.03	219,142.00	0
Parking Lot	182.00	Space	1.64	72,800.00	0
Parking Lot	43.30	1000sqft	0.99	43,300.00	0
City Park	2.20	Acre	2.20	95,832.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - Consistent with the DEIR's model.

Construction Phase - Consistent with the DEIR's model.

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Reductions to Off-Road Construction Equipment Unit Amounts"

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Reductions to Off-Road Construction Equipment Unit Amounts"

Trips and VMT - Consistent with the DEIR's model.

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

Architectural Coating - See SWAPE comment regarding "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors." Architectural coating areas consistent with the DEIR's model.

Vehicle Trips - Consistent with the DEIR's model.

Fleet Mix - Consistent with the DEIR's model.

Area Coating - See SWAPE comment regarding "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors." Area coating areas consistent with the DEIR's model.

Construction Off-road Equipment Mitigation - Consistent with the DEIR's model.

Area Mitigation - See SWAPE comment regarding "Incorrect Application of Area-Related Operational Mitigation Measures"

Water Mitigation - Consistent with the DEIR's model.

Waste Mitigation - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	207,355.00	207,353.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	622,065.00	622,058.00
tblAreaCoating	Area_Nonresidential_Exterior	207355	207353
tblAreaCoating	Area_Nonresidential_Interior	622065	622058
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	131.00
tblConstructionPhase	PhaseEndDate	7/12/2024	10/23/2023
tblConstructionPhase	PhaseEndDate	5/17/2024	8/28/2023
tblConstructionPhase	PhaseEndDate	3/24/2023	2/24/2023
tblConstructionPhase	PhaseEndDate	6/14/2024	9/25/2023
tblConstructionPhase	PhaseEndDate	2/10/2023	1/13/2023
tblConstructionPhase	PhaseStartDate	6/15/2024	9/26/2023
tblConstructionPhase	PhaseStartDate	3/25/2023	2/25/2023
tblConstructionPhase	PhaseStartDate	2/11/2023	1/14/2023
tblConstructionPhase	PhaseStartDate	5/18/2024	8/29/2023
tblConstructionPhase	PhaseStartDate	1/28/2023	1/1/2023
tblFleetMix	HHD	0.02	0.57
tblFleetMix	HHD	0.02	0.00

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

tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDA	0.53	0.70
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.23
tblFleetMix	LHD1	0.03	0.29
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.7960e-003	0.08
tblFleetMix	LHD2	7.7960e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.7520e-003	0.00
tblFleetMix	MH	5.7520e-003	0.00
tblFleetMix	MHD	7.1140e-003	0.06
tblFleetMix	MHD	7.1140e-003	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	SBUS	1.1600e-003	0.00
tblFleetMix	SBUS	1.1600e-003	0.00
tblFleetMix	UBUS	1.9400e-004	0.00
tblFleetMix	UBUS	1.9400e-004	0.00
tblLandUse	LandUseSquareFeet	219,140.00	219,142.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00

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

tblVehicleTrips	CC_TL	6.60	40.00
tblVehicleTrips	CC_TL	6.60	16.60
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TL	6.60	16.60
tblVehicleTrips	CW_TL	14.70	40.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	ST_TR	1.74	1.88
tblVehicleTrips	ST_TR	1.74	7.63
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	SU_TR	1.74	1.88
tblVehicleTrips	SU_TR	1.74	7.63
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblVehicleTrips	WD_TR	1.74	1.88
tblVehicleTrips	WD_TR	1.74	7.63

2.0 Emissions Summary

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	492.6917	34.6036	30.6609	0.0886	19.7847	1.4263	21.0514	10.1363	1.3122	11.3016	0.0000	8,890.7612	8,890.7612	1.9522	0.4715	9,049.0979
Maximum	**492.6917**	**34.6036**	**30.6609**	**0.0886**	**19.7847**	**1.4263**	**21.0514**	**10.1363**	**1.3122**	**11.3016**	**0.0000**	**8,890.7612**	**8,890.7612**	**1.9522**	**0.4715**	**9,049.0979**

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	492.6917	34.6036	30.6609	0.0886	19.7847	1.4263	21.0514	10.1363	1.3122	11.3016	0.0000	8,890.7612	8,890.7612	1.9522	0.4715	9,049.0979
Maximum	**492.6917**	**34.6036**	**30.6609**	**0.0886**	**19.7847**	**1.4263**	**21.0514**	**10.1363**	**1.3122**	**11.3016**	**0.0000**	**8,890.7612**	**8,890.7612**	**1.9522**	**0.4715**	**9,049.0979**

	ROG	NOx	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**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Energy	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188
Mobile	2.7142	42.0846	38.6090	0.2945	20.3718	0.5309	20.9027	5.5157	0.5059	6.0217		30,594.0903	30,594.0903	0.2878	3.1702	31,545.9922
Total	**14.5724**	**43.4914**	**39.8779**	**0.3029**	**20.3718**	**0.6381**	**21.0099**	**5.5157**	**0.6131**	**6.1288**		**32,281.4714**	**32,281.4714**	**0.3207**	**3.2011**	**33,243.4118**

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	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Energy	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188
Mobile	2.7142	42.0846	38.6090	0.2945	20.3718	0.5309	20.9027	5.5157	0.5059	6.0217		30,594.0903	30,594.0903	0.2878	3.1702	31,545.9922
Total	**14.5724**	**43.4914**	**39.8779**	**0.3029**	**20.3718**	**0.6381**	**21.0099**	**5.5157**	**0.6131**	**6.1288**		**32,281.4714**	**32,281.4714**	**0.3207**	**3.2011**	**33,243.4118**

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	2/24/2023	5	30	
3	Building Construction	Building Construction	2/25/2023	8/28/2023	5	131	
4	Paving	Paving	8/29/2023	9/25/2023	5	20	
5	Architectural Coating	Architectural Coating	9/26/2023	10/23/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 7.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 622,058; Non-Residential Outdoor: 207,353; Striped Parking Area: 20,115 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41

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

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	30.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	355.00	139.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	71.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0293	0.3384	1.0300e-003	0.1277	6.1000e-004	0.1283	0.0339	5.6000e-004	0.0344		103.8319	103.8319	2.6600e-003	2.8400e-003	104.7455
Total	**0.0431**	**0.0293**	**0.3384**	**1.0300e-003**	**0.1277**	**6.1000e-004**	**0.1283**	**0.0339**	**5.6000e-004**	**0.0344**		**103.8319**	**103.8319**	**2.6600e-003**	**2.8400e-003**	**104.7455**

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0293	0.3384	1.0300e-003	0.1277	6.1000e-004	0.1283	0.0339	5.6000e-004	0.0344		103.8319	103.8319	2.6600e-003	2.8400e-003	104.7455
Total	**0.0431**	**0.0293**	**0.3384**	**1.0300e-003**	**0.1277**	**6.1000e-004**	**0.1283**	**0.0339**	**5.6000e-004**	**0.0344**		**103.8319**	**103.8319**	**2.6600e-003**	**2.8400e-003**	**104.7455**

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1293	0.0880	1.0152	3.0800e-003	0.3832	1.8200e-003	0.3850	0.1016	1.6800e-003	0.1033		311.4958	311.4958	7.9800e-003	8.5300e-003	314.2364
Total	**0.1293**	**0.0880**	**1.0152**	**3.0800e-003**	**0.3832**	**1.8200e-003**	**0.3850**	**0.1016**	**1.6800e-003**	**0.1033**		**311.4958**	**311.4958**	**7.9800e-003**	**8.5300e-003**	**314.2364**

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1293	0.0880	1.0152	3.0800e-003	0.3832	1.8200e-003	0.3850	0.1016	1.6800e-003	0.1033		311.4958	311.4958	7.9800e-003	8.5300e-003	314.2364
Total	**0.1293**	**0.0880**	**1.0152**	**3.0800e-003**	**0.3832**	**1.8200e-003**	**0.3850**	**0.1016**	**1.6800e-003**	**0.1033**		**311.4958**	**311.4958**	**7.9800e-003**	**8.5300e-003**	**314.2364**

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

3.4 Building Construction - 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					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.1816	5.0096	2.4035	0.0252	0.8527	0.0409	0.8936	0.2456	0.0391	0.2847		2,649.5180	2,649.5180	0.0114	0.3706	2,760.2276
Worker	1.5297	1.0408	12.0134	0.0365	4.5344	0.0216	4.5560	1.2025	0.0199	1.2224		3,686.0333	3,686.0333	0.0944	0.1009	3,718.4643
Total	**1.7113**	**6.0504**	**14.4169**	**0.0616**	**5.3872**	**0.0625**	**5.4496**	**1.4481**	**0.0590**	**1.5071**		**6,335.5513**	**6,335.5513**	**0.1058**	**0.4715**	**6,478.6918**

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

3.4 Building Construction - 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					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.1816	5.0096	2.4035	0.0252	0.8527	0.0409	0.8936	0.2456	0.0391	0.2847		2,649.5180	2,649.5180	0.0114	0.3706	2,760.2276
Worker	1.5297	1.0408	12.0134	0.0365	4.5344	0.0216	4.5560	1.2025	0.0199	1.2224		3,686.0333	3,686.0333	0.0944	0.1009	3,718.4643
Total	**1.7113**	**6.0504**	**14.4169**	**0.0616**	**5.3872**	**0.0625**	**5.4496**	**1.4481**	**0.0590**	**1.5071**		**6,335.5513**	**6,335.5513**	**0.1058**	**0.4715**	**6,478.6918**

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

3.5 Paving - 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					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0362**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0690	0.0469	0.5415	1.6400e-003	0.2044	9.7000e-004	0.2053	0.0542	9.0000e-004	0.0551		166.1311	166.1311	4.2600e-003	4.5500e-003	167.5928
Total	**0.0690**	**0.0469**	**0.5415**	**1.6400e-003**	**0.2044**	**9.7000e-004**	**0.2053**	**0.0542**	**9.0000e-004**	**0.0551**		**166.1311**	**166.1311**	**4.2600e-003**	**4.5500e-003**	**167.5928**

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

3.5 Paving - 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					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	1.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0362**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0690	0.0469	0.5415	1.6400e-003	0.2044	9.7000e-004	0.2053	0.0542	9.0000e-004	0.0551		166.1311	166.1311	4.2600e-003	4.5500e-003	167.5928
Total	**0.0690**	**0.0469**	**0.5415**	**1.6400e-003**	**0.2044**	**9.7000e-004**	**0.2053**	**0.0542**	**9.0000e-004**	**0.0551**		**166.1311**	**166.1311**	**4.2600e-003**	**4.5500e-003**	**167.5928**

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

3.6 Architectural Coating - 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					
Archit. Coating	492.1941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**492.3858**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3060	0.2082	2.4027	7.2900e-003	0.9069	4.3100e-003	0.9112	0.2405	3.9700e-003	0.2445		737.2067	737.2067	0.0189	0.0202	743.6929
Total	**0.3060**	**0.2082**	**2.4027**	**7.2900e-003**	**0.9069**	**4.3100e-003**	**0.9112**	**0.2405**	**3.9700e-003**	**0.2445**		**737.2067**	**737.2067**	**0.0189**	**0.0202**	**743.6929**

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

3.6 Architectural Coating - 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					
Archit. Coating	492.1941					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**492.3858**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3060	0.2082	2.4027	7.2900e-003	0.9069	4.3100e-003	0.9112	0.2405	3.9700e-003	0.2445		737.2067	737.2067	0.0189	0.0202	743.6929
Total	**0.3060**	**0.2082**	**2.4027**	**7.2900e-003**	**0.9069**	**4.3100e-003**	**0.9112**	**0.2405**	**3.9700e-003**	**0.2445**		**737.2067**	**737.2067**	**0.0189**	**0.0202**	**743.6929**

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	2.7142	42.0846	38.6090	0.2945	20.3718	0.5309	20.9027	5.5157	0.5059	6.0217		30,594.0903	30,594.0903	0.2878	3.1702	31,545.9922
Unmitigated	2.7142	42.0846	38.6090	0.2945	20.3718	0.5309	20.9027	5.5157	0.5059	6.0217		30,594.0903	30,594.0903	0.2878	3.1702	31,545.9922

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Heavy Industry	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	253.39	253.39	253.39	3,440,555	3,440,555
Unrefrigerated Warehouse-Rail	1,028.37	1,028.37	1028.37	5,795,521	5,795,521
Total	1,281.76	1,281.76	1,281.76	9,236,075	9,236,075

4.3 Trip Type Information

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	40.00	40.00	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-Rail	16.60	16.60	16.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
General Heavy Industry	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Other Asphalt Surfaces	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Parking Lot	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.290000	0.076100	0.060900	0.573000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-Rail	0.696000	0.074700	0.229300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188
NaturalGas Unmitigated	0.1547	1.4060	1.1810	8.4400e-003		0.1069	0.1069		0.1069	0.1069		1,687.1926	1,687.1926	0.0323	0.0309	1,697.2188

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					
City Park	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
General Heavy Industry	12856.7	0.1387	1.2605	1.0588	7.5600e-003		0.0958	0.0958		0.0958	0.0958		1,512.5542	1,512.5542	0.0290	0.0277	1,521.5426
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	742.213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Unrefrigerated Warehouse-Rail	742.213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Total		**0.1547**	**1.4060**	**1.1810**	**8.4400e-003**		**0.1069**	**0.1069**		**0.1069**	**0.1069**		**1,687.1926**	**1,687.1926**	**0.0323**	**0.0309**	**1,697.2188**

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					
City Park	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
General Heavy Industry	12.8567	0.1387	1.2605	1.0588	7.5600e-003		0.0958	0.0958		0.0958	0.0958		1,512.5542	1,512.5542	0.0290	0.0277	1,521.5426
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	0.742213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Unrefrigerated Warehouse-Rail	0.742213	8.0000e-003	0.0728	0.0611	4.4000e-004		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003		87.3192	87.3192	1.6700e-003	1.6000e-003	87.8381
Total		**0.1547**	**1.4060**	**1.1810**	**8.4400e-003**		**0.1069**	**0.1069**		**0.1069**	**0.1069**		**1,687.1926**	**1,687.1926**	**0.0323**	**0.0309**	**1,697.2188**

6.0 Area Detail

6.1 Mitigation Measures Area

I-15 Industrial Phase II - Mojave Desert Air Basin, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Unmitigated	11.7035	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008

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	2.6970					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.1100e-003	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Total	**11.7035**	**8.0000e-004**	**0.0878**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1885**	**0.1885**	**4.9000e-004**		**0.2008**

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	2.6970					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.1100e-003	8.0000e-004	0.0878	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004		0.1885	0.1885	4.9000e-004		0.2008
Total	**11.7035**	**8.0000e-004**	**0.0878**	**1.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**		**0.1885**	**0.1885**	**4.9000e-004**		**0.2008**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

I-15 Industrial Phase II

Mojave Desert Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	145.15	1000sqft	3.33	145,150.00	0
Unrefrigerated Warehouse-No Rail	134.78	1000sqft	3.09	134,780.00	0
Unrefrigerated Warehouse-Rail	134.78	1000sqft	3.09	134,780.00	0
Other Asphalt Surfaces	219.14	1000sqft	5.03	219,142.00	0
Parking Lot	182.00	Space	1.64	72,800.00	0
Parking Lot	43.30	1000sqft	0.99	43,300.00	0
City Park	2.20	Acre	2.20	95,832.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - Consistent with the DEIR's model.

Construction Phase - Consistent with the DEIR's model.

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Reductions to Off-Road Construction Equipment Unit Amounts"

Off-road Equipment - See SWAPE comment regarding "Unsubstantiated Reductions to Off-Road Construction Equipment Unit Amounts"

Trips and VMT - Consistent with the DEIR's model.

I-15 Industrial Phase II - Mojave Desert Air Basin, Annual

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

Architectural Coating - See SWAPE comment regarding "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors." Architectural coating areas consistent with the DEIR's model.

Vehicle Trips - Consistent with the DEIR's model.

Fleet Mix - Consistent with the DEIR's model.

Area Coating - See SWAPE comment regarding "Unsubstantiated Reductions to Architectural and Area Coating Emission Factors." Area coating areas consistent with the DEIR's model.

Construction Off-road Equipment Mitigation - Consistent with the DEIR's model.

Area Mitigation - See SWAPE comment regarding "Incorrect Application of Area-Related Operational Mitigation Measures"

Water Mitigation - Consistent with the DEIR's model.

Waste Mitigation - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	207,355.00	207,353.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	622,065.00	622,058.00
tblAreaCoating	Area_Nonresidential_Exterior	207355	207353
tblAreaCoating	Area_Nonresidential_Interior	622065	622058
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	131.00
tblConstructionPhase	PhaseEndDate	7/12/2024	10/23/2023
tblConstructionPhase	PhaseEndDate	5/17/2024	8/28/2023
tblConstructionPhase	PhaseEndDate	3/24/2023	2/24/2023
tblConstructionPhase	PhaseEndDate	6/14/2024	9/25/2023
tblConstructionPhase	PhaseEndDate	2/10/2023	1/13/2023
tblConstructionPhase	PhaseStartDate	6/15/2024	9/26/2023
tblConstructionPhase	PhaseStartDate	3/25/2023	2/25/2023
tblConstructionPhase	PhaseStartDate	2/11/2023	1/14/2023
tblConstructionPhase	PhaseStartDate	5/18/2024	8/29/2023
tblConstructionPhase	PhaseStartDate	1/28/2023	1/1/2023
tblFleetMix	HHD	0.02	0.57
tblFleetMix	HHD	0.02	0.00

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

tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDA	0.53	0.70
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.23
tblFleetMix	LHD1	0.03	0.29
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.7960e-003	0.08
tblFleetMix	LHD2	7.7960e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.7520e-003	0.00
tblFleetMix	MH	5.7520e-003	0.00
tblFleetMix	MHD	7.1140e-003	0.06
tblFleetMix	MHD	7.1140e-003	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	SBUS	1.1600e-003	0.00
tblFleetMix	SBUS	1.1600e-003	0.00
tblFleetMix	UBUS	1.9400e-004	0.00
tblFleetMix	UBUS	1.9400e-004	0.00
tblLandUse	LandUseSquareFeet	219,140.00	219,142.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00

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

tblVehicleTrips	CC_TL	6.60	40.00
tblVehicleTrips	CC_TL	6.60	16.60
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TL	6.60	16.60
tblVehicleTrips	CW_TL	14.70	40.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	ST_TR	1.74	1.88
tblVehicleTrips	ST_TR	1.74	7.63
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	SU_TR	1.74	1.88
tblVehicleTrips	SU_TR	1.74	7.63
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblVehicleTrips	WD_TR	1.74	1.88
tblVehicleTrips	WD_TR	1.74	7.63

2.0 Emissions Summary

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	5.2207	2.1147	2.7890	7.3900e-003	0.6001	0.0835	0.6836	0.2032	0.0779	0.2811	0.0000	668.5656	668.5656	0.0814	0.0286	679.1280
Maximum	**5.2207**	**2.1147**	**2.7890**	**7.3900e-003**	**0.6001**	**0.0835**	**0.6836**	**0.2032**	**0.0779**	**0.2811**	**0.0000**	**668.5656**	**668.5656**	**0.0814**	**0.0286**	**679.1280**

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	5.2207	2.1147	2.7890	7.3900e-003	0.6001	0.0835	0.6836	0.2032	0.0779	0.2811	0.0000	668.5653	668.5653	0.0814	0.0286	679.1277
Maximum	**5.2207**	**2.1147**	**2.7890**	**7.3900e-003**	**0.6001**	**0.0835**	**0.6836**	**0.2032**	**0.0779**	**0.2811**	**0.0000**	**668.5653**	**668.5653**	**0.0814**	**0.0286**	**679.1277**

	ROG	NOx	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**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	1.0078	1.0078
2	4-1-2023	6-30-2023	0.7640	0.7640
3	7-1-2023	9-30-2023	1.5013	1.5013
		Highest	1.5013	1.5013

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	2.1352	7.0000e-005	7.9000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0154	0.0154	4.0000e-005	0.0000	0.0164
Energy	0.0282	0.2566	0.2155	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	652.8060	652.8060	0.0369	8.9400e-003	656.3927
Mobile	0.4952	7.7427	7.3532	0.0540	3.6429	0.0965	3.7393	0.9880	0.0919	1.0799	0.0000	5,087.3318	5,087.3318	0.0484	0.5244	5,244.8102
Waste						0.0000	0.0000		0.0000	0.0000	88.0088	0.0000	88.0088	5.2012	0.0000	218.0380
Water						0.0000	0.0000		0.0000	0.0000	30.4252	226.6224	257.0476	3.1441	0.0761	358.3292
Total	**2.6585**	**7.9993**	**7.5767**	**0.0555**	**3.6429**	**0.1160**	**3.7589**	**0.9880**	**0.1115**	**1.0994**	**118.4339**	**5,966.7756**	**6,085.2096**	**8.4306**	**0.6094**	**6,477.5864**

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	2.1352	7.0000e-005	7.9000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0154	0.0154	4.0000e-005	0.0000	0.0164
Energy	0.0282	0.2566	0.2155	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	652.8060	652.8060	0.0369	8.9400e-003	656.3927
Mobile	0.4952	7.7427	7.3532	0.0540	3.6429	0.0965	3.7393	0.9880	0.0919	1.0799	0.0000	5,087.3318	5,087.3318	0.0484	0.5244	5,244.8102
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	24.3401	182.3309	206.6710	2.5154	0.0609	287.7016
Total	**2.6585**	**7.9993**	**7.5767**	**0.0555**	**3.6429**	**0.1160**	**3.7589**	**0.9880**	**0.1115**	**1.0994**	**24.3401**	**5,922.4841**	**5,946.8242**	**2.6007**	**0.5942**	**6,188.9209**

	ROG	NOx	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**	**79.45**	**0.74**	**2.27**	**69.15**	**2.50**	**4.46**

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	1/1/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	2/24/2023	5	30	
3	Building Construction	Building Construction	2/25/2023	8/28/2023	5	131	

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

4	Paving	Paving	8/29/2023	9/25/2023	5	20	
5	Architectural Coating	Architectural Coating	9/26/2023	10/23/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 7.66

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 622,058; Non-Residential Outdoor: 207,353; Striped Parking Area: 20,115 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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

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	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	30.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	355.00	139.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	71.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

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

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.8200e-003	1.0000e-005	6.3000e-004	0.0000	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4843	0.4843	1.0000e-005	1.0000e-005	0.4886
Total	**2.0000e-004**	**1.6000e-004**	**1.8200e-003**	**1.0000e-005**	**6.3000e-004**	**0.0000**	**6.3000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.4843**	**0.4843**	**1.0000e-005**	**1.0000e-005**	**0.4886**

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

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 Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.6000e-004	1.8200e-003	1.0000e-005	6.3000e-004	0.0000	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4843	0.4843	1.0000e-005	1.0000e-005	0.4886
Total	**2.0000e-004**	**1.6000e-004**	**1.8200e-003**	**1.0000e-005**	**6.3000e-004**	**0.0000**	**6.3000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.4843**	**0.4843**	**1.0000e-005**	**1.0000e-005**	**0.4886**

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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.1381**	**0.0214**	**0.1594**	**0.0548**	**0.0197**	**0.0745**	**0.0000**	**81.8028**	**81.8028**	**0.0265**	**0.0000**	**82.4642**

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 Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7900e-003	1.4100e-003	0.0163	5.0000e-005	5.6400e-003	3.0000e-005	5.6700e-003	1.5000e-003	3.0000e-005	1.5200e-003	0.0000	4.3583	4.3583	1.1000e-004	1.2000e-004	4.3972
Total	**1.7900e-003**	**1.4100e-003**	**0.0163**	**5.0000e-005**	**5.6400e-003**	**3.0000e-005**	**5.6700e-003**	**1.5000e-003**	**3.0000e-005**	**1.5200e-003**	**0.0000**	**4.3583**	**4.3583**	**1.1000e-004**	**1.2000e-004**	**4.3972**

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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.1381**	**0.0214**	**0.1594**	**0.0548**	**0.0197**	**0.0745**	**0.0000**	**81.8027**	**81.8027**	**0.0265**	**0.0000**	**82.4641**

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 Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7900e-003	1.4100e-003	0.0163	5.0000e-005	5.6400e-003	3.0000e-005	5.6700e-003	1.5000e-003	3.0000e-005	1.5200e-003	0.0000	4.3583	4.3583	1.1000e-004	1.2000e-004	4.3972
Total	**1.7900e-003**	**1.4100e-003**	**0.0163**	**5.0000e-005**	**5.6400e-003**	**3.0000e-005**	**5.6700e-003**	**1.5000e-003**	**3.0000e-005**	**1.5200e-003**	**0.0000**	**4.3583**	**4.3583**	**1.1000e-004**	**1.2000e-004**	**4.3972**

3.4 Building Construction - 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					
Off-Road	0.1030	0.9422	1.0640	1.7600e-003		0.0458	0.0458		0.0431	0.0431	0.0000	151.8321	151.8321	0.0361	0.0000	152.7351
Total	**0.1030**	**0.9422**	**1.0640**	**1.7600e-003**		**0.0458**	**0.0458**		**0.0431**	**0.0431**	**0.0000**	**151.8321**	**151.8321**	**0.0361**	**0.0000**	**152.7351**

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

3.4 Building Construction - 2023

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	0.0123	0.3253	0.1549	1.6500e-003	0.0550	2.6700e-003	0.0577	0.0159	2.5600e-003	0.0184	0.0000	157.1564	157.1564	7.0000e-004	0.0220	163.7242
Worker	0.0926	0.0726	0.8444	2.4600e-003	0.2915	1.4100e-003	0.2929	0.0774	1.3000e-003	0.0787	0.0000	225.2004	225.2004	5.7600e-003	6.2600e-003	227.2111
Total	**0.1049**	**0.3979**	**0.9993**	**4.1100e-003**	**0.3465**	**4.0800e-003**	**0.3506**	**0.0933**	**3.8600e-003**	**0.0972**	**0.0000**	**382.3568**	**382.3568**	**6.4600e-003**	**0.0282**	**390.9354**

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	0.1030	0.9422	1.0640	1.7600e-003		0.0458	0.0458		0.0431	0.0431	0.0000	151.8319	151.8319	0.0361	0.0000	152.7349
Total	**0.1030**	**0.9422**	**1.0640**	**1.7600e-003**		**0.0458**	**0.0458**		**0.0431**	**0.0431**	**0.0000**	**151.8319**	**151.8319**	**0.0361**	**0.0000**	**152.7349**

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

3.4 Building Construction - 2023

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	0.0123	0.3253	0.1549	1.6500e-003	0.0550	2.6700e-003	0.0577	0.0159	2.5600e-003	0.0184	0.0000	157.1564	157.1564	7.0000e-004	0.0220	163.7242
Worker	0.0926	0.0726	0.8444	2.4600e-003	0.2915	1.4100e-003	0.2929	0.0774	1.3000e-003	0.0787	0.0000	225.2004	225.2004	5.7600e-003	6.2600e-003	227.2111
Total	**0.1049**	**0.3979**	**0.9993**	**4.1100e-003**	**0.3465**	**4.0800e-003**	**0.3506**	**0.0933**	**3.8600e-003**	**0.0972**	**0.0000**	**382.3568**	**382.3568**	**6.4600e-003**	**0.0282**	**390.9354**

3.5 Paving - 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					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0204**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

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3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	5.0000e-004	5.8100e-003	2.0000e-005	2.0100e-003	1.0000e-005	2.0200e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.5496	1.5496	4.0000e-005	4.0000e-005	1.5634
Total	**6.4000e-004**	**5.0000e-004**	**5.8100e-003**	**2.0000e-005**	**2.0100e-003**	**1.0000e-005**	**2.0200e-003**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.5496**	**1.5496**	**4.0000e-005**	**4.0000e-005**	**1.5634**

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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0204**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

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

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	5.0000e-004	5.8100e-003	2.0000e-005	2.0100e-003	1.0000e-005	2.0200e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.5496	1.5496	4.0000e-005	4.0000e-005	1.5634
Total	**6.4000e-004**	**5.0000e-004**	**5.8100e-003**	**2.0000e-005**	**2.0100e-003**	**1.0000e-005**	**2.0200e-003**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.5496**	**1.5496**	**4.0000e-005**	**4.0000e-005**	**1.5634**

3.6 Architectural Coating - 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					
Archit. Coating	4.9219					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**4.9239**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

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

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8300e-003	2.2200e-003	0.0258	7.0000e-005	8.9000e-003	4.0000e-005	8.9400e-003	2.3600e-003	4.0000e-005	2.4000e-003	0.0000	6.8764	6.8764	1.8000e-004	1.9000e-004	6.9377
Total	**2.8300e-003**	**2.2200e-003**	**0.0258**	**7.0000e-005**	**8.9000e-003**	**4.0000e-005**	**8.9400e-003**	**2.3600e-003**	**4.0000e-005**	**2.4000e-003**	**0.0000**	**6.8764**	**6.8764**	**1.8000e-004**	**1.9000e-004**	**6.9377**

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	4.9219					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**4.9239**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

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

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8300e-003	2.2200e-003	0.0258	7.0000e-005	8.9000e-003	4.0000e-005	8.9400e-003	2.3600e-003	4.0000e-005	2.4000e-003	0.0000	6.8764	6.8764	1.8000e-004	1.9000e-004	6.9377
Total	**2.8300e-003**	**2.2200e-003**	**0.0258**	**7.0000e-005**	**8.9000e-003**	**4.0000e-005**	**8.9400e-003**	**2.3600e-003**	**4.0000e-005**	**2.4000e-003**	**0.0000**	**6.8764**	**6.8764**	**1.8000e-004**	**1.9000e-004**	**6.9377**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4952	7.7427	7.3532	0.0540	3.6429	0.0965	3.7393	0.9880	0.0919	1.0799	0.0000	5,087.3318	5,087.3318	0.0484	0.5244	5,244.8102
Unmitigated	0.4952	7.7427	7.3532	0.0540	3.6429	0.0965	3.7393	0.9880	0.0919	1.0799	0.0000	5,087.3318	5,087.3318	0.0484	0.5244	5,244.8102

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Heavy Industry	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	253.39	253.39	253.39	3,440,555	3,440,555
Unrefrigerated Warehouse-Rail	1,028.37	1,028.37	1028.37	5,795,521	5,795,521
Total	1,281.76	1,281.76	1,281.76	9,236,075	9,236,075

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
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	40.00	40.00	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-Rail	16.60	16.60	16.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
General Heavy Industry	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Other Asphalt Surfaces	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Parking Lot	0.531780	0.056022	0.172399	0.135630	0.029743	0.007796	0.007114	0.023242	0.000520	0.000194	0.028649	0.001160	0.005752
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.290000	0.076100	0.060900	0.573000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-Rail	0.696000	0.074700	0.229300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

I-15 Industrial Phase II - Mojave Desert Air Basin, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	373.4724	373.4724	0.0315	3.8200e-003	375.3991
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	373.4724	373.4724	0.0315	3.8200e-003	375.3991
NaturalGas Mitigated	0.0282	0.2566	0.2155	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.3337	279.3337	5.3500e-003	5.1200e-003	280.9936
NaturalGas Unmitigated	0.0282	0.2566	0.2155	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.3337	279.3337	5.3500e-003	5.1200e-003	280.9936

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					
City Park	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
General Heavy Industry	4.6927e+006	0.0253	0.2300	0.1932	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	250.4203	250.4203	4.8000e-003	4.5900e-003	251.9084
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	270908	1.4600e-003	0.0133	0.0112	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003	0.0000	14.4567	14.4567	2.8000e-004	2.7000e-004	14.5426
Unrefrigerated Warehouse-Rail	270908	1.4600e-003	0.0133	0.0112	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003	0.0000	14.4567	14.4567	2.8000e-004	2.7000e-004	14.5426
Total		**0.0282**	**0.2566**	**0.2156**	**1.5400e-003**		**0.0195**	**0.0195**		**0.0195**	**0.0195**	**0.0000**	**279.3337**	**279.3337**	**5.3600e-003**	**5.1300e-003**	**280.9936**

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					
City Park	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
General Heavy Industry	4.6927e+006	0.0253	0.2300	0.1932	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	250.4203	250.4203	4.8000e-003	4.5900e-003	251.9084
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	270908	1.4600e-003	0.0133	0.0112	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003	0.0000	14.4567	14.4567	2.8000e-004	2.7000e-004	14.5426
Unrefrigerated Warehouse-Rail	270908	1.4600e-003	0.0133	0.0112	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003	0.0000	14.4567	14.4567	2.8000e-004	2.7000e-004	14.5426
Total		**0.0282**	**0.2566**	**0.2156**	**1.5400e-003**		**0.0195**	**0.0195**		**0.0195**	**0.0195**	**0.0000**	**279.3337**	**279.3337**	**5.3600e-003**	**5.1300e-003**	**280.9936**

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			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	1.43989e+006	255.3577	0.0216	2.6100e-003	256.6751
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	15155	2.6877	2.3000e-004	3.0000e-005	2.7015
Parking Lot	25480	4.5188	3.8000e-004	5.0000e-005	4.5421
Unrefrigerated Warehouse-No Rail	312690	55.4541	4.6800e-003	5.7000e-004	55.7402
Unrefrigerated Warehouse-Rail	312690	55.4541	4.6800e-003	5.7000e-004	55.7402
Total		**373.4724**	**0.0315**	**3.8300e-003**	**375.3991**

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			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	1.43989e+006	255.3577	0.0216	2.6100e-003	256.6751
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	15155	2.6877	2.3000e-004	3.0000e-005	2.7015
Parking Lot	25480	4.5188	3.8000e-004	5.0000e-005	4.5421
Unrefrigerated Warehouse-No Rail	312690	55.4541	4.6800e-003	5.7000e-004	55.7402
Unrefrigerated Warehouse-Rail	312690	55.4541	4.6800e-003	5.7000e-004	55.7402
Total		**373.4724**	**0.0315**	**3.8300e-003**	**375.3991**

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	2.1352	7.0000e-005	7.9000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0154	0.0154	4.0000e-005	0.0000	0.0164
Unmitigated	2.1352	7.0000e-005	7.9000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0154	0.0154	4.0000e-005	0.0000	0.0164

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	0.4922					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.3000e-004	7.0000e-005	7.9000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0154	0.0154	4.0000e-005	0.0000	0.0164
Total	**2.1351**	**7.0000e-005**	**7.9000e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0154**	**0.0154**	**4.0000e-005**	**0.0000**	**0.0164**

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	0.4922					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.3000e-004	7.0000e-005	7.9000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0154	0.0154	4.0000e-005	0.0000	0.0164
Total	**2.1351**	**7.0000e-005**	**7.9000e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0154**	**0.0154**	**4.0000e-005**	**0.0000**	**0.0164**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

I-15 Industrial Phase II - Mojave Desert Air Basin, Annual

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	206.6710	2.5154	0.0609	287.7016
Unmitigated	257.0476	3.1441	0.0761	358.3292

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

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 2.62126	5.1647	4.4000e-004	5.0000e-005	5.1913
General Heavy Industry	33.5659 / 0	88.1599	1.1003	0.0266	123.5995
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	31.1679 / 0	81.8615	1.0217	0.0247	114.7692
Unrefrigerated Warehouse-Rail	31.1679 / 0	81.8615	1.0217	0.0247	114.7692
Total		**257.0476**	**3.1441**	**0.0761**	**358.3292**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 2.62126	5.1647	4.4000e-004	5.0000e-005	5.1913
General Heavy Industry	26.8528 / 0	70.5280	0.8802	0.0213	98.8796
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	24.9343 / 0	65.4892	0.8173	0.0198	91.8153
Unrefrigerated Warehouse-Rail	24.9343 / 0	65.4892	0.8173	0.0198	91.8153
Total		**206.6710**	**2.5154**	**0.0609**	**287.7016**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

I-15 Industrial Phase II - Mojave Desert Air Basin, Annual

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	0.0000	0.0000	0.0000	0.0000
Unmitigated	88.0088	5.2012	0.0000	218.0380

I-15 Industrial Phase II - Mojave Desert Air Basin, Annual

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

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.19	0.0386	2.2800e-003	0.0000	0.0956
General Heavy Industry	179.99	36.5363	2.1592	0.0000	90.5172
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	126.69	25.7169	1.5198	0.0000	63.7126
Unrefrigerated Warehouse-Rail	126.69	25.7169	1.5198	0.0000	63.7126
Total		**88.0088**	**5.2012**	**0.0000**	**218.0380**

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			
City Park		0.0000	0.0000	0.0000	0.0000
General Heavy Industry		0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces		0.0000	0.0000	0.0000	0.0000
Parking Lot		0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail		0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail		0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

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

Education:

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

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

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

Positions Matt has held include:

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

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

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

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

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

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

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

Executive Director:

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

Hydrogeology:

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

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

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

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

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

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

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

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

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

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

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

Policy:

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

Activities included the following:

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

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

Geology:

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

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

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

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

Teaching:

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

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

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

Invited Testimony, Reports, Papers and Presentations:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Other Experience:

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

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

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

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

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

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

Professional Experience

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

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

Professional History:

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

Publications:

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

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

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

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

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

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

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

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

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

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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.

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

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

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

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

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

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

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

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

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

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

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

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

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

Presentations:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Teaching Experience:

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

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

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

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

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

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

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

Academic Grants Awarded:

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

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

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

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

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

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

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

Deposition and/or Trial Testimony:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Golden State Environmental Justice Alliance
Green Jobs & Clean Communities
P.O. Box 79222
Corona, CA 92877

January 25, 2023

Ryan Leonard
Senior Planner
City of Hesperia
rleonard@cityofhesperia.us

Re: Poplar 18 Project, SCH Number 2022080248

Dear Mr. Leonard:

On behalf of the Golden State Environmental Justice Alliance ("GSEJA"), I am writing to you regarding the Poplar 18 Project, SCH Number 2022080248 ("Project").

2-1

GSEJA is withdrawing its comment letter and opposition to the Project. The Project's developer has addressed GSEJA's concerns about environmental mitigation.

Golden State Environmental Justice Alliance

Sincerely,

Joe Bourgeois
Executive Director