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Final Initial Study/Mitigated Negative Declaration
Ramona Expressway and Brennan Avenue Warehouse Project
City of Perris, Riverside County, California
DPR 22-00010

State Clearinghouse Number 2022110066

Lead Agency:
City of Perris
135 North D Street
Perris, CA 92570
951.943.5003

Contact: Alfredo Garcia, Associate Planner

Prepared by:
FirstCarbon Solutions
967 Kendall Drive, #A-537
San Bernardino, CA 92407
714.508.4100

Contact: Jason Brandman, Project Director
Angela Wolfe, Project Manager

Date: January 26, 2023

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Table of Contents

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SECTION 1: INTRODUCTION

A Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) (State Clearinghouse [SCH] No. 2022110066) was prepared for the proposed Ramona Expressway and Brennan Avenue Warehouse Project (proposed project) and made available for public comment for a 30-day public review period from November 4, 2022 through December 5, 2022. Five letters providing comments on the Draft IS/MND were received by the City of Perris during the public review period.

In accordance with the Guidelines for Implementation of the California Environmental Quality Act (CEQA) (State CEQA Guidelines § 15074(b)), before approving the proposed project, the City of Perris, as the lead agency under CEQA, will consider the Draft IS/MND along with any comments received during the public review period. Specifically, Section 15074(b) of the State CEQA Guidelines states the following:

> Prior to approving a project, the decision-making body of the lead agency shall consider the proposed negative declaration or mitigated negative declaration together with any comments received during the public review process. The decision-making body shall adopt the proposed negative declaration or mitigated negative declaration only if it finds on the basis of the whole record before it (including the initial study and any comments received), that there is no substantial evidence that the project will have a significant effect on the environment and that the negative declaration or mitigated negative declaration reflects the lead agency's independent judgment and analysis.

Although not required by CEQA, the City of Perris has prepared the following written responses to the substantive environmental comments received on the Draft IS/MND. The Responses to Comments and Errata, which are included in this document, together with the Draft IS/MND, Draft IS/MND appendices, and the Mitigation Monitoring and Reporting Program (MMRP), comprise the Final IS/MND for use by the City of Perris in its review and consideration of the proposed project. All public comments regarding the Draft IS/MND are included for consideration by the City of Perris as the lead agency for the proposed project under CEQA.

This document is organized into three sections:

- **Section 1—Introduction.**
- **Section 2—Responses to Written Comments:** Provides a list of the agencies, organizations, and individuals who commented on the Draft IS/MND. Copies of all of the letters received regarding the Draft IS/MND and responses thereto are included in this section.
- **Section 3—Errata:** Includes an addendum listing refinements and clarifications on the Draft IS/MND, which have been incorporated.

The Final IS/MND includes the following contents:

- Draft IS/MND (provided under separate cover)
- Draft IS/MND appendices (provided under separate cover)
- Responses to Written Comments and Errata (Sections 2 and 3 of this document)
- Mitigation Monitoring and Reporting Program (provided under separate cover)

SECTION 2: RESPONSES TO WRITTEN COMMENTS

2.1 - List of Authors

A list of public agencies, organizations, and individuals that provided comments on the Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) is presented below. Each comment has been assigned a code. Individual comments within each communication have been numbered so that the comments can be crossed-referenced with the applicable responses. Following this list, the text of the communication is reprinted and followed by the corresponding responses.

Author **Author Code**

Local Agencies

Department of Transportation ..... DOT
Eastern Municipal Water District..... EMWD
South Coast Air Quality Management Distrct ..... SCAQMD

Organizations

Blum Collins & Ho, LLP (Golden State Environmental Justice Alliance)..... BLUM

Individuals

Adam Salcido ..... SALCIDO

2.2 - Responses to Comments

2.2.1 - Introduction

Although a lead agency is not required to provide written responses to comments on proposed Negative Declarations (NDs) or Mitigated Negative Declarations (MNDs) under the California Environmental Quality Act (CEQA), the City of Perris has evaluated the comments received on the Ramona Expressway and Brennan Avenue Warehouse Project (State Clearinghouse No. 2022110066) (proposed project) Draft IS/MND and has elected to provide written responses to the substantive environmental comments. None of the responses materially affect the Draft IS/MND analysis or change the conclusions and thus does not constitute a substantial revision of the Draft IS/MND because there is no identification of new significant impacts or additional mitigation measures. Therefore, none of the comments received results in the need to recirculate the Draft IS/MND or to prepare an Environmental Impact Report (EIR).

2.2.2 - Comment Letters and Responses

The comment letters reproduced in the following pages follow the same organization as used in the List of Authors.

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DEPARTMENT OF TRANSPORTATION
DISTRICT 8
PLANNING (MS 722)
464 WEST 4th STREET, 6th Floor
SAN BERNARDINO, CA 92401-1400
PHONE (909) 383-4557
FAX (909) 383-5936
TTY (909) 383-6300
www.dot.ca.gov/dist8

Make Conservation
A California Way of Life.

November 28, 2022

Riv 215 PM R30.92
LOC: Brennan Ave & Ramona Expressway
DPR22-00010

City of Perris
Planning Division
11 South "D" Street
Perris, CA 92570-2200

Seefried Industrial Properties, Inc

We have completed our initial review of the above proposal to construct an approximately 165,371 square-foot non-refrigerated warehouse center for consumer products. This warehouse site is located east of I-215, south of Ramona Expressway, west of Brennan Ave within the Perris Valley Commerce Center Specific Plan. This warehouse facility is proposed to operate 24-hours 365 days per year.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. Under the California Environmental Quality Act (CEQA), we are required to make recommendations to offset associated impacts to the nearby SHS expected to result with the proposed project. Although the project is under the jurisdiction of the City of Perris, due to the Project's potential impact to State facilities it is also subject to the policies and regulations that govern the SHS. 1

We recommend the following to be provided for our review:

Traffic Study

Traffic analysis should include a Traffic Impact Study assessment consistent with the guide available at: 2

https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf

2
CONT

We appreciate the opportunity to offer comments concerning this project. If you have any questions regarding this letter, please contact Talvin Dennis at (909) 806-3957.

Sincerely,

Rosa F. Clark

ROSA F. CLARK
Office Chief
Land Development/Intergovernmental Review

Local Agencies

Department of Transportation (DOT)

Response to DOT-1
This comment provides introductory information and states that coordination and consultation with local jurisdictions is necessary when proposed development may impact State Highway System facilities. This comment does not question the content or conclusions of the Draft IS/MND.

Response to DOT-2
The commenter requests the completion of a traffic analysis which includes a Traffic Impact Study consistent with the California Department of Transportation's (Caltrans) Transportation Impact Study Guide.

The project site is approximately 0.48 mile east of Interstate 215 (I-215) and approximately 4.2 miles north of Highway 74. The Trip Generation Assessment performed for the proposed project and included in Appendix I of the Draft IS/MND concluded that the proposed project is anticipated to generate fewer than 50 peak-hour trips and fewer than 500 two-way trips per day; thus, the City of Perris determined that no additional traffic operations analysis is necessary. Given the low traffic volumes, the proposed project is not anticipated to adversely impact State facilities.

A Vehicle Miles Traveled (VMT) Screening Evaluation was also included within Appendix I of the Draft IS/MND. A duplicate copy of the VMT Screening Evaluation was provided to the DOT in response to the comment letter on December 12, 2022. The Screening Evaluation concluded that, based on applicable VMT screening criteria as presented in the City Guidelines, the proposed project would generate less than 500 average daily trips and potential impacts under State CEQA Guidelines Section 15064.3 would be less than significant.

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November 7, 2022

Alfredo Garcia
City of Perris Planning Division
11 S. "D" Street
Perris, CA 92570-2200

Subject: **EMWD Comments for the Ramona Expressway and Brennan Ave Warehouse Project Notice Intent to Adopt a Mitigated Negative Declaration**

APN: 303-020-005, -022, 023, 024, and -025
Location: Southwest corner of Ramona Expressway and Brennan Ave, City of Perris, Riverside County, California.

Dear Alfredo Garcia:

Eastern Municipal Water District (EMWD) thanks you for the opportunity to comment on the Ramona Expressway and Brennan Avenue Warehouse Project Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration (MND). The project proposes to construct an approximately 165,371 square foot non-refrigerated warehouse center for consumer products. The proposed project would also include approximately 41,155 square feet of landscaping. Offsite improvements would include the construction of a 12-inch water line extended along Ramona Expressway from the western connection point to the Northeast corner of Ramona Expressway and Brennan Avenue, and installation of a 6-inch dry pipe along Brennan frontage for an Eastern Municipal Water District connection. 1

EMWD offers the following comments:

To define the impact(s) on the environment and on existing EMWD facilities, and as development within this area occurs over time, the proponents of implementing development projects shall consult EMWD's Development Services Department to compare proposed and existing water demands and sewer flows, and prepare a Design Conditions report (DC), formally known as the Plan of Service (POS), to detail all 2

2270 Trumble Road • P.O. Box 8300 • Perris, CA 92572-8300
T 951.928.3777 • F 951.928.6177 www.emwd.org

pertinent facilities necessary to serve such implementing development projects, resulting in an approved DC, prior to final design and plan check of such facilities.

To help define EMWD's Design Conditions, EMWD requires beginning dialogue with project proponents at an early stage in the site design and development, via a one-hour complementary Due Diligence meeting. To set up this meeting the project proponent should complete a Project Questionnaire (form NBD-058) and submit to EMWD. To download this form or for additional information, please visit our web page www.emwd.org, then select the "Developer" link, then select the "New Development Process Forms" link. This meeting will offer the following benefits:

1. Describe EMWD's development process
2. Identify project scope and parameters
3. Provide a preliminary review of the project within the context of existing infrastructure
4. Discuss potential candidacy for recycled water service
5. Identify project submittal requirements to start the Design Conditions review

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CONT

Following the Due Diligence meeting, and to proceed with a project, the Design Conditions will need to be developed by the developer's engineer and reviewed/approved by EMWD prior to submitting improvement plans for Plan Check. The DC process and approval will provide the following:

1. Technical evaluation of the project's demands and existing system capacities
2. Identification of impacts to existing facilities
3. Identification of additional on-site and off-site facilities, necessary to serve the project
4. Identification of easement requirements, if necessary
5. Identification of potential EMWD's cost participation in facility oversizing, if applicable

If you have questions or concerns, please do not hesitate to contact Maroun El-Hage at (951) 928-3777, extension 4468 or by e-mail at El-hagem@emwd.org.

Sincerely,

Al Javier

Digitally signed by Al Javier
Date: 2022.11.07 11:10:40
-08'00'

Alfred Javier
Director of Environmental and Regulatory Compliance

ARJ:hs

Attachments: Copy of Public Notice

December 3, 2021

Attn: Jay Brander
DRC Engineering
160 S Old Springs Rd. Ste. 210
Anaheim Hills, CA 92808

Subject: SAN 53 – Will Serve – WS 20210001417 - APN: 303-020-005 & -022 THRU -025

Eastern Municipal Water District (EMWD) is willing to provide water and sewer services to the subject project. The provisions of service are contingent upon the developer completing the necessary arrangements in accordance with EMWD rules and regulations. EMWD expects the developer to provide proper notification when a water demand assessment is required pursuant to Senate Bill 221 and/or 610. EMWD expects the developer to coordinate with the approving agency for the proper notification. Further arrangements for service from EMWD may also include plan check, facility construction, inspection, jurisdictional annexation, and payment of financial participation charges. The developer is advised to contact EMWD's Development Services Department early in the entitlement process to determine the necessary arrangements for service, and to receive direction on the preparation of facility Design Conditions, which is required prior to final engineering.

EMWD's ability to serve is subject to limiting conditions, such as regulatory requirements, legal issues, or conditions beyond EMWD's control.

Expiration – one year from date of issue

Thank you for your cooperation in serving our mutual customers. If you have any questions, please call me at (951) 928-3777, extension 4420.

Sincerely,

Sambo Lay, MS, PE
Associate Civil Engineer II
Development Services Department
Eastern Municipal Water District

SL:lm

2270 Trumble Road • P.O. Box 8300 • Perris, CA 92572-8300
T 951.928.3777 • F 951.928.6177 www.emwd.org

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Eastern Municipal Water District (EMWD)

Response to EMWD-1
This comment provides introductory information. This comment does not question the content or conclusions of the Draft IS/MND. No response is required.

Response to EMWD-2
The commenter requests consultation with the EMWD's Development Services Department to compare existing and proposed demands and sewer flows and to prepare a Design Conditions (DC) report.

The applicant's engineer, DRC Engineering, Inc. is consulting with the EMWD regarding the project. Details regarding ongoing consultation between the EMWD and DRC Engineering, Inc. as of December 9, 2022, are outlined in Table 1 below. A copy of the Will-Serve letter dated December 3, 2021, from the EMWD is appended after the comment letter indicating that the EMWD is willing to provide water and sewer services to the subject property. The applicant's engineer is following EMWD engineering design recommendations and upon completion of the improvements as recommended, the EMWD has indicated that they would have capacity to serve the property.

Table 1: EMWD Development Services Department Ongoing Consultation

Consultation Action	Date Completed
EMWD Project Number: 2021-1465	
Will-Serve Letter Received	12/3/2021
Initial Due Diligence Meeting[1]	12/23/2021
Fire Flow Test Applications Submitted	3/23/2022
Design Coordination Fee Paid/Received	7/29/2022
Work Order 16484 Issued	8/16/2022
DC Engineer Assigned to Dudek	8/16/2022
EMWD DC Comments Received	9/6/2022
Clarification of EMWD DC Comments On-site[2]	11/14/2022

Notes:
EMWD = Eastern Municipal Water District
[1] Initial due diligence meeting with engineers Edmund Chew and Gary Schenkler
[2] Clarification of EMWD comments related to sewer lateral routing location

EMWD and the Santa Ana Regional Water Quality Control Board (Santa Ana RWQCB) have been added as responsible agencies under Section 1, Introduction, of the Final IS/MND. Inclusion of the EMWD and the Santa Ana RWQCB as responsible agencies does not materially affect the Draft IS/MND analysis or changes the conclusions and thus does not constitute a substantial revision of the Draft IS/MND because there is no identification of new significant impacts or additional mitigation measures. These revisions clarify and therefore do not trigger the need for recirculation of the Draft IS/MND.

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South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL: December 5, 2022

algarcia@cityofperris.org
Alfredo Garcia, Associate Planner
Department of Development Services–Planning Division
135 North D Street
Perris, California 92570

Mitigated Negative Declaration (MND) for the Proposed Ramona Expressway and Brennan Avenue Warehouse Project (Proposed Project)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The City of Perris is the California Environmental Quality Act (CEQA) Lead Agency for the Proposed Project. The following comments include recommended revisions to the health risk impacts during operation, cumulative impacts during operation, and information about South Coast AQMD permits that the Lead Agency should include in the Final MND. 1

South Coast AQMD Staff's Summary of Project Information in the MND

Based on the MND, the Proposed Project consists of construction and operation of a 165,371-square-foot building for warehouse activities on a 7.5-acre site that is located near the southwest corner of Ramona Expressway and Brennan Avenue in the City of Perris.[1] The Proposed Project is also located within the Perris Valley Commerce Center Specific Plan (PVCCSP) planning area.[2] Construction of the Proposed Project is anticipated to begin in the fourth quarter of 2022.[3] Operation is expected to begin in 2023.[4] The 160,371-square-foot warehouse portion[5] with 22 loading docks[6] is expected to involve 102 truck trips per day[7]. Based on a review of aerial photographs, South Coast AQMD staff found that the nearest sensitive receptor (e.g., residence) is within ~470 feet of the Proposed Project. 2

South Coast AQMD Staff's Comments

Health Risk Impacts during Project Operation

In the Appendix A, "Air Quality, Greenhouse Gas Emissions, and Energy Analysis" by First Carbon Solutions, Revised October 12, 2022 of this MND and its technical modeling files, South Coast AQMD staff found several places that need to be revised and re-modeled in accordance with the requirements in Office of Environmental Health Hazard Assessment (OEHHA) - Air 3

[1] Mitigated Negative Declaration. Introduction. Page 1-3.
[2] *Ibid.* Page 2.
[3] *Ibid.* Page 6.
[4] *Ibid.*
[5] *Ibid.* Page 3
[6] *Ibid.* 2.3 Air Quality. Page 52.
[7] Appendix I. Traffic Supporting information, I.1 Trip Generation Assessment, Table 2. Page 3 of 5.

Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments[8]. For example, the diesel particulate matters (DPM) emissions from truck idling and proposed 100 hp firewater pump were not estimated and modeled as point sources in MND's dispersion modeling files. The averaging time selected for the DPM modeling should use "period" but not "annual" in AERMOD settings. The proposed 165,371-square-foot warehouse building was not included in the dispersion model and therefore building downwash effect was not included. The cancer risks for off- site worker were not estimated in MND. In addition, it is not clear in the MND if any off-road combustion mobile source (e.g. diesel forklift) will be used onsite during operation. If any of them will be used when implementing the Proposed Project, they will also need to be added as additional sources to the health risk assessment and dispersion modeling files. Therefore, South Coast AQMD staff recommends that the Lead Agency revise the health risk assessment and dispersion modeling files and include the revisions in the Final MND.

3 CONT

Cumulative Impacts during Project Operation

The Proposed Project is located within the Perris Valley Commerce Center Specific Plan (PVCCSP) planning area. The PVCCSP was approved pursuant to a certified Environmental Impact Report (EIR) on 1/10/2012.[9] Prior to certification of the PVCCSP, a Draft EIR was released for public review and comment between 7/20/2011 – 9/6/2011.[10] During this public review period the South Coast AQMD submitted a comment recommending the Lead Agency include a more robust analysis of cumulative impacts in the Final EIR. Specifically, the South Coast AQMD asked that the lead agency revisit the estimated number of trucks projected to serve the site, provide additional analysis demonstrating that the project will not significantly impact sensitive receptors during operation and that it will not cause a significant air quality and air toxics impact, and to evaluate additional mitigation measures to further reduce any significant air quality and air toxics impacts. The PVCCSP has been revised and amended many times since 2012, the most recent Perris Valley Commerce Center Specific Plan Amendment No. 12, was approved on January 11, 2022[11]. However, the cumulative impacts from the revised projects in PVCCSP are not updated and a robust analysis of cumulative air quality and air toxics impacts from all the projects in PVCCSP is not included in the PVCCSP or this MND.

4

Per CEQA Guidelines Section 15065(a)(3), South Coast AQMD staff is primarily concerned with the cumulative air quality impacts from increased concentrations of air toxics in the PVCCSP region. Therefore, South Coast AQMD staff recommends that, at minimum, the Lead Agency to perform a qualitative analysis to provide the potential cumulative impacts from air toxics in consideration and listing of all surrounding past, present, and future probable projects. The Lead Agency may also perform a more detailed and robust quantitative analysis of cumulative air toxics and potential health risk implications to be included in the Final MND.

5

[8] Office of Environmental Health Hazard Assessment (OEHHA) - Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Available at https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

[9] ORDINANCE NUMBER 1284.
Accessed here: https://www.cityofperris.org/home/showpublisheddocument/2923/637250482796800000

[10] Final EIR. 9.0 Introduction, Public Review Summary. Page 9.0-1
Accessed here: https://www.cityofperris.org/home/showpublisheddocument/2645/637455522835370000

[11] Perris Valley Commerce Center Specific Plan Amendment No. 12, approved January 11, 2022, available at https://www.cityofperris.org/home/showpublisheddocument/2647/637799977032200000

South Coast AQMD Permits and Responsible Agency

If implementation of the Proposed Project would require the use of stationary equipment, including but not limited to emergency fire pump(s),[12] permits from South Coast AQMD are required. The Final MND should include a discussion on stationary equipment that will require South Coast AQMD permits and identify South Coast AQMD as a Responsible Agency for the Proposed Project. Any assumptions used in the Final MND will be used as the basis for permit conditions and limits for the Proposed Project. The 2015 revised Office of Environmental Health Hazard Assessment (OEHHA) methodology is being used by South Coast AQMD for determining operational health risks for permitting applications and also for all CEQA projects where South Coast AQMD is the Lead Agency. Please contact South Coast AQMD's Engineering and Permitting staff at (909) 396-3385 for questions on permits. For more general information on permits, please visit South Coast AQMD's webpage at: http://www.aqmd.gov/home/permits. 6

Conclusion

Pursuant to CEQA Guidelines Section 15074, prior to approving the Proposed Project, the Lead Agency shall consider the MND for adoption together with any comments received during the public review process. Please provide South Coast AQMD with written responses to all comments contained herein prior to the adoption of the Final MND. When responding to issues raised in the comments, responses should provide sufficient details giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and the public who are interested in the Proposed Project. 7

South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Evelyn Aguilar, Air Quality Specialist, at eaguilar@aqmd.gov, should you have any questions or wish to discuss the comments.

Sincerely,

Sam Wang

Sam Wang
Program Supervisor, CEQA-IGR
Planning, Rule Development and Implementation

SW:EA
RVC221108-03
Control Number

[12] Mitigated Negative Declaration. 2.3 Air Quality, Table 2. Page 45.

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South Coast Air Quality Management District (SCAQMD)

Response to SCAQMD-1
This comment provides introductory information. This comment does not question the content or conclusions of the Draft IS/MND. No response is required.

Response to SCAQMD-2
This comment provides a summary of project information. This comment does not question the content or conclusions of the Draft IS/MND. No response is required.

Response to SCAQMD-3
The commenter recommends that the Lead Agency revise the Health Risk Assessment (HRA) and dispersion modeling files included in Appendix A of the Draft IS/MND to address the following points:

- Diesel particulate matter (DPM) emission from truck idling and the proposed 100 hp fire pump were not estimated and modeled as point sources.
- In AERMOD, the averaging time for DPM modeling should be provided for "period," not "annual."
- The proposed 165,371-square-foot warehouse building was not included in the dispersion model.
- The cancer risks for off-site workers were not estimated in the Draft IS/MND.
- It was not made clear if off-road combustion mobile sources will be used on-site during operation. If so, they would need to be added as additional sources to the HRA and dispersion modeling files.

The HRA and associated dispersion modeling followed the latest Office of Environmental Health Hazard Assessment (OEHHA) guidance referenced in the comment: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. The specific input suggestions made in the comment would not materially affect the analysis, nor change any of the conclusions, and do not warrant updates to the HRA or associated dispersion modeling. Specific points raised in the comment are addressed individually, below:

- DPM emission from truck idling was included in the dispersion modeling as line sources, which are a series of point sources. As such, DPM from truck idling was adequately included in the dispersion modeling and no revisions are necessary.
- The proposed 100 hp fire pump was included in the regional emission impacts to provide a conservative estimate of maximum daily emissions; however, the fire pump is a stationary source that would require permitting from the SCAQMD. Permitted sources are covered under SCAQMD Regulation II – Permits (https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/regulation-ii). Compliance with mandatory permitting requirements would ensure that permitted source would not have a significant impact related to health risk impacts. Specifically, the SCAQMD evaluates health risk impacts from the

proposed source and requires that the equipment permit unit shall not be operated contrary to the conditions specified in the permit to operate.

- In AERMOD, the "annual" averaging time was used in the DPM dispersion modeling. The "annual" and "period" options provide results in the same format and both show annual concentrations. However, the "period" option averages the annual concentrations over the years of meteorological data used in the modeling, while the "annual" option provides the highest annual concentration out of the year of meteorological data used in the modeling. As such, the "annual" averaging time presents a more conservative estimate of concentrations and associated health risk impacts compared to the "period" averaging time. No revisions are necessary in response to this suggestion to edit the averaging time.
- As noted in the comment, cancer risks for off-site workers were not estimated in the Draft IS/MND. The HRA included as part of the Draft IS/MND was prepared as a part of determining whether the project would expose sensitive receptors to substantial pollutant concentrations, which is a CEQA impact question. The following is noted on Page 96 of the Air Quality, Greenhouse Gas Emissions, and Energy Analysis Report included as Appendix A of the Draft IS/MND:

  > For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities.[1] Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours. However, when assessing the impact of pollutants with 1-hour or 8-hour standards (such as NO_2 and CO), commercial and/or industrial facilities would be considered sensitive receptors.
  >
  > The TAC evaluated in the HRA was DPM, which is not a pollutant with a 1-hour or 8-hour standard. As such, the HRA evaluated impacts at locations where a sensitive individual could remain for 24 hours (consistent with SCAQMD guidance for the purposes of CEQA). As worker receptors are not considered sensitive receptors when evaluating impacts from DPM, no revisions to the HRA or associated dispersion modeling files are necessary. Nonetheless, the analysis for the worker scenario was completed for information purposes and added as additional appendix material to this Final IS/MND (Attachment A).

- As described in the Air Quality, Greenhouse Gas Emissions, and Energy Analysis Report prepared for the project and included in Appendix A of the Draft IS/MND, sources of DPM generated from construction and operations of the 165,371-square-foot warehouse were included in the HRA. The building itself is not a source of TACs. In addition, including the building and the building downwash effect only affects the modeled concentrations when stack stationary sources are included. As no stack stationary sources were modeled, it is not necessary to include the proposed building in the dispersion model. No revisions are necessary in response to address this portion of the comment.

[1] South Coast Air Quality Management District (SCAQMD). 2008. Final Localized Significance Threshold Methodology. Revised July 2008. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed January 26, 2022.

- All sources included in the modeling were outlined in the Air Quality, Greenhouse Gas Emissions, and Energy Analysis Report prepared for the project, included as Appendix A of the Draft IS/MND. As noted in Appendix A of the Draft IS/MND and Section 2.8 – Greenhouse Gas Emissions of the Draft IS/MND, MM GHG-1 through MM GHG-3 would require the project to install infrastructure for the support and operation of zero and near-zero freight vehicles and equipment powered by renewable energy. As required by MM GHG-3, exterior yard trucks and other off-road equipment used on-site during project operations are anticipated to be powered by electricity or another form of renewable energy. Therefore, off-road combustion mobile sources that would generate TACs (such as diesel-fueled off-road equipment) would not be used on-site during operation. No additions or revisions to the HRA or associated dispersion modeling files are necessary in response to this comment.

Response to SCAQMD-4
This comment provides a summary of the SCAQMD comments on the EIR for the Perris Valley Commerce Center Specific Plan (PVCCSP). The commenter notes that while the PVCCSP has been amended many times, the cumulative impacts from the revised projects in the PVCCSP have not been updated and an analysis of cumulative air quality and air toxic impacts are not included in the PVCCSP or in the Draft IS/MND for the proposed project. Prior to approving the PVCCSP, a Draft EIR was released for public review and comment between July 20, 2011, and August 6, 2011. Notably, the EIR for the PVCCSP was then certified over 10 years ago in November 2011. California courts have held that after EIR certification, "the interests of finality are favored over the policy of encouraging public comment" quoting *Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112, 1130.

As discussed in the City's response to the SCAQMD's comments on the PVCCSP EIR, (Response to Comment L-4), the PVCCSP was analyzed with a "programmatic" approach (PVCCSP DEIR, p. 3.0-7) and the PVCCSP EIR is considered to be a programmatic document, as defined in Section 15168 of the State CEQA Guidelines. When a programmatic EIR is prepared, later activities, which for the PVCCSP consists of individual implementing development and infrastructure projects, must be examined to determine whether an additional environmental document is required (State CEQA Guidelines § 15168(c)). Specific evaluations in later-tier environmental documents for individual development projects within the PVCCSP planning area were anticipated This evaluation takes place as part of the City's normal development review process.

It is important to understand that the PVCCSP has been amended 12 times to date in large part because of the changes to the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (MARB/IPA ALUCP) that were adopted on November 13, 2014 by the Riverside County Airport Land Use Commission, which was after the PVCCSP was adopted by the City of Perris. The updated ALUCP placed further restrictions on the land uses that could be provided in the northern poart of the City of Perris. The PVCCSP amendments resulted in the development of new light industrial uses in areas where the previously approved land use was no longer feasible. The impacts associated with each of these amendment projects have been evaluated in EIRs and MNDs. Some amendments only involved the elimination of planned unimproved roadways that were no longer needed within development sites.

As previously noted, this comment relates to the EIR for the PVCCSP that was certified in November 2011 and has since been amended several times. The Draft IS/MND is an evaluation of an individual project that is consistent with the PVCCSP and includes an adequate analysis of project-level air quality impacts. As described in Section 1.4, Project Description, of the Draft IS/MND, the project includes the construction and development of a proposed 165,371-square-foot warehouse center. As such, the analysis of air quality impacts from the proposed project was limited to those potential impacts related to the project described in the Draft IS/MND. The proposed project's potential contribution to cumulative impacts to air quality were assessed for the proposed project, consistent with published SCAQMD guidance, in the Draft IS/MND. As noted in Section 2.3, Air Quality, of the Draft IS/MND, all impacts related to air quality resources, including cumulative impacts, were found to be less than significant.

Response to SCAQMD-5
This comment recommends that the Lead Agency perform a qualitative analysis to describe potential cumulative impacts from air toxics in consideration and list all surrounding past, present, and future probable projects. This comment also states that the Final MND may include a more robust and detailed quantitative analysis of cumulative air toxics and potential health risk implications.

By its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants is a result of past and present development within the air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the proposed project) within the air basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. According to Section 15064(h)(4) of the State CEQA Guidelines, the existence of significant cumulative impacts caused by other projects alone does not constitute substantial evidence that the project's incremental effects would be cumulatively considerable. Rather, the determination of cumulative air quality impacts for construction and operational emissions is based on whether the proposed project would result in regional emissions that exceed the SCAQMD regional thresholds of significance for construction and operations on a project level.

Because the PVCCSP EIR was prepared at the programmatic level and there were no specific implementing development projects proposed, a meaningful analysis of health risk impacts could not be performed at the programatic stage of master planning for the Perris Valley Commerce Center. Therefore, the PVCCSP EIR concluded that any such analysis would be, at best, speculative (PVCCSP DEIR, page 4.2-49) and did not discuss the issue further as allowed per Section 15145 of the State CEQA Guidelines. Thus, the PVCCSP EIR's conclusions related to the individual PVCCSP implementing development and infrastructure projects exposing sensitive receptors to substantial pollutant concentrations were based on the health risks from previously evaluated industrial projects within the PVCCSP vicinity (PVCCSP DEIR Table 4.2-M) and the determination from the General Plan EIR. However, PVCCSP EIR mitigation measure MM Air 15 specifically requires an HRA to identify project-specific impacts resulting from the use of diesel trucks from individual implementing development projects based on the number of dock doors and truck trips.

Additionally, there is no methodology to quantify the cumulative areawide or localized health risks from multiple facilities within a community-wide area. This is because the SCAQMD's recommended thresholds of significance (utilized by the City of Perris to evaluate air quality impacts of proposed projects) apply to individual development projects and are meant to evaluate the incremental increase in emissions from a proposed source. These thresholds do not apply to the emissions generated by a group of related or cumulative projects. The SCAQMD has published a report on how to address cumulative impacts from air pollution that addresses cumulative impacts from air toxics: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution.* In this report the SCAQMD clearly states (Page D-3):

> *" . . . the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

The City of Perris uses the SCAQMD's recommended methodology to evaluate cumulative impacts, which is to conclude that an impact that is considered to be significant on a project-specific basis would also cause a significant cumulative impact. Individual HRAs have been prepared for the majority individual light industrial project proposed within the PVCCSP planning area. Thus, here, as recommended by the SCAQMD, because the proposed project's air quality impacts would not exceed AQMD thresholds and thus are not significant, the proposed project's air quality impacts are not considered cumulatively considerable, and the proposed project's cumulative impacts are not considered to be significant.

The City is aware of the toxic air contaminant and health risk conditions within its jurisdiction and surrounding areas. In the northern part of the City of Perris (zip code 92571), the SCAQMD's Multiple Air Toxics Exposure Study (MATES) V study identifies a cancer risk of 308 per million. Of this risk, 68.8% is associated with diesel PM. The air toxics cancer risk in this area is higher than only 15 percent of the South Coast Air Basin (SoCAB) population. The cancer risk in the southern part of the City (zip code 92585) is 288 per million. In comparison, the greatest cancer risk in Riverside County is 469 per million within the 92501 zip code of the City of Riverside. The greatest cancer risk within the SoCAB is 749 per million in downtown Los Angeles. It is not the responsibility of one individual development project to evaluate the potential health risks associated with the existing and future development of all properties within a community planning area. Instead, as per the State CEQA

Guidelines, the HRA provides an analysis to determine whether the proposed project would expose sensitive receptor to substantial DPM pollutant concentrations utilizing the methodologies and thresholds of significance recommended for individual development projects by the SCAQMD.

Response to SCAQMD-6
This comment states that the use of stationary equipment would require SCAQMD permits. The comment further states that if implementation of the proposed project would require the use of stationary equipment, the Final IS/MND should include a discussion of said equipment and identify the SCAQMD as a responsible agency for the proposed project. Assumptions used in the Final IS/MND will be used as the basis for permit conditions and limits for the proposed project.

As requested by the comment, a discussion of stationary equipment that would require SCAQMD permits was added to Section 2.3, Air Quality, in the Final IS/MND. In addition, the Final IS/MND lists the SCAQMD as a responsible agency in Section 1, Introduction. Neither the inclusion of the stationary equipment discussion nor the inclusion of the SCAQMD as a responsible agency materially affects the Draft IS/MND analysis or changes the conclusions and thus does not constitute a substantial revision of the Draft IS/MND because there is no identification of new significant impacts or additional mitigation measures. These revisions clarify and therefore do not trigger the need for recirculation of the Draft IS/MND.

Response to SCAQMD-7
As discussed in Section 1: Introduction of this Final IS/MND, the City of Perris, as the lead agency under CEQA, will consider the Draft IS/MND along with any public comments in its review and consideration of the proposed project. Although not required by CEQA, the City has prepared the preceding written responses to the substantive environmental comments submitted by the SCAQMD. The City will provide these responses to the SCAQMD prior to the Planning Commission hearing for the proposed project.

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December 1, 2022

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SUBJECT: COMMENTS ON RAMONA EXPRESSWAY AND BRENNAN AVENUE WAREHOUSE MND (SCH NO. 2022110066)

To whom it may concern:

Thank you for the opportunity to comment on the Mitigated Negative Declaration (MND) for the proposed Ramona Expressway and Brennan Avenue Warehouse Project. Please accept and consider these comments on behalf of Golden State Environmental Justice Alliance. Also, Golden State Environmental Justice Alliance formally requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877.

1.0 Introduction

The project proposes the construction and operation of one 165,371 square-foot (sf) non-refrigerated warehouse center for consumer products comprised of 160,371 sf of warehouse space, 2,500 sf of office space and a 2,500 mezzanine on an approximately 7.5 acre site. The building includes 20 truck/trailer dock doors, 33 truck/trailer parking spaces, 29 truck/trailer loading spaces, and 68 passenger car parking spaces.

The MND describes the project as, "Sortable e-commerce warehouses and distribution centers are high-cube package handling facilities that support the "first-mile" of the tenant's fulfillment network. The proposed project is intended to be used primarily for the storage and/or consolidation of goods prior to their distribution to the customer or another supporting facility. The proposed building would store, package, and fulfill orders, utilizing automation to enable highly efficient

processing of goods. The site will operate 24-hours a day, 365 days per year. Cold storage is not proposed as part of the project."

1.4 Project Description

The MND does not include a detailed site plan, floor plan, elevations, or grading plan for the proposed project. The basic components of a Planning Application include a detailed site plan, floor plan, grading plan, elevations, and written narrative. Exhibit 5: Site Plan does not provide any pertinent information such as the earthwork quantity notes, parking requirements, or floor area ratio calculations. This figure has been edited for public review and excludes pertinent information required for consistency analysis with applicable requirements. The MND has excluded the required application items from public review and edited the site plan into a form that does not represent the project meaningfully, 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 these documents contribute directly to analysis of the problem at hand. Providing this information is vital as the MND does not provide any details about the onsite/offsite grading required by the proposed project. An EIR must be prepared to include all application items for review, analysis, and comment by the public and decision makers.

2.0 Environmental Checklist and Environmental Evaluation
2.3 Air Quality, 2.6 Energy, and 2.8 Greenhouse Gas Emissions

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

The MND does not include for analysis relevant environmental justice issues in reviewing potential impacts, including cumulative impacts from the proposed project. This is especially significant as the surrounding community is highly burdened by pollution. According to CalEnviroScreen 4.0[1], CalEPA's screening tool that ranks each census tract in the state for pollution and socioeconomic vulnerability, the proposed project's census tract (6065042620) experiences high rates of pollution burden. The surrounding community, including residences to the north, Val Verde High School, Val Verde Academy, and Val Verde Regional Academy (continuation middle and high school) to the west, bears the impact of multiple sources of pollution. For example, the project census tract ranks in the 98th percentile for ozone burden, the 53rd percentile for particulate matter (PM) 2.5 burden, the 48th percentile for diesel PM, and the 82nd percentile for traffic impacts. All of these environmental factors are typically attributed to heavy truck activity in the area. Ozone can cause lung irritation, inflammation, and worsening of

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

existing chronic health conditions, even at low levels of exposure[2]. 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[3]. The census tract also bears more impacts from cleanup sites than 69% of the state. Chemicals in the buildings, soil, or water at cleanup sites can move into nearby communities through the air or movement of water[4].

Further, the census tract is a diverse community including 69% Hispanic, 13% African-American and 7% Asian-American residents, whom are especially vulnerable to the impacts of pollution. The community has a high rate of low educational attainment, meaning75% of the census tract over age 25 has not attained a high school diploma, which is an indication that they may lack health insurance or access to medical care. The community also has a high rate of poverty, meaning 65% of the households in the census tract have a total income before taxes that is less than the poverty level. Income can affect health when people cannot afford healthy living and working conditions, nutritious food and necessary medical care[5]. Poor communities are often located in areas with high levels of pollution[6]. Poverty can cause stress that weakens the immune system and causes people to become ill from pollution[7]. Living in poverty is also an indication that residents may lack health insurance or access to medical care. Medical care is vital for this census tract as it ranks in the 91st percentile for incidence of cardiovascular disease and 66th percentile for incidence of asthma. The community also has a high rate of linguistic isolation, meaning 53% of the census tract speaks little to no English and faces further inequities as a result.

Additionally, the proposed project's census tract (6065042620) and the census tracts adjacent to the project site (6065046700 (north), 6065048800 (north), 6065042904 (west), and 6065042010 (west) are identified as SB 535 Disadvantaged Communities[8], which is not discussed or presented for analysis in the MND. This indicates that cumulative impacts of development and environmental impacts in the City are disproportionately impacting these communities. An EIR must be prepared to include this information for analysis, including cumulative impacts and irreversible environmental effects.

[2] OEHHA Ozone https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone
[3] OEHHA Diesel Particulate Matter https://oehha.ca.gov/calenviroscreen/indicator/diesel-particulate-matter
[4] OEHHA Cleanup Sites https://oehha.ca.gov/calenviroscreen/indicator/cleanup-sites
[5] OEHHA Poverty https://oehha.ca.gov/calenviroscreen/indicator/poverty
[6] Ibid.
[7] Ibid.
[8] OEHHA SB 535 Census Tracts https://oehha.ca.gov/calenviroscreen/sb535

California's Building Energy Code Compliance Software (CBECC) is the State's only approved energy compliance modeling software for non-residential buildings in compliance with Title 24[9]. CalEEMod is not listed as an approved software. The CalEEMod-based modeling in the MND 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 MND did not accurately or adequately model the energy impacts in compliance with Title 24, a finding of significance must be made. An 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 MND utilizes CalEEMod as a source in its methodology and analysis, which is clearly not the approved software.

2.4 Biological Resources

According to Appendix B: Biological Resources Assessment, a general biological survey assessment was conducted on March 24, 2022. The assessment concluded that there is moderate potential for burrowing owl to occur onsite. Appendix B states that "there is a large concrete slab in the northern portion of the site that could potentially provide burrowing habitat for burrowing owls. Additionally, there is high potential for California ground squirrels to occupy and burrow on the project site prior to its development; thus, there is a potential for occurrence of burrowing owls on the project site prior to its development. Additional studies would be necessary to confirm whether California ground squirrels and burrowing owls use the site. There are 11 recent records within 5 miles of the project site and 40 recent records between 5 and 10 miles from the project site (Exhibit 6). Therefore, there is moderate potential for this species to occur on-site as a breeder, winter resident, and/or for post-breeding dispersal."

The appendix does not demonstrate compliance with the Western Riverside MSHCP Burrowing Owl Survey Instructions[10]. An EIR must be prepared to provide a map of the transects walked, area surveyed, and details regarding temperature and precipitation as required by the MSHCP. Additionally, the Western Riverside MSHCP requires "the location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed should be recorded and mapped, including GPS coordinates." The MND and Appendix B do not include the GPS coordinates. An EIR must be prepared to include this information in order to be an adequate informational document in compliance with the MSHCP Instructions.

[9] California Energy Commission 2022 Energy Code Compliance Software
https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-1
[10] Western Riverside MSHCP Burrowing Owl Survey Instructions
https://www.rctlma.org/Portals/3/EPD/consultant/burrowing_owl_survey_instructions.pdf

It is also important to note that the Department of Fish and Game's 2012 Staff Report on Burrowing Owl Mitigation[11] provides further instructions regarding burrowing owls. The 2012 Report concludes that "current scientific literature indicates that it is most effective to conduct breeding and non-breeding season surveys and report in the manner that follows:

Breeding Season Surveys

Number of visits and timing. Conduct 4 survey visits: 1) at least one site visit between 15 February and 15 April, and 2) a minimum of three survey visits, at least three weeks apart, between 15 April and 15 July, *with at least one visit after 15 June*."

The general biological survey conducted on March 24, 2022 was not conducted in accordance with the most effective practices outlined by the 2012 Report. The field assessment also occurred outside of the breeding season. The MSHCP Burrowing Owl Survey Instructions also state "Surveys that are conducted outside the breeding season will likely need to be repeated during the breeding season; therefore, it is recommended that surveys only be conducted during the breeding season." The MSHCP defines the breeding season as March 1 - August 1 annually. An EIR must be prepared which includes burrowing owl surveys conducted in accordance with the most effective practices of the 2012 Report and the requirements of the MSHCP for public review.

Additionally, the mitigation measures provided are not sufficient. Notably, MM BIO-2 states that "If burrowing owls occupy any implementing project site and cannot be avoided, active or passive relocation shall be used to exclude owls from their burrows, as agreed to by the City of Perris Planning Department and the CDFW. Relocation shall be conducted outside the breeding season or once the young are able to leave the nest and fly. Passive relocation is the exclusion of owls from their burrows (outside the breeding season or once the young are able to leave the nest and fly) by installing one-way doors in burrow entrances. These one-way doors allow the owl to exit the burrow, but not enter it. These doors shall be left in place 48 hours to ensure owls have left the burrow. Artificial burrows shall be provided nearby." The MSHCP does not include provisions for exclusion. The California Department of Fish and Game's 2012 Staff Report on Burrowing Owl Mitigation[12] concludes that "Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls, or permanently exclude burrowing owls and close burrows after verifying burrows are empty by site monitoring and scoping. Exclusion in and of itself is not a take avoidance, minimization or mitigation method. Eviction of burrowing owls is a potentially significant impact under CEQA." MM BIO-2 includes exclusion, which is a potentially significant impact under CEQA. MM BIO-

[11] Department of Fish and Game Staff Report on Burrowing Owl Mitigation
https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843
[12] Department of Fish and Game 2012 Staff Report on Burrowing Owl Mitigation
https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843

2 will not result in sufficient mitigation and serves to increase potentially significant impacts to the burrowing owls identified on the project site. The DFG Report states that "scientific literature indicates that any site-specific avoidance or mitigation measures developed should incorporate the best practices presented below," and includes a list of mitigation measures. An EIR must be prepared with mitigation measures that are meaningfully enforceable by the lead agency and compliant with the MSHCP and DFG Report, including but not limited to those listed in the DFG Report (minimization, habitat protection, buffer zones, etc).

2.9 Hazards and Hazardous Materials

The proposed Project site is within March Air Reserve Base (MARB)/Inland Port Airport Compatibility Zone C1. Zone C1 includes limitations on concentrations of people including, "Development shall contain no more than 100 people per acre on average or 250 people for a single acre for all land uses." The MND concludes the project is compatible with the limitations on concentrations of people for Zone C1 because the project includes "68 full-time employees. Employees would work in two shifts within a 24-hour period. Therefore, it would not exceed 100 people." As noted in the Population and Housing analysis below, the MND does not provide a source or methodology for the conclusion that the project will generate 68 employees. Additionally, no useful information is given about the end user/tenant to support the conclusion that the project will only generate 68 employees and contain no more than 100 people per acre on average or 250 people for a single acre at all times. An EIR must be prepared to include an accurate analysis of the proposed project's concentrations of people onsite in order to adequately analyze the potentially significant impacts.

The MND concludes that the project is consistent with Table 12.0-1, MARB/IPA Basic Compatibility Criteria Table within the Perris Valley Commerce Center Specific Plan (PVCCSP) Airport Overlay Zone in order to conclude the project will have less than significant impacts. However, Implementation Measures of the General Plan require MARB review and comment prior to making any land use decisions:

1. Safety Element Implementation Measure I.D.2 Continue to notify March Air Reserve Base of new development project applications and consider their input prior to making land use decisions.

The MND is misleading to the public and decision makers by relying solely on airport compatibility review from the City/PVCC SP to conclude the project will have less than significant impacts. Delaying MARB review until after the CEQA process is implementation of the project prior to CEQA review and deferred mitigation in violation of CEQA. An EIR must be prepared

which includes a review and comment letter regarding the proposed development plans from MARB.

2.11 Land Use and Planning

The MND must provide a quantified analysis of the project's growth within the PVCCSP and General Plan to determine if it exceeds the buildout scenario for its Planning Area within PVCC SP and the PVCC SP as a whole, in accordance with Table LU-28: Building Area by Land Use Designation, Table LU-29: General Plan Population Projections, and Table LU-30: General Plan Employment Projections of the City's General Plan Land Use Element, including all cumulative development and projects "in the pipeline."

Further, the MND 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. Policy HC 1.5 On an ongoing basis, identify and address health inequities in Perris (i.e. unjust barriers that result in differences in environmental conditions and health outcomes) and strive to provide a high quality of life for all residents, regardless of income, age or ethnicity.

2. Goal HC-5: Healthy Economy – Encourage businesses to provide meaningful employment opportunities to residents.

3. Policy HC 5.1 Develop programs to attract and retain industries that can provide a living wage, provide health insurance benefits, and meet existing levels of workforce education.

4. Policy HC 6.1. Support regional efforts to improve air quality through energy efficient technology, use of alternative fuels, and land use and transportation planning.

5. Safety Element Implementation Measure I.D.2 Continue to notify March Air Reserve Base of new development project applications and consider their input prior to making land use decisions.

An EIR must be prepared to include an analysis of the project's potential inconsistency with these goals and policies. This is notable as the project site is identified as a Disadvantaged Community in Figure 1 of the Environmental Justice Element of the General Plan.

Additionally, the MND does not provide any consistency analysis with SCAG's 2020-2045 Connect SoCal RTP/SCS. Due to errors in modeling and modeling without supporting evidence, as noted throughout this comment letter and attachments, the proposed project has significant

potential for inconsistency 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. An EIR must be prepared to include revised, accurate modeling and a consistency analysis with all goals of the RTP/SCS.

2.14 Population and Housing

The MND utilizes uncertain language and does not provide any meaningful analysis or supporting evidence to substantiate the conclusion that there will be no significant impacts to population and housing. For example, the MND states that the project "could employ approximately 68 full-time staff/employees once completed," without providing any meaningful evidence to substantiate this claim, including the source/methodology for this calculation. The MND does not provide any discussion of the City's unemployed population in terms of qualification for and/or interest in work in the industrial sector. The MND also states that "Because of the nature of the proposed project, the labor skills required for the proposed project are *typically* filled by workers who are already present in the local labor force. No features of the proposed project would be *expected* to have a substantial effect on the existing or planned population of the City of Perris" without providing any quantified analysis or meaningful evidence to support this claim. The MND does not provide any demographic and geographic information on the location of qualified workers to fill these positions. A construction worker employment analysis must also be included to adequately and accurately analyze all potentially significant environmental impacts.

The MND does not provide any analysis of projects approved, proposed, or "in the pipeline" of the PVCCSP to demonstrate that the combined workforce of all projects does not exceed the growth estimates analyzed by the PVCCSP EIR. This is especially vital given the 12 amendments that have been approved in the PVCCSP, including seven amendments to increase the amount of light industrial uses than originally planned for in the PVCCSP and its EIR:

1. Amendment No. 3 (approved February 9, 2016) to rezone 68.99 acres from commercial and business professional to light industrial.

2. Amendment No. 4 (approved February 9, 2016) to rezone 16 acres from general industrial to light industrial.

3. Amendment No. 6 (approved February 14, 2017) to rezone 23.66 acres from commercial to light industrial.

4. Amendment No. 7 (approved June 13, 2017) to rezone 7.48 acres from commercial to light industrial.

5. Amendment No. 8 (approved April 10, 2018) to rezone 16.22 acres from business professional office to light industrial.

6. Amendment No. 9 (approved August 28, 2018) to rezone 35 acres from business professional office to light industrial.

7. Amendment No. 11 (approved October 26, 2021) to rezone 9.54 acres from business professional office to light industrial.

Overall, the PVCCSP has been amended seven times in the past six years to increase the amount of light industrial uses. This has increased the amount of light industrial acreage, uses, and employees within the PVCCSP by a cumulative 176.9 acres. This has increased the light industrial area within the 3,500 acre PVCCSP planning area by approximately 5%. Table 2.0-1, Land Use Comparison within the PVCCSP[13] states that the original 2012 PVCCSP document planned for 1,866 acres of light industrial and it has increased to 2,040 acres through approval of the PVCCSP amendments. An EIR must be prepared with analysis of projects approved, proposed, or "in the pipeline" of the PVCCSP to demonstrate that the combined workforce of all projects does not exceed the growth estimates analyzed by the PVCCSP EIR.

The MND has not provided the methodology for its determination that the project will generate 68 employees during project operations or evidence that the City's workforce population is qualified for or interested in work in the industrial sector. SCAG's Employment Density Study[14] provides the following applicable employment generation rates for Riverside County:

Warehouse: 1 employee per 581 square feet
Office: 1 employee per 481 square feet

Applying these ratios results in the following calculation:

Warehouse: 162,871 sf / 581 sf = 281 employees
Office: 2,500 sf / 481 sf = 6 employees

Total: 287 employees

Utilizing SCAG's Employment Density Study ratios, the proposed project will generate 287 employees. The MND utilizes uncertain and misleading language which does not provide any meaningful analysis of the project's population and employment generation. In order to comply with CEQA's requirements for meaningful disclosure, an EIR must be prepared to provide an accurate estimate of employees generated by all uses of the proposed project. It must also provide

[13] Perris Valley Commerce Center Specific Plan
https://www.cityofperris.org/home/showpublisheddocument/2647/637799977032200000
[14] SCAG Employment Density Study
http://www.mwcog.org/file.aspx?A=QTTlTR24POOOUIw5mPNzK8F4d8djdJe4LF9Exj6lXOU%3D

demographic and geographic information on the location of qualified workers to fill these positions in order to provide an accurate environmental analysis.

SCAG's Connect SoCal Demographics and Growth Forecast[15] notes that the City will add 10,300 jobs between 2016 - 2045. Utilizing the SCAG Employment Density Study calculation of 287 employees, the project represents 2.7% of the City′s employment growth from 2016 - 2045. A single project accounting for this amount of the projected employment and/or population over 29 years represents a significant amount of growth. An EIR must be prepared to include this analysis and also provide a cumulative analysis discussion of projects approved since 2016 and projects "in the pipeline" to determine if the project will exceed SCAG's employment and/or population growth forecast for the City. For example, other recent industrial projects such as Harley Knox Commerce Center (152 employees), PVCCSP Amendment No. 13 (603 employees), Core 5 Rider Warehouse (432 employees), First Industrial Warehouse at Rider (562 employees), Perris and Morgan 3 Industrial Buildings (494 employees), First Industrial at Wilson 1 (526 employees), First Industrial at Wilson 2 (276 employees), IDI Rider Warehouses 2 and 4 (1,313 employees), Ramona-Indian Warehouse (440 employees), Redlands East Warehouse (442 employees), and Redlands West Warehouse (592 employees) combined with the proposed project will cumulatively generate 6,119 employees, which is 59.4% of the City's employment growth forecast over 29 years. An EIR must be prepared to include this information for analysis, and also provide a cumulative analysis discussion of projects approved since 2016 and projects "in the pipeline" to determine if the proposed project will exceed the employment/population growth forecasts by SCAG, the City's General Plan, and/or the PVCC SP EIR.

2.17 Transportation

The MND 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 MND has not provided any exhibits depicting the available truck/trailer turning radius at the intersection of the project driveways to determine if there is enough space available to accommodate heavy truck maneuvering. Further, there are no exhibits providing on-site analysis regarding available space on the property to accommodate truck/trailer 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. An EIR must be

[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

prepared for the proposed project with this analysis in order to provide an adequate and accurate environmental analysis.

The VMT Appendix models the proposed project as ITE Land Use Code 150 (Warehouse) to determine the project trip generation and VMT impacts. However, ITE Land Use Code 150 (Warehouse) is a general category and does not represent the proposed project's operational features and was chosen for analysis because ITE attributes it with the 2nd lowest trip generation rate of all the warehouse types. ITE Land Use Code 156 (High-Cube Parcel Hub Warehouse) accurately reflects the proposed project. The ITE describes Land Use Code 156 High-Cube Parcel Hub Warehouse and their place in the supply chain as "situated at multiple points in the supply chain (intermediate or final delivery)[16]." The MND states that the building "is intended to be used primarily for the storage and/or consolidation of goods prior to their distribution to the customer or another supporting facility." The operational function of the building is described as situated in multiple points of the supply chain, either at an intermediate point (another supporting facility) or for final delivery (distribution to the customer). Therefore, an EIR must be prepared with accurate trip generation modeling and VMT analysis utilizing ITE Land Use Code 156 (High-Cube Parcel Hub Warehouse).

Further, the VMT analysis has not analyzed the project's truck/trailer/delivery van activity. An EIR must be prepared to include all truck/trailer/delivery van activity for quantified VMT analysis. The operational nature of industrial/warehouse uses involves high rates of truck/trailer/delivery van VMT due to traveling from large import hubs to regional distribution centers to smaller industrial parks and then to their final delivery destinations. Once employees arrive at work, they will conduct their jobs by driving truck/trailer/delivery vans across the region as part of the daily operations as a parcel hub facility, which will drastically increase project-generated VMT. The project's truck/trailer and delivery van activity is unable to utilize public transit or active transportation and it is misleading to the public and decision makers to exclude this activity from VMT analysis. An EIR must be prepared to reflect a quantified VMT analysis that includes all truck/trailer and delivery van activity.

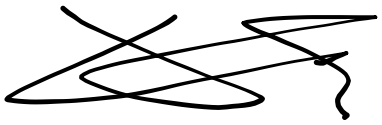
Conclusion

For the foregoing reasons, GSEJA believes the MND is flawed and an 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

[16] ITE High Cube Vehicle Trip Generation Analysis
https://www.ite.org/pub/?id=a3e6679a%2De3a8%2Dbf38%2D7f29%2D2961becdd498

communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877.

Sincerely,



Gary Ho
Blum Collins & Ho, LLP

Attachment: SWAPE Analysis

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

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December 1, 2022

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

Subject: **Comments on the Ramona Expressway and Brennan Avenue Warehouse Project (SCH No. 2022110066)**

Dear Mr. Ho,

We have reviewed the October 2022 Initial Study and Mitigated Negative Declaration ("IS/MND") for the Ramona Expressway and Brennan Avenue Warehouse ("Project") located in the City of Perris ("City"). The Project proposes to construct 165,371-square-feet ("SF") of warehouse space, 5,000-SF of office space, and 110 parking spaces on the 7.48-acre site.

Our review concludes that the IS/MND fails to adequately evaluate the Project's air quality and health risk impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the environment.

Air Quality

Failure to Provide Complete CalEEMod Output Files

Land use development projects under the California Environmental Quality Act ("CEQA") typically evaluate air quality impacts and calculate potential criteria air pollutant emissions using the California Emissions Estimator Model ("CalEEMod") Version 2020.4.0 (p. 42). [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

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

information is known, the user can change the default values and input project-specific values, but CEQA requires that such changes be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are 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.

Regarding the evaluation of the criteria air pollutant emissions associated with Project construction and operation, the Air Quality, Greenhouse Gas Emissions, and Energy Report ("AQ & GHG Report"), provided as Appendix A to the IS/MND, states:

> "Regional construction and operational emissions reported in this analysis were modeled using CalEEMod Version 2022.1" (p. 71).

As indicated above, the AQ & GHG Report uses CalEEMod Version 2022.1 to estimate the Project's emissions.[2] However, this poses a problem, as the soft-release of the new program fails to provide complete output files. Specifically, the "User Changes to Default Data" table no longer provides the quantitative counterparts to the changes to the default values (see excerpt below):

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based on project applicant's inputs, the project would start in September 2022 and conclude in second quarter of 2023.
Operations: Fleet Mix	The vehicle trips are adjusted based on the traffic analysis which estimates 184 daily passenger vehicles and 102 daily truck trips. Please see trip adjustment and fleet mix calculation sheets in the appendix.
Operations: Vehicle Data	Number of trips are adjusted based on the traffic analysis which estimates 184 daily passenger vehicles and 102 daily truck trips. Please see trip adjustment calculation sheets in the appendix. Truck trip length is set to be 78 miles, which is the distance between the Port of Long Beach and the proposed project.
Construction: Off-Road Equipment	The Building Construction Phase is shortened based on project schedule, the equipment hours are adjusted to conserve the same horsepower hours with that of the CalEEMod default horsepower. Please see the appendix for details.

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

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

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

Thus, the output files associated with CalEEMod Version 2022.1 fail to divulge the exact parameters utilized to calculate Project emissions. Without access to the complete output files, including the exact changes to the default values, we cannot verify that the AQ & GHG Report's air modeling, and subsequent analysis, is an accurate reflection of the proposed Project. As such, an EIR should be conducted to include an updated air quality analysis using CalEEMod Version 2020.4.0.[3]

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 utilized CalEEMod Version 2020.4.0, as well as the Project-specific information provided by the IS/MND.[4] Consistent with the IS/MND, we included 160,371-SF of "Unrefrigerated Warehouse- No Rail," 5,000-SF of "General Office Building," and 119,000-SF of "Parking Lot." We assumed that the Project would be located within Climate Zone 10 and the Project's utilities would be provided by Southern California Edison.[5, 6] Additionally, we altered the default construction phase lengths and included 184 operational daily passenger vehicle trips to be consistent with the IS/MND's air model. All other values were left as default.[7]

Our updated analysis estimates that the Project's construction-related VOC emissions would exceed the applicable South Coast Air Quality Management District ("SCAQMD") threshold of 75 pounds per day ("lbs/day"), as referenced by the IS/MND (p. 43, Table 1) (see table below).[8]

[3] "CalEEMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), March 2022, *available at:* http://www.aqmd.gov/caleemod/download-model.
[4] "CalEEMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), March 2022, *available at:* http://www.aqmd.gov/caleemod/download-model.
[5] "Appendix F – Climate Zones Lookup." CAPCOA, September 2016, *available at:* http://www.aqmd.gov/caleemod/user's-guide.
[6] "Southern California Edison's Service Area." Southern California Edison, April 2019, *available at*: https://download.newsroom.edison.com/create_memory_file/?f_id=5cc32d492cfac24d21aecf4c&content_verified=True, pp. 2.
[7] See Attachment A for Updated CalEEMod Output Files.
[8] "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, *available at*: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

SWAPE Criteria Air Pollutant Emissions	
Construction	**VOC** (lbs/day)
IS/MND	20.5
SWAPE	79.37
% Increase	287%
SCAQMD Threshold	**75**
Exceeds?	***Yes***

As demonstrated in the table above, the Project's construction-related VOC emissions, as estimated by SWAPE, increase by approximately 287% and exceed the applicable SCAQMD significance threshold. Thus, our updated model demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the IS/MND. As a result, an 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 IS/MND, 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]

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

[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.
[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.

> "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]

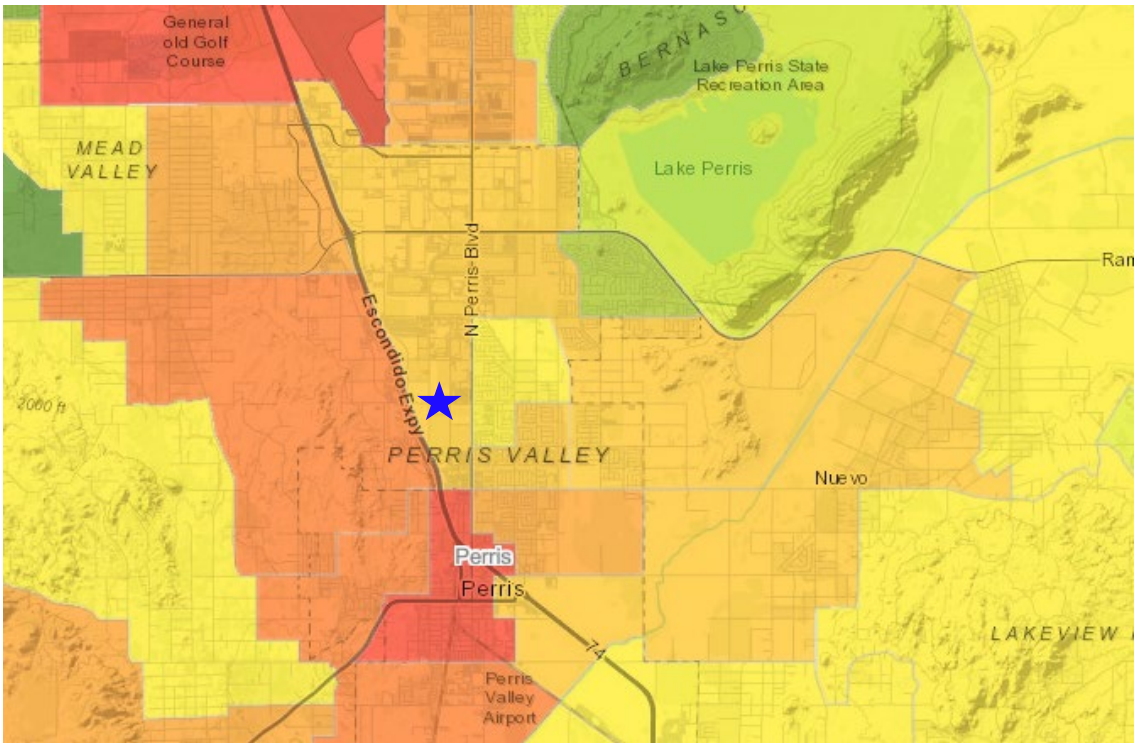
It is evident that the continued development of industrial warehouses within these communities poses a significant environmental justice challenge. However, the acceleration of warehouse development is only increasing despite the consequences on public health. The Inland Empire alone is adding 10 to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

Perris, the setting of the proposed Project, has long borne a disproportionately high pollution burden compared to the rest of California. When using CalEnviroScreen 4.0, CalEPA's screening tool that ranks each census tract in the State for pollution and socioeconomic vulnerability, we found that the Project's census tract is in the 69th percentile of most polluted census tracts in the State (see excerpt below).[14]

[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.

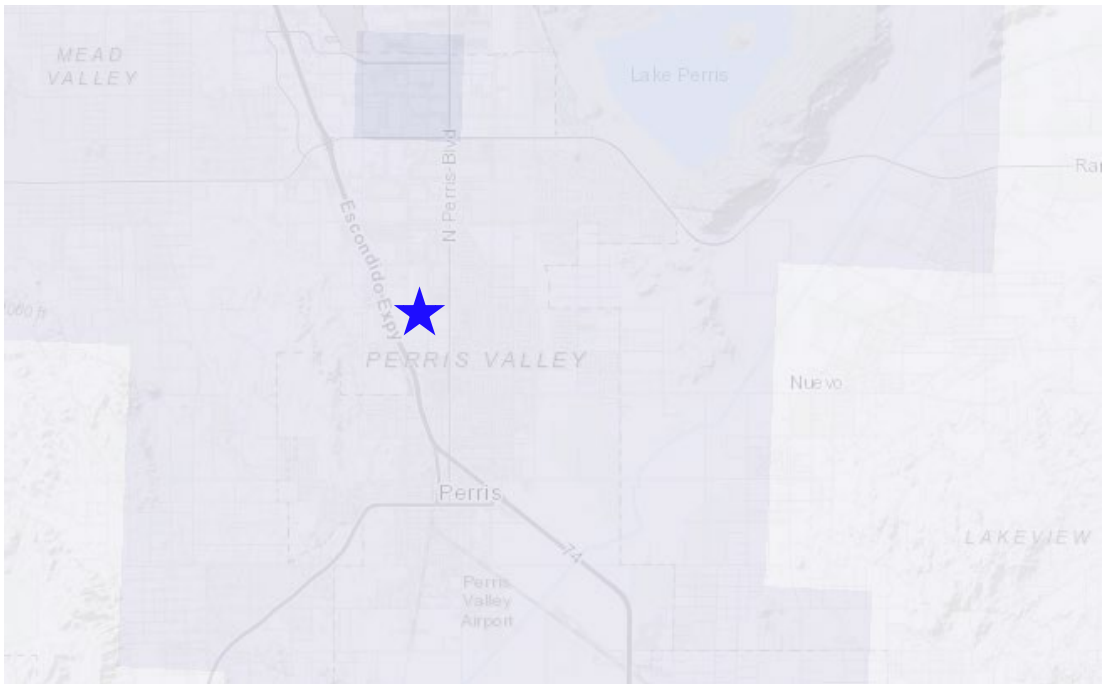
[13] "2020 North America Industrial Big Box Review & Outlook." CBRE, 2020, *available at:* https://www.cbre.com/-/media/project/cbre/shared-site/insights/local-responses/industrial-big-box-report-inland-empire/local-response-2020-ibb-inland-empire-overview.pdf, p. 2.

[14] "CalEnviroScreen 4.0." California Office of Environmental Health Hazard Assessment (OEHHA), October 2021, *available at:* https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40.



Furthermore, the Data Visualization Tool for Mates V, a monitoring and evaluation study conducted by SCAQMD, demonstrates that the City already exhibits a heightened residential carcinogenic risk from exposure to air toxics. Specifically, the location of the Project site is in the 67th percentile of highest cancer risks in the South Coast Air Basin, with a cancer risk of 345 in one million (see excerpt below).[15]

[15] "Residential Air Toxics Cancer Risk Calculated from Model Data in Grid Cells." MATES V, 2018, *available at:* https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/Main-Page/?views=Click-tabs-for-other-data%2CGridded-Cancer-Risk; see also: "MATES V Multiple Air Toxics Exposure Study." SCAQMD, *available at:* http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v.



Therefore, development of the proposed warehouse would disproportionately contribute to and exacerbate the health conditions of the residents in Perris.

In April 2022, the American Lung Association ranked San Bernadino County as the worst for ozone pollution in the nation.[16] 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.[17] 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.[18] 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:

> "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."[19]

[16] "State of the Air 2022." American Lung Association, April 2022, *available at:* https://www.lung.org/research/sota/key-findings/most-polluted-places.
[17] "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.
[18] "High Ozone Days." American Lung Association, 2022, *available at:* https://www.lung.org/research/sota/city-rankings/states/california.
[19] "Health Effects of Ozone Pollution." U.S. EPA, May 2021, *available at:* https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.

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."[20]

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.[21] 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.[22] Regarding the proposed Project itself, the IS/MND states:

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[20] "Children and Air Pollution." California Air Resources Board (CARB), *available at:* https://ww2.arb.ca.gov/resources/documents/children-and-air-pollution.

[21] "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/.

[22] "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.

> "The closest school, Val Verde High School, is located approximately 0.3 mile southwest of the project site along Morgan Street, and Edgemont Elementary School is approximately 7.23 miles to the north of the project site" (p. 36).

As stated above, Val Verde High School is located within approximately one-mile from the Project site. 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.

An updated 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 updated 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 in conjunction with the poor ambient air quality in the Project's census tract.

Diesel Particulate Matter Emissions Inadequately Evaluated

The IS/MND conducts a health risk analysis ("HRA") evaluating impacts as a result of exposure to diesel particulate matter ("DPM") emissions from Project construction and operation. Specifically, the IS/MND estimates that the maximum cancer risk posed to nearby, existing residential sensitive receptors as a result of Project construction and operation would be 8.55 in one million, which would not exceed the SCAQMD significance threshold of 10 in one million (p. 53, Table 7).

Table 7: Summary of Health Risk Impacts From Project Operations (30-Year Exposure)

Health Impact Metric	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[1]
Construction and Operations		
Risks and Hazards at the MIR over 30-year exposure	8.55	0.016
SCAQMD Significance Threshold	**10**	**1**
Exceeds Individual Source Threshold?	**No**	**No**
Operations Only		
Risks and Hazards at the MIR over 30-year exposure	2.55	0.004
SCAQMD Significance Threshold	**10**	**1**
Exceeds Individual Source Threshold?	**No**	**No**

Notes:
µg/m³ = micrograms per cubic meter
DPM = diesel particulate matter
HI = hazard index
MIR = Maximally Impacted Sensitive Receptor
REL = Reference Exposure Level
SCAQMD = South Coast Air Quality Management District
[1] Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as $PM_{2.5}$ exhaust) by the REL of 5 µg/m³.
Source: Appendix A Air Quality, Greenhouse Gas Emissions, and Energy Report.

However, the IS/MND's quantitative HRA analysis is unsubstantiated. As demonstrated above, the emission values used in the IS/MND's HRA are from the CalEEMod output files provided in the the AQ &

GHG Report. However, as previously discussed, we are unable to verify that the AQ & GHG Report's air model is accurate, as the output files associated with CalEEMod Version 2022.1 fail to divulge the exact parameters utilized to calculate Project emissions. Thus, the HRA may utilize an underestimated DPM concentration to calculate the health risk associated with Project construction and operation. As such, the IS/MND's HRA and resulting cancer risk should not be relied upon to determine Project significance. An EIR should be prepared that adequately assesses the potential health risk impacts that construction and operation of the proposed Project may have on the surrounding environment.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant air quality and health risk 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 California Department of Justice Warehouse Project Best Practices document.[23] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

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

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

- Using paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L.
- Providing information on transit and ridesharing programs and services to construction employees.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.
- Requiring all heavy-duty vehicles engaged in drayage to or from the project site to be zero-emission beginning in 2030.
- Requiring all on-site motorized operational equipment, such as forklifts and yard trucks, to be zero-emission with the necessary charging or fueling stations provided.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
- Forbidding trucks from idling for more than three minutes and requiring operators to turn off engines when not in use.
- Posting both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the local air district, and the building manager.
- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity that is equal to or greater than the building's projected energy needs, including all electrical chargers.
- Designing all project building roofs to accommodate the maximum future coverage of solar panels and installing the maximum solar power generation capacity feasible.
- Constructing zero-emission truck charging/fueling stations proportional to the number of dock doors at the project.
- Running conduit to designated locations for future electric truck charging stations.
- Unless the owner of the facility records a covenant on the title of the underlying property ensuring that the property cannot be used to provide refrigerated warehouse space, constructing electric plugs for electric transport refrigeration units at every dock door and requiring truck operators with transport refrigeration units to use the electric plugs when at loading docks.
- Oversizing electrical rooms by 25 percent or providing a secondary electrical room to accommodate future expansion of electric vehicle charging capability.
- Constructing and maintaining electric light-duty vehicle charging stations proportional to the number of employee parking spaces (for example, requiring at least 10% of all employee parking spaces to be equipped with electric vehicle charging stations of at least Level 2 charging performance)
- Running conduit to an additional proportion of employee parking spaces for a future increase in the number of electric light-duty charging stations.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.

- Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Designing to LEED green building certification standards.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB-approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants who own, operate, or hire trucking carriers with more than 100 trucks to use carriers that are SmartWay carriers.
- Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

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.

An updated EIR should be prepared to include all feasible mitigation measures, as well as include updated air quality, health risk, and GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The updated 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 results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

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

Paul E. Rosenfeld, Ph.D.

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

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

Perris Ramona Expressway Warehouse Main Site v2

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5.00	1000sqft	0.11	5,000.00	0
Unrefrigerated Warehouse-No Rail	160.00	1000sqft	3.68	160,371.00	0
Parking Lot	119.00	1000sqft	2.74	41,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
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 IS/MND's model.

Land Use - Consistent with the IS/MND's model.

Construction Phase - Consistent with the IS/MND's model.

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Vehicle Trips - Consistent with the IS/MND's model.

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	167.00
tblLandUse	LandUseSquareFeet	160,000.00	160,371.00
tblLandUse	LandUseSquareFeet	119,000.00	41,155.00
tblLandUse	LotAcreage	3.67	3.68
tblLandUse	LotAcreage	2.73	2.74
tblVehicleTrips	ST_TR	2.21	0.64
tblVehicleTrips	ST_TR	1.74	36.80
tblVehicleTrips	SU_TR	0.70	0.64
tblVehicleTrips	SU_TR	1.74	36.80
tblVehicleTrips	WD_TR	9.74	0.64
tblVehicleTrips	WD_TR	1.74	36.80

2.0 Emissions Summary

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1012	0.9534	0.8367	1.6700e-003	0.1949	0.0454	0.2402	0.0917	0.0422	0.1339	0.0000	147.7553	147.7553	0.0342	2.1100e-003	149.2401
2023	0.9119	1.1399	1.4350	2.9300e-003	0.0789	0.0522	0.1312	0.0213	0.0491	0.0704	0.0000	259.8355	259.8355	0.0441	6.8100e-003	262.9668
Maximum	**0.9119**	**1.1399**	**1.4350**	**2.9300e-003**	**0.1949**	**0.0522**	**0.2402**	**0.0917**	**0.0491**	**0.1339**	**0.0000**	**259.8355**	**259.8355**	**0.0441**	**6.8100e-003**	**262.9668**

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					
2022	0.1012	0.9534	0.8367	1.6700e-003	0.1949	0.0454	0.2402	0.0917	0.0422	0.1339	0.0000	147.7552	147.7552	0.0342	2.1100e-003	149.2400
2023	0.9119	1.1399	1.4350	2.9300e-003	0.0789	0.0522	0.1312	0.0213	0.0491	0.0704	0.0000	259.8353	259.8353	0.0441	6.8100e-003	262.9666
Maximum	**0.9119**	**1.1399**	**1.4350**	**2.9300e-003**	**0.1949**	**0.0522**	**0.2402**	**0.0917**	**0.0491**	**0.1339**	**0.0000**	**259.8353**	**259.8353**	**0.0441**	**6.8100e-003**	**262.9666**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2022**	**11-30-2022**	0.8411	0.8411
2	**12-1-2022**	**2-28-2023**	0.5874	0.5874
3	**3-1-2023**	**5-31-2023**	0.5793	0.5793
4	**6-1-2023**	**8-31-2023**	1.0936	1.0936
		Highest	1.0936	1.0936

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	0.6778	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0500e-003	7.0500e-003	2.0000e-005	0.0000	7.5100e-003
Energy	1.8300e-003	0.0166	0.0140	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	94.8037	94.8037	6.8200e-003	1.1200e-003	95.3069
Mobile	3.3636	5.9656	37.8072	0.0922	9.5488	0.0742	9.6230	2.5511	0.0696	2.6207	0.0000	8,525.8063	8,525.8063	0.4166	0.4136	8,659.4834
Waste						0.0000	0.0000		0.0000	0.0000	31.4738	0.0000	31.4738	1.8601	0.0000	77.9749
Water						0.0000	0.0000		0.0000	0.0000	12.0203	88.5663	100.5866	1.2421	0.0301	140.5958
Total	**4.0433**	**5.9823**	**37.8248**	**0.0923**	**9.5488**	**0.0755**	**9.6243**	**2.5511**	**0.0709**	**2.6220**	**43.4941**	**8,709.1833**	**8,752.6773**	**3.5256**	**0.4448**	**8,973.3685**

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	0.6778	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0500e-003	7.0500e-003	2.0000e-005	0.0000	7.5100e-003
Energy	1.8300e-003	0.0166	0.0140	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	94.8037	94.8037	6.8200e-003	1.1200e-003	95.3069
Mobile	3.3636	5.9656	37.8072	0.0922	9.5488	0.0742	9.6230	2.5511	0.0696	2.6207	0.0000	8,525.8063	8,525.8063	0.4166	0.4136	8,659.4834
Waste						0.0000	0.0000		0.0000	0.0000	31.4738	0.0000	31.4738	1.8601	0.0000	77.9749
Water						0.0000	0.0000		0.0000	0.0000	12.0203	88.5663	100.5866	1.2421	0.0301	140.5958
Total	**4.0433**	**5.9823**	**37.8248**	**0.0923**	**9.5488**	**0.0755**	**9.6243**	**2.5511**	**0.0709**	**2.6220**	**43.4941**	**8,709.1833**	**8,752.6773**	**3.5256**	**0.4448**	**8,973.3685**

	ROG	NOx	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	Demolition	Demolition	9/1/2022	9/28/2022	5	20	
2	Site Preparation	Site Preparation	9/29/2022	10/12/2022	5	10	
3	Grading	Grading	10/13/2022	11/9/2022	5	20	

4	Building Construction	Building Construction	11/10/2022	6/30/2023	5	167	
5	Paving	Paving	6/1/2023	6/28/2023	5	20	
6	Architectural Coating	Architectural Coating	6/29/2023	7/26/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 2.74

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 248,057; Non-Residential Outdoor: 82,686; Striped Parking Area: 2,469 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	86.00	34.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

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	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**		**0.0124**	**0.0124**		**0.0116**	**0.0116**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

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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 Demolition - 2022

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	5.2000e-004	4.1000e-004	5.1000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2953	1.2953	3.0000e-005	4.0000e-005	1.3069
Total	**5.2000e-004**	**4.1000e-004**	**5.1000e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2953**	**1.2953**	**3.0000e-005**	**4.0000e-005**	**1.3069**

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	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**		**0.0124**	**0.0124**		**0.0116**	**0.0116**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

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

3.2 Demolition - 2022

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	5.2000e-004	4.1000e-004	5.1000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2953	1.2953	3.0000e-005	4.0000e-005	1.3069
Total	**5.2000e-004**	**4.1000e-004**	**5.1000e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2953**	**1.2953**	**3.0000e-005**	**4.0000e-005**	**1.3069**

3.3 Site Preparation - 2022

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	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0983**	**8.0600e-003**	**0.1064**	**0.0505**	**7.4200e-003**	**0.0579**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.3 Site Preparation - 2022

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	3.1000e-004	2.4000e-004	3.0600e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7772	0.7772	2.0000e-005	2.0000e-005	0.7842
Total	**3.1000e-004**	**2.4000e-004**	**3.0600e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**0.7772**	**0.7772**	**2.0000e-005**	**2.0000e-005**	**0.7842**

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	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0983**	**8.0600e-003**	**0.1064**	**0.0505**	**7.4200e-003**	**0.0579**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.3 Site Preparation - 2022

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	3.1000e-004	2.4000e-004	3.0600e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7772	0.7772	2.0000e-005	2.0000e-005	0.7842
Total	**3.1000e-004**	**2.4000e-004**	**3.0600e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**0.7772**	**0.7772**	**2.0000e-005**	**2.0000e-005**	**0.7842**

3.4 Grading - 2022

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					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	**0.0195**	**0.2086**	**0.1527**	**3.0000e-004**	**0.0708**	**9.4100e-003**	**0.0802**	**0.0343**	**8.6600e-003**	**0.0429**	**0.0000**	**26.0548**	**26.0548**	**8.4300e-003**	**0.0000**	**26.2654**

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

3.4 Grading - 2022

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	5.2000e-004	4.1000e-004	5.1000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2953	1.2953	3.0000e-005	4.0000e-005	1.3069
Total	**5.2000e-004**	**4.1000e-004**	**5.1000e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2953**	**1.2953**	**3.0000e-005**	**4.0000e-005**	**1.3069**

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					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654
Total	**0.0195**	**0.2086**	**0.1527**	**3.0000e-004**	**0.0708**	**9.4100e-003**	**0.0802**	**0.0343**	**8.6600e-003**	**0.0429**	**0.0000**	**26.0547**	**26.0547**	**8.4300e-003**	**0.0000**	**26.2654**

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

3.4 Grading - 2022

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	5.2000e-004	4.1000e-004	5.1000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2953	1.2953	3.0000e-005	4.0000e-005	1.3069
Total	**5.2000e-004**	**4.1000e-004**	**5.1000e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2953**	**1.2953**	**3.0000e-005**	**4.0000e-005**	**1.3069**

3.5 Building Construction - 2022

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	0.0316	0.2889	0.3027	5.0000e-004		0.0150	0.0150		0.0141	0.0141	0.0000	42.8692	42.8692	0.0103	0.0000	43.1259
Total	**0.0316**	**0.2889**	**0.3027**	**5.0000e-004**		**0.0150**	**0.0150**		**0.0141**	**0.0141**	**0.0000**	**42.8692**	**42.8692**	**0.0103**	**0.0000**	**43.1259**

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

3.5 Building Construction - 2022

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	1.0000e-003	0.0279	9.4100e-003	1.1000e-004	3.9700e-003	3.8000e-004	4.3600e-003	1.1500e-003	3.7000e-004	1.5100e-003	0.0000	11.0149	11.0149	1.2000e-004	1.6300e-003	11.5049
Worker	5.5600e-003	4.3300e-003	0.0541	1.5000e-004	0.0175	9.0000e-005	0.0176	4.6400e-003	8.0000e-005	4.7200e-003	0.0000	13.7388	13.7388	3.7000e-004	3.8000e-004	13.8621
Total	**6.5600e-003**	**0.0323**	**0.0635**	**2.6000e-004**	**0.0215**	**4.7000e-004**	**0.0219**	**5.7900e-003**	**4.5000e-004**	**6.2300e-003**	**0.0000**	**24.7537**	**24.7537**	**4.9000e-004**	**2.0100e-003**	**25.3670**

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	0.0316	0.2889	0.3027	5.0000e-004		0.0150	0.0150		0.0141	0.0141	0.0000	42.8691	42.8691	0.0103	0.0000	43.1259
Total	**0.0316**	**0.2889**	**0.3027**	**5.0000e-004**		**0.0150**	**0.0150**		**0.0141**	**0.0141**	**0.0000**	**42.8691**	**42.8691**	**0.0103**	**0.0000**	**43.1259**

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

3.5 Building Construction - 2022

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	1.0000e-003	0.0279	9.4100e-003	1.1000e-004	3.9700e-003	3.8000e-004	4.3600e-003	1.1500e-003	3.7000e-004	1.5100e-003	0.0000	11.0149	11.0149	1.2000e-004	1.6300e-003	11.5049
Worker	5.5600e-003	4.3300e-003	0.0541	1.5000e-004	0.0175	9.0000e-005	0.0176	4.6400e-003	8.0000e-005	4.7200e-003	0.0000	13.7388	13.7388	3.7000e-004	3.8000e-004	13.8621
Total	**6.5600e-003**	**0.0323**	**0.0635**	**2.6000e-004**	**0.0215**	**4.7000e-004**	**0.0219**	**5.7900e-003**	**4.5000e-004**	**6.2300e-003**	**0.0000**	**24.7537**	**24.7537**	**4.9000e-004**	**2.0100e-003**	**25.3670**

3.5 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	0.1022	0.9350	1.0559	1.7500e-003		0.0455	0.0455		0.0428	0.0428	0.0000	150.6731	150.6731	0.0358	0.0000	151.5692
Total	**0.1022**	**0.9350**	**1.0559**	**1.7500e-003**		**0.0455**	**0.0455**		**0.0428**	**0.0428**	**0.0000**	**150.6731**	**150.6731**	**0.0358**	**0.0000**	**151.5692**

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

3.5 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	2.4000e-003	0.0758	0.0302	3.9000e-004	0.0140	6.3000e-004	0.0146	4.0300e-003	6.0000e-004	4.6300e-003	0.0000	37.1834	37.1834	3.8000e-004	5.5000e-003	38.8312
Worker	0.0181	0.0134	0.1750	5.1000e-004	0.0614	2.9000e-004	0.0617	0.0163	2.7000e-004	0.0166	0.0000	46.7242	46.7242	1.1700e-003	1.2400e-003	47.1231
Total	**0.0205**	**0.0892**	**0.2052**	**9.0000e-004**	**0.0754**	**9.2000e-004**	**0.0763**	**0.0204**	**8.7000e-004**	**0.0212**	**0.0000**	**83.9075**	**83.9075**	**1.5500e-003**	**6.7400e-003**	**85.9543**

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	0.1022	0.9350	1.0559	1.7500e-003		0.0455	0.0455		0.0428	0.0428	0.0000	150.6729	150.6729	0.0358	0.0000	151.5690
Total	**0.1022**	**0.9350**	**1.0559**	**1.7500e-003**		**0.0455**	**0.0455**		**0.0428**	**0.0428**	**0.0000**	**150.6729**	**150.6729**	**0.0358**	**0.0000**	**151.5690**

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

3.5 Building Construction - 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	2.4000e-003	0.0758	0.0302	3.9000e-004	0.0140	6.3000e-004	0.0146	4.0300e-003	6.0000e-004	4.6300e-003	0.0000	37.1834	37.1834	3.8000e-004	5.5000e-003	38.8312
Worker	0.0181	0.0134	0.1750	5.1000e-004	0.0614	2.9000e-004	0.0617	0.0163	2.7000e-004	0.0166	0.0000	46.7242	46.7242	1.1700e-003	1.2400e-003	47.1231
Total	**0.0205**	**0.0892**	**0.2052**	**9.0000e-004**	**0.0754**	**9.2000e-004**	**0.0763**	**0.0204**	**8.7000e-004**	**0.0212**	**0.0000**	**83.9075**	**83.9075**	**1.5500e-003**	**6.7400e-003**	**85.9543**

3.6 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	3.5900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0139**	**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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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 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	4.9000e-004	3.6000e-004	4.7000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2538	1.2538	3.0000e-005	3.0000e-005	1.2645
Total	**4.9000e-004**	**3.6000e-004**	**4.7000e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2538**	**1.2538**	**3.0000e-005**	**3.0000e-005**	**1.2645**

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	3.5900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0139**	**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

3.6 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	4.9000e-004	3.6000e-004	4.7000e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2538	1.2538	3.0000e-005	3.0000e-005	1.2645
Total	**4.9000e-004**	**3.6000e-004**	**4.7000e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2538**	**1.2538**	**3.0000e-005**	**3.0000e-005**	**1.2645**

3.7 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	0.7722					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	**0.7741**	**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

3.7 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	5.5000e-004	4.1000e-004	5.3200e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.0000e-004	0.0000	1.4210	1.4210	4.0000e-005	4.0000e-005	1.4331
Total	**5.5000e-004**	**4.1000e-004**	**5.3200e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.4210**	**1.4210**	**4.0000e-005**	**4.0000e-005**	**1.4331**

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	0.7722					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	**0.7741**	**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

3.7 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	5.5000e-004	4.1000e-004	5.3200e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.0000e-004	0.0000	1.4210	1.4210	4.0000e-005	4.0000e-005	1.4331
Total	**5.5000e-004**	**4.1000e-004**	**5.3200e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.4210**	**1.4210**	**4.0000e-005**	**4.0000e-005**	**1.4331**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.3636	5.9656	37.8072	0.0922	9.5488	0.0742	9.6230	2.5511	0.0696	2.6207	0.0000	8,525.8063	8,525.8063	0.4166	0.4136	8,659.4834
Unmitigated	3.3636	5.9656	37.8072	0.0922	9.5488	0.0742	9.6230	2.5511	0.0696	2.6207	0.0000	8,525.8063	8,525.8063	0.4166	0.4136	8,659.4834

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	3.20	3.20	3.20	10,309	10,309
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	5,888.00	5,888.00	5888.00	25,234,301	25,234,301
Total	5,891.20	5,891.20	5,891.20	25,244,610	25,244,610

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	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
General Office Building	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Parking Lot	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

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

Unrefrigerated Warehouse-No Rail	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76.6869	76.6869	6.4700e-003	7.8000e-004	77.0825
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76.6869	76.6869	6.4700e-003	7.8000e-004	77.0825
NaturalGas Mitigated	1.8300e-003	0.0166	0.0140	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	18.1168	18.1168	3.5000e-004	3.3000e-004	18.2244
NaturalGas Unmitigated	1.8300e-003	0.0166	0.0140	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	18.1168	18.1168	3.5000e-004	3.3000e-004	18.2244

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	17150	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9152	0.9152	2.0000e-005	2.0000e-005	0.9206
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	322346	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003	0.0000	17.2016	17.2016	3.3000e-004	3.2000e-004	17.3038
Total		**1.8300e-003**	**0.0166**	**0.0140**	**1.0000e-004**		**1.2600e-003**	**1.2600e-003**		**1.2600e-003**	**1.2600e-003**	**0.0000**	**18.1168**	**18.1168**	**3.5000e-004**	**3.4000e-004**	**18.2245**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

5.2 Energy by Land Use - NaturalGas

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					
General Office Building	17150	9.0000e-005	8.4000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9152	0.9152	2.0000e-005	2.0000e-005	0.9206
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	322346	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003	0.0000	17.2016	17.2016	3.3000e-004	3.2000e-004	17.3038
Total		**1.8300e-003**	**0.0166**	**0.0140**	**1.0000e-004**		**1.2600e-003**	**1.2600e-003**		**1.2600e-003**	**1.2600e-003**	**0.0000**	**18.1168**	**18.1168**	**3.5000e-004**	**3.4000e-004**	**18.2245**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	45950	8.1490	6.9000e-004	8.0000e-005	8.1911
Parking Lot	14404.2	2.5545	2.2000e-004	3.0000e-005	2.5677
Unrefrigerated Warehouse-No Rail	372061	65.9833	5.5700e-003	6.8000e-004	66.3237
Total		**76.6869**	**6.4800e-003**	**7.9000e-004**	**77.0825**

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			
General Office Building	45950	8.1490	6.9000e-004	8.0000e-005	8.1911
Parking Lot	14404.2	2.5545	2.2000e-004	3.0000e-005	2.5677
Unrefrigerated Warehouse-No Rail	372061	65.9833	5.5700e-003	6.8000e-004	66.3237
Total		**76.6869**	**6.4800e-003**	**7.9000e-004**	**77.0825**

6.0 Area Detail

6.1 Mitigation Measures Area

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6778	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0500e-003	7.0500e-003	2.0000e-005	0.0000	7.5100e-003
Unmitigated	0.6778	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0500e-003	7.0500e-003	2.0000e-005	0.0000	7.5100e-003

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	0.0772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.4000e-004	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0500e-003	7.0500e-003	2.0000e-005	0.0000	7.5100e-003
Total	**0.6778**	**3.0000e-005**	**3.6200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.0500e-003**	**7.0500e-003**	**2.0000e-005**	**0.0000**	**7.5100e-003**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Annual

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	0.0772					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6002					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.4000e-004	3.0000e-005	3.6200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.0500e-003	7.0500e-003	2.0000e-005	0.0000	7.5100e-003
Total	**0.6778**	**3.0000e-005**	**3.6200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**7.0500e-003**	**7.0500e-003**	**2.0000e-005**	**0.0000**	**7.5100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, 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	100.5866	1.2421	0.0301	140.5958
Unmitigated	100.5866	1.2421	0.0301	140.5958

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.888669 / 0.544668	3.4072	0.0292	7.2000e-004	4.3510
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	37 / 0	97.1794	1.2129	0.0293	136.2448
Total		**100.5866**	**1.2421**	**0.0301**	**140.5958**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.888669 / 0.544668	3.4072	0.0292	7.2000e-004	4.3510
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	37 / 0	97.1794	1.2129	0.0293	136.2448
Total		**100.5866**	**1.2421**	**0.0301**	**140.5958**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, 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	31.4738	1.8601	0.0000	77.9749
Unmitigated	31.4738	1.8601	0.0000	77.9749

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	4.65	0.9439	0.0558	0.0000	2.3385
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	150.4	30.5298	1.8043	0.0000	75.6364
Total		**31.4738**	**1.8600**	**0.0000**	**77.9749**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, 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

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	4.65	0.9439	0.0558	0.0000	2.3385
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	150.4	30.5298	1.8043	0.0000	75.6364
Total		**31.4738**	**1.8600**	**0.0000**	**77.9749**

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

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

Perris Ramona Expressway Warehouse Main Site v2

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5.00	1000sqft	0.11	5,000.00	0
Unrefrigerated Warehouse-No Rail	160.00	1000sqft	3.68	160,371.00	0
Parking Lot	119.00	1000sqft	2.74	41,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
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 IS/MND's model.

Land Use - Consistent with the IS/MND's model.

Construction Phase - Consistent with the IS/MND's model.

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Vehicle Trips - Consistent with the IS/MND's model.

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	167.00
tblLandUse	LandUseSquareFeet	160,000.00	160,371.00
tblLandUse	LandUseSquareFeet	119,000.00	41,155.00
tblLandUse	LotAcreage	3.67	3.68
tblLandUse	LotAcreage	2.73	2.74
tblVehicleTrips	ST_TR	2.21	0.64
tblVehicleTrips	ST_TR	1.74	36.80
tblVehicleTrips	SU_TR	0.70	0.64
tblVehicleTrips	SU_TR	1.74	36.80
tblVehicleTrips	WD_TR	9.74	0.64
tblVehicleTrips	WD_TR	1.74	36.80

2.0 Emissions Summary

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2364	33.1312	21.0780	0.0410	19.8582	1.6136	21.4718	10.1558	1.4845	11.6403	0.0000	4,010.9986	4,010.9986	1.1967	0.1199	4,062.7290
2023	79.3743	25.9910	34.3016	0.0647	1.3691	1.2249	2.5716	0.3680	1.1420	1.5041	0.0000	6,303.7065	6,303.7065	1.3513	0.1181	6,372.5454
Maximum	**79.3743**	**33.1312**	**34.3016**	**0.0647**	**19.8582**	**1.6136**	**21.4718**	**10.1558**	**1.4845**	**11.6403**	**0.0000**	**6,303.7065**	**6,303.7065**	**1.3513**	**0.1199**	**6,372.5454**

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					
2022	3.2364	33.1312	21.0780	0.0410	19.8582	1.6136	21.4718	10.1558	1.4845	11.6403	0.0000	4,010.9986	4,010.9986	1.1967	0.1199	4,062.7290
2023	79.3743	25.9910	34.3016	0.0647	1.3691	1.2249	2.5716	0.3680	1.1420	1.5041	0.0000	6,303.7065	6,303.7065	1.3513	0.1181	6,372.5454
Maximum	**79.3743**	**33.1312**	**34.3016**	**0.0647**	**19.8582**	**1.6136**	**21.4718**	**10.1558**	**1.4845**	**11.6403**	**0.0000**	**6,303.7065**	**6,303.7065**	**1.3513**	**0.1199**	**6,372.5454**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

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

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Energy	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768
Mobile	18.2838	32.5195	200.4882	0.4988	53.3451	0.4085	53.7536	14.2327	0.3830	14.6157		50,825.4303	50,825.4303	2.5246	2.4897	51,630.4777
Total	**22.0086**	**32.6110**	**200.5938**	**0.4993**	**53.3451**	**0.4156**	**53.7607**	**14.2327**	**0.3900**	**14.6228**		**50,934.9189**	**50,934.9189**	**2.5269**	**2.4917**	**51,740.6207**

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	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Energy	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768
Mobile	18.2838	32.5195	200.4882	0.4988	53.3451	0.4085	53.7536	14.2327	0.3830	14.6157		50,825.4303	50,825.4303	2.5246	2.4897	51,630.4777
Total	**22.0086**	**32.6110**	**200.5938**	**0.4993**	**53.3451**	**0.4156**	**53.7607**	**14.2327**	**0.3900**	**14.6228**		**50,934.9189**	**50,934.9189**	**2.5269**	**2.4917**	**51,740.6207**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	9/28/2022	5	20	
2	Site Preparation	Site Preparation	9/29/2022	10/12/2022	5	10	
3	Grading	Grading	10/13/2022	11/9/2022	5	20	
4	Building Construction	Building Construction	11/10/2022	6/30/2023	5	167	
5	Paving	Paving	6/1/2023	6/28/2023	5	20	
6	Architectural Coating	Architectural Coating	6/29/2023	7/26/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 2.74

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 248,057; Non-Residential Outdoor: 82,686; Striped Parking Area: 2,469 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	86.00	34.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.2 Demolition - 2022

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	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	**0.0552**	**0.0398**	**0.4840**	**1.3800e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**139.5236**	**139.5236**	**3.8100e-003**	**3.9000e-003**	**140.7822**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.2 Demolition - 2022

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	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	**0.0552**	**0.0398**	**0.4840**	**1.3800e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**139.5236**	**139.5236**	**3.8100e-003**	**3.9000e-003**	**140.7822**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.3 Site Preparation - 2022

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	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	**0.0662**	**0.0477**	**0.5807**	**1.6600e-003**	**0.2012**	**1.0000e-003**	**0.2022**	**0.0534**	**9.2000e-004**	**0.0543**		**167.4284**	**167.4284**	**4.5800e-003**	**4.6800e-003**	**168.9386**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.3 Site Preparation - 2022

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	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	**0.0662**	**0.0477**	**0.5807**	**1.6600e-003**	**0.2012**	**1.0000e-003**	**0.2022**	**0.0534**	**9.2000e-004**	**0.0543**		**167.4284**	**167.4284**	**4.5800e-003**	**4.6800e-003**	**168.9386**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	**0.0552**	**0.0398**	**0.4840**	**1.3800e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**139.5236**	**139.5236**	**3.8100e-003**	**3.9000e-003**	**140.7822**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	**0.0552**	**0.0398**	**0.4840**	**1.3800e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**139.5236**	**139.5236**	**3.8100e-003**	**3.9000e-003**	**140.7822**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.5 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0530	1.5147	0.5191	6.2000e-003	0.2178	0.0208	0.2386	0.0627	0.0199	0.0826		656.7296	656.7296	6.8400e-003	0.0975	685.9455
Worker	0.3165	0.2279	2.7747	7.9100e-003	0.9613	4.7800e-003	0.9661	0.2549	4.4000e-003	0.2593		799.9354	799.9354	0.0219	0.0224	807.1513
Total	**0.3695**	**1.7426**	**3.2938**	**0.0141**	**1.1791**	**0.0256**	**1.2046**	**0.3176**	**0.0243**	**0.3419**		**1,456.6650**	**1,456.6650**	**0.0287**	**0.1199**	**1,493.0968**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.5 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0530	1.5147	0.5191	6.2000e-003	0.2178	0.0208	0.2386	0.0627	0.0199	0.0826		656.7296	656.7296	6.8400e-003	0.0975	685.9455
Worker	0.3165	0.2279	2.7747	7.9100e-003	0.9613	4.7800e-003	0.9661	0.2549	4.4000e-003	0.2593		799.9354	799.9354	0.0219	0.0224	807.1513
Total	**0.3695**	**1.7426**	**3.2938**	**0.0141**	**1.1791**	**0.0256**	**1.2046**	**0.3176**	**0.0243**	**0.3419**		**1,456.6650**	**1,456.6650**	**0.0287**	**0.1199**	**1,493.0968**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.5 Building Construction - 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	0.0355	1.1780	0.4728	5.9600e-003	0.2178	9.7100e-003	0.2275	0.0627	9.2900e-003	0.0720		631.4847	631.4847	6.3000e-003	0.0934	659.4734
Worker	0.2943	0.2013	2.5550	7.6600e-003	0.9613	4.5000e-003	0.9658	0.2549	4.1400e-003	0.2591		774.3642	774.3642	0.0197	0.0207	781.0098
Total	**0.3298**	**1.3793**	**3.0278**	**0.0136**	**1.1791**	**0.0142**	**1.1933**	**0.3176**	**0.0134**	**0.3311**		**1,405.8489**	**1,405.8489**	**0.0260**	**0.1140**	**1,440.4832**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.5 Building Construction - 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	0.0355	1.1780	0.4728	5.9600e-003	0.2178	9.7100e-003	0.2275	0.0627	9.2900e-003	0.0720		631.4847	631.4847	6.3000e-003	0.0934	659.4734
Worker	0.2943	0.2013	2.5550	7.6600e-003	0.9613	4.5000e-003	0.9658	0.2549	4.1400e-003	0.2591		774.3642	774.3642	0.0197	0.0207	781.0098
Total	**0.3298**	**1.3793**	**3.0278**	**0.0136**	**1.1791**	**0.0142**	**1.1933**	**0.3176**	**0.0134**	**0.3311**		**1,405.8489**	**1,405.8489**	**0.0260**	**0.1140**	**1,440.4832**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.6 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	0.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3917**	**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	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	**0.0513**	**0.0351**	**0.4456**	**1.3400e-003**	**0.1677**	**7.8000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**135.0635**	**135.0635**	**3.4300e-003**	**3.6000e-003**	**136.2226**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.6 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	0.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3917**	**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	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	**0.0513**	**0.0351**	**0.4456**	**1.3400e-003**	**0.1677**	**7.8000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**135.0635**	**135.0635**	**3.4300e-003**	**3.6000e-003**	**136.2226**

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

3.7 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	77.2219					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	**77.4135**	**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	0.0582	0.0398	0.5051	1.5100e-003	0.1900	8.9000e-004	0.1909	0.0504	8.2000e-004	0.0512		153.0720	153.0720	3.8900e-003	4.0800e-003	154.3857
Total	**0.0582**	**0.0398**	**0.5051**	**1.5100e-003**	**0.1900**	**8.9000e-004**	**0.1909**	**0.0504**	**8.2000e-004**	**0.0512**		**153.0720**	**153.0720**	**3.8900e-003**	**4.0800e-003**	**154.3857**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

3.7 Architectural Coating - 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	77.2219					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	**77.4135**	**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	0.0582	0.0398	0.5051	1.5100e-003	0.1900	8.9000e-004	0.1909	0.0504	8.2000e-004	0.0512		153.0720	153.0720	3.8900e-003	4.0800e-003	154.3857
Total	**0.0582**	**0.0398**	**0.5051**	**1.5100e-003**	**0.1900**	**8.9000e-004**	**0.1909**	**0.0504**	**8.2000e-004**	**0.0512**		**153.0720**	**153.0720**	**3.8900e-003**	**4.0800e-003**	**154.3857**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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	18.2838	32.5195	200.4882	0.4988	53.3451	0.4085	53.7536	14.2327	0.3830	14.6157		50,825.4303	50,825.4303	2.5246	2.4897	51,630.4777
Unmitigated	18.2838	32.5195	200.4882	0.4988	53.3451	0.4085	53.7536	14.2327	0.3830	14.6157		50,825.4303	50,825.4303	2.5246	2.4897	51,630.4777

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	3.20	3.20	3.20	10,309	10,309
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	5,888.00	5,888.00	5888.00	25,234,301	25,234,301
Total	5,891.20	5,891.20	5,891.20	25,244,610	25,244,610

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Parking Lot	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Unrefrigerated Warehouse-No Rail	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768
NaturalGas Unmitigated	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	46.9863	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5278	5.5278	1.1000e-004	1.0000e-004	5.5607
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	883.139	9.5200e-003	0.0866	0.0727	5.2000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003		103.8987	103.8987	1.9900e-003	1.9000e-003	104.5161
Total		**0.0100**	**0.0912**	**0.0766**	**5.5000e-004**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**		**109.4265**	**109.4265**	**2.1000e-003**	**2.0000e-003**	**110.0768**

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					
General Office Building	0.0469863	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5278	5.5278	1.1000e-004	1.0000e-004	5.5607
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	0.883139	9.5200e-003	0.0866	0.0727	5.2000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003		103.8987	103.8987	1.9900e-003	1.9000e-003	104.5161
Total		**0.0100**	**0.0912**	**0.0766**	**5.5000e-004**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**		**109.4265**	**109.4265**	**2.1000e-003**	**2.0000e-003**	**110.0768**

6.0 Area Detail

6.1 Mitigation Measures Area

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Unmitigated	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662

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	0.4231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Total	**3.7147**	**2.6000e-004**	**0.0290**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0622**	**0.0622**	**1.6000e-004**		**0.0662**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Total	**3.7147**	**2.6000e-004**	**0.0290**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0622**	**0.0622**	**1.6000e-004**		**0.0662**

7.0 Water Detail

7.1 Mitigation Measures Water

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

Perris Ramona Expressway Warehouse Main Site v2

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5.00	1000sqft	0.11	5,000.00	0
Unrefrigerated Warehouse-No Rail	160.00	1000sqft	3.68	160,371.00	0
Parking Lot	119.00	1000sqft	2.74	41,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
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 IS/MND's model.

Land Use - Consistent with the IS/MND's model.

Construction Phase - Consistent with the IS/MND's model.

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Off-road Equipment - Left as default

Vehicle Trips - Consistent with the IS/MND's model.

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	167.00
tblLandUse	LandUseSquareFeet	160,000.00	160,371.00
tblLandUse	LandUseSquareFeet	119,000.00	41,155.00
tblLandUse	LotAcreage	3.67	3.68
tblLandUse	LotAcreage	2.73	2.74
tblVehicleTrips	ST_TR	2.21	0.64
tblVehicleTrips	ST_TR	1.74	36.80
tblVehicleTrips	SU_TR	0.70	0.64
tblVehicleTrips	SU_TR	1.74	36.80
tblVehicleTrips	WD_TR	9.74	0.64
tblVehicleTrips	WD_TR	1.74	36.80

2.0 Emissions Summary

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2411	33.1295	21.1912	0.0419	19.8582	1.6136	21.4718	10.1558	1.4845	11.6403	0.0000	4,093.4766	4,093.4766	1.1968	0.1191	4,145.0045
2023	79.4007	25.9152	34.9809	0.0656	1.3691	1.2249	2.5716	0.3680	1.1419	1.5040	0.0000	6,396.3932	6,396.3932	1.3515	0.1173	6,464.9793
Maximum	**79.4007**	**33.1295**	**34.9809**	**0.0656**	**19.8582**	**1.6136**	**21.4718**	**10.1558**	**1.4845**	**11.6403**	**0.0000**	**6,396.3932**	**6,396.3932**	**1.3515**	**0.1191**	**6,464.9793**

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					
2022	3.2411	33.1295	21.1912	0.0419	19.8582	1.6136	21.4718	10.1558	1.4845	11.6403	0.0000	4,093.4766	4,093.4766	1.1968	0.1191	4,145.0045
2023	79.4007	25.9152	34.9809	0.0656	1.3691	1.2249	2.5716	0.3680	1.1419	1.5040	0.0000	6,396.3932	6,396.3932	1.3515	0.1173	6,464.9793
Maximum	**79.4007**	**33.1295**	**34.9809**	**0.0656**	**19.8582**	**1.6136**	**21.4718**	**10.1558**	**1.4845**	**11.6403**	**0.0000**	**6,396.3932**	**6,396.3932**	**1.3515**	**0.1191**	**6,464.9793**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

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

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	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Energy	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768
Mobile	21.1428	30.6831	229.4306	0.5378	53.3451	0.4083	53.7534	14.2327	0.3828	14.6155		54,761.1298	54,761.1298	2.4906	2.4391	55,550.2479
Total	**24.8675**	**30.7746**	**229.5362**	**0.5383**	**53.3451**	**0.4153**	**53.7604**	**14.2327**	**0.3898**	**14.6226**		**54,870.6184**	**54,870.6184**	**2.4928**	**2.4411**	**55,660.3909**

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	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Energy	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768
Mobile	21.1428	30.6831	229.4306	0.5378	53.3451	0.4083	53.7534	14.2327	0.3828	14.6155		54,761.1298	54,761.1298	2.4906	2.4391	55,550.2479
Total	**24.8675**	**30.7746**	**229.5362**	**0.5383**	**53.3451**	**0.4153**	**53.7604**	**14.2327**	**0.3898**	**14.6226**		**54,870.6184**	**54,870.6184**	**2.4928**	**2.4411**	**55,660.3909**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2022	9/28/2022	5	20	
2	Site Preparation	Site Preparation	9/29/2022	10/12/2022	5	10	
3	Grading	Grading	10/13/2022	11/9/2022	5	20	
4	Building Construction	Building Construction	11/10/2022	6/30/2023	5	167	
5	Paving	Paving	6/1/2023	6/28/2023	5	20	
6	Architectural Coating	Architectural Coating	6/29/2023	7/26/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 2.74

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 248,057; Non-Residential Outdoor: 82,686; Striped Parking Area: 2,469 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	86.00	34.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.2 Demolition - 2022

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	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	**0.0591**	**0.0383**	**0.5972**	**1.5200e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**154.0341**	**154.0341**	**3.8400e-003**	**3.8100e-003**	**155.2664**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.2 Demolition - 2022

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	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	**0.0591**	**0.0383**	**0.5972**	**1.5200e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**154.0341**	**154.0341**	**3.8400e-003**	**3.8100e-003**	**155.2664**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.3 Site Preparation - 2022

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	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	**0.0709**	**0.0460**	**0.7166**	**1.8300e-003**	**0.2012**	**1.0000e-003**	**0.2022**	**0.0534**	**9.2000e-004**	**0.0543**		**184.8409**	**184.8409**	**4.6100e-003**	**4.5800e-003**	**186.3197**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.3 Site Preparation - 2022

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	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	**0.0709**	**0.0460**	**0.7166**	**1.8300e-003**	**0.2012**	**1.0000e-003**	**0.2022**	**0.0534**	**9.2000e-004**	**0.0543**		**184.8409**	**184.8409**	**4.6100e-003**	**4.5800e-003**	**186.3197**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	**0.0591**	**0.0383**	**0.5972**	**1.5200e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**154.0341**	**154.0341**	**3.8400e-003**	**3.8100e-003**	**155.2664**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	**0.0591**	**0.0383**	**0.5972**	**1.5200e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.7000e-004**	**0.0452**		**154.0341**	**154.0341**	**3.8400e-003**	**3.8100e-003**	**155.2664**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.5 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0553	1.4377	0.4999	6.1900e-003	0.2178	0.0207	0.2385	0.0627	0.0198	0.0825		656.0141	656.0141	6.9400e-003	0.0973	685.1784
Worker	0.3388	0.2196	3.4237	8.7400e-003	0.9613	4.7800e-003	0.9661	0.2549	4.4000e-003	0.2593		883.1288	883.1288	0.0220	0.0219	890.1939
Total	**0.3941**	**1.6573**	**3.9236**	**0.0149**	**1.1791**	**0.0255**	**1.2046**	**0.3176**	**0.0242**	**0.3419**		**1,539.1430**	**1,539.1430**	**0.0290**	**0.1191**	**1,575.3723**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.5 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0553	1.4377	0.4999	6.1900e-003	0.2178	0.0207	0.2385	0.0627	0.0198	0.0825		656.0141	656.0141	6.9400e-003	0.0973	685.1784
Worker	0.3388	0.2196	3.4237	8.7400e-003	0.9613	4.7800e-003	0.9661	0.2549	4.4000e-003	0.2593		883.1288	883.1288	0.0220	0.0219	890.1939
Total	**0.3941**	**1.6573**	**3.9236**	**0.0149**	**1.1791**	**0.0255**	**1.2046**	**0.3176**	**0.0242**	**0.3419**		**1,539.1430**	**1,539.1430**	**0.0290**	**0.1191**	**1,575.3723**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.5 Building Construction - 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	0.0383	1.1108	0.4574	5.9400e-003	0.2178	9.6700e-003	0.2274	0.0627	9.2500e-003	0.0720		629.9214	629.9214	6.4200e-003	0.0931	657.8209
Worker	0.3140	0.1940	3.1465	8.4600e-003	0.9613	4.5000e-003	0.9658	0.2549	4.1400e-003	0.2591		854.6167	854.6167	0.0198	0.0202	861.1229
Total	**0.3523**	**1.3048**	**3.6039**	**0.0144**	**1.1791**	**0.0142**	**1.1932**	**0.3176**	**0.0134**	**0.3310**		**1,484.5381**	**1,484.5381**	**0.0262**	**0.1133**	**1,518.9438**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.5 Building Construction - 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	0.0383	1.1108	0.4574	5.9400e-003	0.2178	9.6700e-003	0.2274	0.0627	9.2500e-003	0.0720		629.9214	629.9214	6.4200e-003	0.0931	657.8209
Worker	0.3140	0.1940	3.1465	8.4600e-003	0.9613	4.5000e-003	0.9658	0.2549	4.1400e-003	0.2591		854.6167	854.6167	0.0198	0.0202	861.1229
Total	**0.3523**	**1.3048**	**3.6039**	**0.0144**	**1.1791**	**0.0142**	**1.1932**	**0.3176**	**0.0134**	**0.3310**		**1,484.5381**	**1,484.5381**	**0.0262**	**0.1133**	**1,518.9438**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.6 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	0.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3917**	**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	0.0548	0.0338	0.5488	1.4700e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		149.0611	149.0611	3.4500e-003	3.5200e-003	150.1959
Total	**0.0548**	**0.0338**	**0.5488**	**1.4700e-003**	**0.1677**	**7.8000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**149.0611**	**149.0611**	**3.4500e-003**	**3.5200e-003**	**150.1959**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.6 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	0.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3917**	**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	0.0548	0.0338	0.5488	1.4700e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		149.0611	149.0611	3.4500e-003	3.5200e-003	150.1959
Total	**0.0548**	**0.0338**	**0.5488**	**1.4700e-003**	**0.1677**	**7.8000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**149.0611**	**149.0611**	**3.4500e-003**	**3.5200e-003**	**150.1959**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.7 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	77.2219					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	**77.4135**	**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	0.0621	0.0384	0.6220	1.6700e-003	0.1900	8.9000e-004	0.1909	0.0504	8.2000e-004	0.0512		168.9359	168.9359	3.9100e-003	3.9900e-003	170.2220
Total	**0.0621**	**0.0384**	**0.6220**	**1.6700e-003**	**0.1900**	**8.9000e-004**	**0.1909**	**0.0504**	**8.2000e-004**	**0.0512**		**168.9359**	**168.9359**	**3.9100e-003**	**3.9900e-003**	**170.2220**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

3.7 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	77.2219					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	**77.4135**	**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	0.0621	0.0384	0.6220	1.6700e-003	0.1900	8.9000e-004	0.1909	0.0504	8.2000e-004	0.0512		168.9359	168.9359	3.9100e-003	3.9900e-003	170.2220
Total	**0.0621**	**0.0384**	**0.6220**	**1.6700e-003**	**0.1900**	**8.9000e-004**	**0.1909**	**0.0504**	**8.2000e-004**	**0.0512**		**168.9359**	**168.9359**	**3.9100e-003**	**3.9900e-003**	**170.2220**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, 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	21.1428	30.6831	229.4306	0.5378	53.3451	0.4083	53.7534	14.2327	0.3828	14.6155		54,761.1298	54,761.1298	2.4906	2.4391	55,550.2479
Unmitigated	21.1428	30.6831	229.4306	0.5378	53.3451	0.4083	53.7534	14.2327	0.3828	14.6155		54,761.1298	54,761.1298	2.4906	2.4391	55,550.2479

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	3.20	3.20	3.20	10,309	10,309
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	5,888.00	5,888.00	5888.00	25,234,301	25,234,301
Total	5,891.20	5,891.20	5,891.20	25,244,610	25,244,610

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Parking Lot	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Unrefrigerated Warehouse-No Rail	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768
NaturalGas Unmitigated	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.4265	109.4265	2.1000e-003	2.0100e-003	110.0768

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	46.9863	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5278	5.5278	1.1000e-004	1.0000e-004	5.5607
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	883.139	9.5200e-003	0.0866	0.0727	5.2000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003		103.8987	103.8987	1.9900e-003	1.9000e-003	104.5161
Total		**0.0100**	**0.0912**	**0.0766**	**5.5000e-004**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**		**109.4265**	**109.4265**	**2.1000e-003**	**2.0000e-003**	**110.0768**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

5.2 Energy by Land Use - NaturalGas

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					
General Office Building	0.0469863	5.1000e-004	4.6100e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5278	5.5278	1.1000e-004	1.0000e-004	5.5607
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	0.883139	9.5200e-003	0.0866	0.0727	5.2000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003		103.8987	103.8987	1.9900e-003	1.9000e-003	104.5161
Total		**0.0100**	**0.0912**	**0.0766**	**5.5000e-004**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**		**109.4265**	**109.4265**	**2.1000e-003**	**2.0000e-003**	**110.0768**

6.0 Area Detail

6.1 Mitigation Measures Area

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Unmitigated	3.7147	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662

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	0.4231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Total	**3.7147**	**2.6000e-004**	**0.0290**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0622**	**0.0622**	**1.6000e-004**		**0.0662**

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2889					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6900e-003	2.6000e-004	0.0290	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0622	0.0622	1.6000e-004		0.0662
Total	**3.7147**	**2.6000e-004**	**0.0290**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0622**	**0.0622**	**1.6000e-004**		**0.0662**

7.0 Water Detail

7.1 Mitigation Measures Water

Perris Ramona Expressway Warehouse Main Site v2 - Riverside-South Coast County, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' 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:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Presentations:

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

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

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

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

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

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

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

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

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International*

Conferences on Soils Sediment and Water. Platform lecture conducted from University of Massachusetts, Amherst MA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Teaching Experience:

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

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

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

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

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

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

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

Academic Grants Awarded:

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

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

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

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

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

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

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

Deposition and/or Trial Testimony:

In the 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, 5-14-2021
Trial, October 8-4-2021

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

In the United States District Court For the Northern District of Illinois
Theresa Romcoe, Plaintiff vs. Northeast Illinois Regional Commuter Railroad Corporation d/b/a METRA Rail, Defendants
Case No.: 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., Plaintiff vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case Number 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 *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 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, *Plaintiffs,* 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.: 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.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff 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., Plaintiffs 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 Number: 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.: 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 N0. 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 Number 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 Number 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 Number: 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 Number 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 Number 2:07CV1052
Rosenfeld Deposition: July 2009

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

January 24, 2023

Alfredo Garcia
Associate Planner
City of Perris
algarcia@cityofperris.org

Re: Ramona Expressway and Brennan Avenue Warehouse Project (SCH NO. 2022110066)

Dear Mr. Garcia:

On behalf of the Golden State Environmental Justice Alliance ("GSEJA"), I am writing to you regarding the Ramona Expressway and Brennan Avenue Warehouse Project (SCH NO. 2022110066) ("Project").

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

Joe Bourgeois
Executive Director

Organizations

Blum Collins & Ho, LLP on behalf of Golden State Environmental Justic Alliance (BLUM)

Response to BLUM

This letter was withdrawn by the commenter after the close of the public review period and, as such, no formal response to the issues raised in the letter is required. The letter of withdrawal has been appended after the commenter letter.

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From: A S
To: Alfredo Garcia
Cc: Unknown; jbourgeois029@gmail.com; Terrance Lucio; PATRICK HANINGER
Subject: Ramona Expressway and Brennan Avenue Warehouse Project
Date: Monday, December 5, 2022 8:02:00 AM

Good Morning Mr. Garcia,

Please provide any updates to the above mentioned project.

I am requesting under Public Resource Code Section 21092.2 to add the email addresses and mailing address below to the notification list, regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project.

t.lucio57@gmail.com

phaninger1@gmail.com

jbourg2271@aol.com

jbourgeois029@gmail.com

asalcido.07@gmail.com

1

Mailing Address:

P.O. Box 79222

Corona, CA 92877

Please confirm receipt of this email.

Thank You,

Adam Salcido

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Individuals

Adam Salcido (SALCIDO)

Response to SALCIDO-1

The commenter requests updates about the proposed project and requests the addition of five email addresses and one mailing address to the notification list for any subsequent environmental documents, public notices or hearing, and notices of determination related to the proposed project. This comment does not question the content or conclusions of the Draft IS/MND.

These addresses have been added to the City's notification list for the proposed project.

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SECTION 3: ERRATA

The following are revisions to the Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) for the proposed Ramona Expressway and Brennan Avenue Warehouse Project (proposed project).

These revisions are minor modifications and clarifications to the document, and do not change the analysis or significance of any of the environmental issue conclusions within the Draft IS/MND. The revisions are listed by page number. All additions to the text are underlined (underlined) and all deletions from the text are stricken (~~stricken~~).

3.1 - Changes in Response to Specific Comments

Section 1–Introduction

Page 6

As mentioned previously, the City of Perris has discretionary authority over the proposed project and is the CEQA lead agency for the preparation of this Draft IS/MND. In order to implement the proposed project, the ~~City~~ Applicant would need to secure the following permits/approvals:

- Approval of the Final IS/MND and Mitigation Monitoring and Reporting Program (MMRP)
- Development Plan Review (DPR 22-00010) approval
- Grading and Building Permits to grade and construct the proposed project
- Approval of avigation easement by March Air Reserve Base (MARB)
- Project design review by Riverside County Fire Department (RCFD)

1.6 – Potential Responsible Agencies

Additional approvals may be required from the following agencies:

- Santa Ana Regional Water Quality Control Board:
  - Approval of a National Pollutant Discharge Elimination System (NPDES) permit to ensure that construction site drainage velocities are equal to or less than the pre-construction conditions and downstream water quality is not worsened.
- Eastern Municipal Water District:
  - Approval of water and sewer improvement plans.
- South Coast Air Quality Management District:
  - Approval of permits to install and operate a diesel fire pump.

1.7 - Intended Uses of this Document

Section 2.3–Air Quality

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Construction and operation of the proposed project would be subject to applicable SCAQMD rules and requirements. The SCAQMD CEQA Air Quality Handbook was developed to assist local jurisdictions and lead agencies in complying with the requirements of CEQA regarding potentially adverse impacts to air quality.[1] Notably, the proposed project includes a fire pump that would operate for testing periods and emergences during project operations. The fire pump is a stationary source that would require permitting from the SCAQMD. Permitted sources are covered under SCAQMD Regulation II–Permits.[2] The SCAQMD evaluates health risk impacts from the proposed source and requires that the equipment permit unit shall not be operated contrary to the conditions specified in the permit to operate.

[1] South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook. Available at SCAQMD, 21865 Copley Drive, Diamond Bar, CA 91765.

[2] South Coast Air Quality Management District (SCAQMD). 2022. Regulation II–Permits. Website: https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/regulation-ii. Accessed December 27, 2022.

Attachment A:
Additional Worker Scenario Health Risk Assessment

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Perris Ramona Expressway Warehouse DPM

Emission Assumptions - Worker Scenario

Emission Factors

1) Truck Emissions

(1) EMFAC2021

(a) Calculations for Riverside County

(b) Truck Mix Fleet Mix estimated based on traffic report

Traffic Allocation

1) Traffic distributed by driveway in accordance with information provided by the traffic report
2) Trip generation by traffic report
3) Onsite travel emissions generated from diesel vehicles
4) Onsite idling emissions generated only by trucks

Emission Source Configuration

1) Project onsite truck traffic represented by a line source
2) Project onsite truck idling represented as line sources (series of point sources)
3) Offsite vehicles represented by line sources

Onsite Vehicle Travel Segments

Segment	Source ID	Segment Travel Distance (m)	
On-site Truck Route	SLINE6	535.1	On-site Trucks (On-site Travel)
Onsite Truck Idling			
On-site Idling	SLINE6	535.1	Docks and on-site idling

Offsite Vehicle Travel Segments

Segment		Segment Travel Distance (m)	
Offsite 1 - Truck Route 1	SLINE2	2089.0	Outgoing trips via I-215 (North or Southbound)
Offsite 2 - Truck Route 2	SLINE3	831.9	Incoming via I-215 (North and Southbound)
Offsite 3 - Truck Route 3	SLINE4	689.9	Outgoing to Indian Avenue (South or Northbound)
Offsite 3 - Truck Route 4	SLINE5	788.3	Outgoing via Ramona Expressway

Other Input Parameters

Facility Operations (hr/day): 24

Perris Ramona Expressway Warehouse

Vehicle Fleet Mix

Total Daily Truck Trips		Trucks	Total Daily Truck Trips
(Trips/day)	Daily Trips	102	102
102	Fleet Mix	100.0%	100.0%

—

Vehicle Fleet

	Trucks Project Vehicle Mix	**EMFAC % Diesel**	**Total Number of Daily Trips**	**Number of Daily Diesel Trips**	**Number of Daily Non-Diesel Trips**	**Total Number of Daily Trips**	**% Diesel Trips**	**% Non-Diesel Trips**	**Total Trips**
LHDT1 (2-axle truck)	13.78%	100.0%	14	14.1	0	14	13.78%	0.00%	
LHDT2 (2-axle truck)	3.86%	100.0%	4	3.9	0	4	3.86%	0.00%	
MHDT (3 axle truck)	21.57%	100.0%	22	22.0	0	22	21.57%	0.00%	
HHDT (4+ axle truck)	60.78%	100.0%	62	62.0	0	62	60.79%	0.00%	
Truck Subtotal	100.0%		102	102.0	0	102	100.00%	0.00%	100.00%

Assumed 100% diesel for MHDT HHDT, LHDT1, and LHDT2 to provide a conservative estimate of emissions.

Perris Ramona Expressway Warehouse

Trip Distribution

Vehicle Allocation - Number of Daily Diesel Trips

Allocation of Building Trips

Percent Allocation - On-site Travel

100% On-site Travel – Route 1 (DSL trucks)
100% Total Diesel Truck Trips

Segment - On-site Travel	Source ID	LDA	LDT1	LDT2	MDT	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	SBUS	MH	Total
On-site Truck Route	SLINE6	0.0	0.0	0.0	0.0	14.1	3.9	22.0	62.0	0.0	0.0	0.0	0.0	102.0
Total Diesel Trucks	—	0	0	0	0	14	4	22	62	0	0	0	0	102

Percent Allocation of Trips - On-site Diesel Truck Idling

100.0% On-site Idling Docks and on-site idling
100% Total Diesel Truck Trips

Segment - On-site Truck Idle	Source ID	LDA	LDT1	LDT2	MDT	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	SBUS	MH	Total
On-site Idling	SLINE6	0.0	0.0	0.0	0.0	14.1	3.9	22.0	62.0	0.0	0.0	0.0	0.0	102.0
Total Idling (Diesel Trucks Idling)	—	0	0	0	0	14	4	22	62	0	0	0	0	102

Perris Ramona Expressway Warehouse

Diesel Vehicle Emissions

Processes Modeled

Diesel vehicle exhaust

Diesel vehicle idling

Facility Operations

24 hrs/day, 52 weeks/year

On-site Travel Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE6	**LHDT1**	5	0.107	14.1	535.1	0.33	4.985E-01	1.10E-03	5.770E-06	
	LHDT2	5	0.098	3.9	535.1	0.33	1.277E-01	2.81E-04	1.478E-06	
	MHDT	5	0.050	22.0	535.1	0.33	3.656E-01	8.05E-04	4.231E-06	
	HHDT	5	0.013	62.0	535.1	0.33	2.720E-01	5.99E-04	3.149E-06	**1.46E-05**

Perris Ramona Expressway Warehouse

Diesel Truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
SLINE6	**LHDT1**	0.001	14.1	1.41E-02	3.10E-05	1.63E-07	
	LHDT2	0.001	3.9	5.12E-03	1.13E-05	5.92E-08	
	MHDT	0.000	22.0	8.80E-03	1.94E-05	1.02E-07	
	HHDT	0.010	62.0	6.08E-01	1.34E-03	7.03E-06	**7.3562E-06**

Perris Ramona Expressway Warehouse

Project Operations **24 hours/day**

Emission Rates **Running Emissions 15 mph and 25 mph averaged (EMFAC2021)**

Offsite DSL Truck Roadway Emissions

Segment ID	Description	% total Trips
SLINE2	Outgoing trips via I-215 (North or Southbound)	16.7%
SLINE2	Incoming via I-215 (North and Southbound)	50.0%
SLINE3	Outgoing to Indian Avenue (South or Northbound)	16.7%
SLINE4	Outgoing via Ramona Expressway	16.7%
	Total	100.0%

Segment ID: SLINE2

Travel Distance: 2089 meters

Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	2.3	0.0617000	1.30	0.188	2.17E-06
LHDT2-DSL	0.7	0.0570000	1.30	0.049	5.62E-07
MHDT-DSL	3.7	0.0191000	1.30	0.091	1.05E-06
HHDT-DSL	10.3	0.0079000	1.30	0.106	1.23E-06
Total	17.0			**4.33E-01**	**5.01E-06**

Segment ID: SLINE2
Travel Distance: 831.9 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	7.0	0.0617000	0.52	0.224	2.59E-06
LHDT2-DSL	2.0	0.0570000	0.52	0.058	6.71E-07
MHDT-DSL	11.0	0.0191000	0.52	0.109	1.26E-06
HHDT-DSL	31.0	0.0079000	0.52	0.127	1.46E-06
Total	51.0			**5.17E-01**	**5.99E-06**

Segment ID: SLINE3
Travel Distance: 689.9 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	2.3	0.0617000	0.43	0.062	7.17E-07
LHDT2-DSL	0.7	0.0570000	0.43	0.016	1.86E-07
MHDT-DSL	3.7	0.0191000	0.43	0.030	3.47E-07
HHDT-DSL	10.3	0.0079000	0.43	0.035	4.05E-07
Total	17.0			**1.43E-01**	**1.65E-06**

Segment ID: SLINE4
Travel Distance: 788.3 meters
Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	2.3	0.0617000	0.49	0.071	8.19E-07
LHDT2-DSL	0.7	0.0570000	0.49	0.018	2.12E-07
MHDT-DSL	3.7	0.0191000	0.49	0.034	3.97E-07
HHDT-DSL	10.3	0.0079000	0.49	0.040	4.63E-07
Total	17.0			**1.63E-01**	**1.89E-06**

Perris Ramona Expressway Warehouse Project Operations
DPM 2023

EMFAC Running Diesel Exhaust Emissions (as PM10 exhaust)
in units of grams/mile

EMFAC2021

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**15 mph**	**25 mph**
LHDT1	DSL	0.1067	0.0901	0.0742	0.0492
LHDT2	DSL	0.0976	0.0814	0.0677	0.0463
MHDT	DSL	0.0500	0.0394	0.0254	0.0128
HHDT	DSL	0.0132	0.0115	0.0090	0.0068

Idling Emissions for Trucks (Emission Factors from EMFAC2021)
in units of grams/trip

EMFAC2021

Vehicle Class	**Fuel**	**Vehicle Speed (mph)**	**DPM g/vehicle/day**	**5 mph (g/mi)**
LHDT1	DSL	Idle	0.0010	0.1067
LHDT2	DSL	Idle	0.0013	0.0976
MHDT	DSL	Idle	0.0004	0.049991
HHDT	DSL	Idle	0.0098	0.0132

Perris Ramona Expressway Warehouse

Summary of Emissions in Pounds

Diesel Truck Idling Emissions

Segment - On-site Truck Idle	Source ID	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/year)	Max Emissions in an Hour (lbs/hr)	
On-site Idling	SLINE6	6.36E-01	0.001399943	0.510979065	0.000139994	Docks and on-site idling
	Subtotal Idle	**6.36E-01**	**0.001399943**	**0.510979065**		

Diesel Truck On-site Travel Emissions (5 mph)

Segment	Source ID	Source Group	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/year)	Max Emissions in an Hour (lbs/hr)
On-site Truck Route	SLINE6	ONSITE1	1.263893348	0.002783906	1.016125709	0.000278391
		Subtotal On-site Travel	**1.263893348**	**0.002783906**	**1.016125709**	

Diesel Truck Localized Off-site Travel Emissions (5-25 mph aggregated)

Segment	Source ID	Source Group	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/year)	Max Emissions in an Hour (lbs/hr)
Off-site Truck Route 1	SLINE2	Off1	0.432927777	0.000953585	0.348058675	0.000158931
Off-site Truck Route 2	SLINE3	Off2	0.51721295	0.001139236	0.415820984	0.000189873
Off-site Truck Route 3	SLINE4	Off3	0.142976004	0.000314925	0.114947669	5.24875E-05
Off-site Truck Route 4	SLINE5	Off4	0.163368581	0.000359843	0.131342582	5.99738E-05
		Subtotal Off-site Travel	**1.256485313**	**0.002767589**	**1.01016991**	

Notes: Divided pounds per day by 10 hours to estimate maximum pounds in an hour.

Worker Scenario Health Risk Summary (Summary of HARP2 Results)

Perris Ramona Expressway Warehouse - Worker Scenario

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	**1.433E-12**	**0.0000014**	**4.632E-09**	**0.00E+00**
Applicable SCAQMD Threshold		**10**	**1**	**1**
Exceeds Applicable Threshold?		**No**	**No**	**No**

	X	Y
Operational Worker MIR UTM	477596.11	3744838.76

Latitude, Longitude: 33°50'36.9"N 117°14'31.8"W
Receptor # 69
MIR = Maximally Impacted Receptor

*HARP - HRACalc v22118 12/30/2022 11:48:15 AM - Cancer Risk - Input File: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerHRAInput.hra
*HARP - HRACalc v22118 12/30/2022 11:48:15 AM - Chronic Risk - Input File: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerHRAInput.hra
*HARP - HRACalc v22118 12/30/2022 11:48:15 AM - Acute Risk - Input File: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerHRAInput.hra

REC	GRP	X	Y	RISK_SUM	SCENARIO	MAXHI NonCancerChronic	MAXHI Acute
1	ALL	477823.07	3744670.90	9.156E-13	25YrCancerDerived_InhSoilDerm	2.96E-09	0.00E+00
2	ALL	477778.43	3744671.16	9.702E-13	25YrCancerDerived_InhSoilDerm	3.14E-09	0.00E+00
3	ALL	477733.79	3744671.42	9.620E-13	25YrCancerDerived_InhSoilDerm	3.11E-09	0.00E+00
4	ALL	477689.16	3744671.68	8.658E-13	25YrCancerDerived_InhSoilDerm	2.80E-09	0.00E+00
5	ALL	477971.67	3744672.28	4.293E-13	25YrCancerDerived_InhSoilDerm	1.39E-09	0.00E+00
6	ALL	477988.06	3744711.67	4.252E-13	25YrCancerDerived_InhSoilDerm	1.37E-09	0.00E+00
7	ALL	478004.44	3744751.07	4.264E-13	25YrCancerDerived_InhSoilDerm	1.38E-09	0.00E+00
8	ALL	477822.68	3744604.24	5.573E-13	25YrCancerDerived_InhSoilDerm	1.80E-09	0.00E+00
9	ALL	477758.94	3744606.72	5.546E-13	25YrCancerDerived_InhSoilDerm	1.79E-09	0.00E+00
10	ALL	477733.40	3744604.76	5.400E-13	25YrCancerDerived_InhSoilDerm	1.75E-09	0.00E+00
11	ALL	477688.77	3744605.02	4.951E-13	25YrCancerDerived_InhSoilDerm	1.60E-09	0.00E+00
12	ALL	477973.62	3744590.22	3.194E-13	25YrCancerDerived_InhSoilDerm	1.03E-09	0.00E+00
13	ALL	478018.13	3744623.68	2.881E-13	25YrCancerDerived_InhSoilDerm	9.31E-10	0.00E+00
14	ALL	478033.42	3744660.46	2.998E-13	25YrCancerDerived_InhSoilDerm	9.69E-10	0.00E+00
15	ALL	478048.72	3744697.23	2.862E-13	25YrCancerDerived_InhSoilDerm	9.25E-10	0.00E+00
16	ALL	478064.01	3744734.00	2.851E-13	25YrCancerDerived_InhSoilDerm	9.21E-10	0.00E+00
17	ALL	477823.51	3744547.33	4.119E-13	25YrCancerDerived_InhSoilDerm	1.33E-09	0.00E+00
18	ALL	477777.65	3744537.83	3.684E-13	25YrCancerDerived_InhSoilDerm	1.19E-09	0.00E+00
19	ALL	477733.02	3744538.09	3.497E-13	25YrCancerDerived_InhSoilDerm	1.13E-09	0.00E+00
20	ALL	477688.38	3744538.35	3.320E-13	25YrCancerDerived_InhSoilDerm	1.07E-09	0.00E+00
21	ALL	477979.93	3744526.30	2.514E-13	25YrCancerDerived_InhSoilDerm	8.13E-10	0.00E+00
22	ALL	478018.71	3744542.16	2.337E-13	25YrCancerDerived_InhSoilDerm	7.55E-10	0.00E+00
23	ALL	478065.53	3744577.36	2.170E-13	25YrCancerDerived_InhSoilDerm	7.01E-10	0.00E+00
24	ALL	478081.62	3744616.04	2.170E-13	25YrCancerDerived_InhSoilDerm	7.01E-10	0.00E+00
25	ALL	478097.70	3744654.73	2.172E-13	25YrCancerDerived_InhSoilDerm	7.02E-10	0.00E+00
26	ALL	478113.79	3744693.41	2.172E-13	25YrCancerDerived_InhSoilDerm	7.02E-10	0.00E+00
27	ALL	478129.88	3744732.09	2.005E-13	25YrCancerDerived_InhSoilDerm	6.48E-10	0.00E+00
28	ALL	477821.90	3744470.91	3.021E-13	25YrCancerDerived_InhSoilDerm	9.76E-10	0.00E+00
29	ALL	477777.27	3744471.17	2.764E-13	25YrCancerDerived_InhSoilDerm	8.93E-10	0.00E+00
30	ALL	477732.63	3744471.43	2.545E-13	25YrCancerDerived_InhSoilDerm	8.23E-10	0.00E+00
31	ALL	477687.99	3744471.69	2.399E-13	25YrCancerDerived_InhSoilDerm	7.75E-10	0.00E+00
32	ALL	477643.35	3744471.95	2.221E-13	25YrCancerDerived_InhSoilDerm	7.18E-10	0.00E+00
33	ALL	477987.20	3744396.25	1.662E-13	25YrCancerDerived_InhSoilDerm	5.37E-10	0.00E+00
34	ALL	478028.27	3744413.06	1.620E-13	25YrCancerDerived_InhSoilDerm	5.24E-10	0.00E+00
35	ALL	478069.34	3744429.86	1.454E-13	25YrCancerDerived_InhSoilDerm	4.70E-10	0.00E+00
36	ALL	478110.42	3744446.66	1.443E-13	25YrCancerDerived_InhSoilDerm	4.66E-10	0.00E+00
37	ALL	478160.01	3744483.95	1.307E-13	25YrCancerDerived_InhSoilDerm	4.22E-10	0.00E+00
38	ALL	478156.71	3744606.79	1.616E-13	25YrCancerDerived_InhSoilDerm	5.22E-10	0.00E+00
39	ALL	477821.13	3744337.57	1.885E-13	25YrCancerDerived_InhSoilDerm	6.09E-10	0.00E+00
40	ALL	477776.49	3744337.83	1.664E-13	25YrCancerDerived_InhSoilDerm	5.38E-10	0.00E+00
41	ALL	477731.85	3744338.09	1.613E-13	25YrCancerDerived_InhSoilDerm	5.21E-10	0.00E+00
42	ALL	477687.21	3744338.35	1.572E-13	25YrCancerDerived_InhSoilDerm	5.08E-10	0.00E+00
43	ALL	477642.58	3744338.61	1.436E-13	25YrCancerDerived_InhSoilDerm	4.64E-10	0.00E+00
44	ALL	478023.94	3744278.27	1.201E-13	25YrCancerDerived_InhSoilDerm	3.88E-10	0.00E+00
45	ALL	478064.22	3744294.75	1.170E-13	25YrCancerDerived_InhSoilDerm	3.78E-10	0.00E+00
46	ALL	478104.51	3744311.23	1.035E-13	25YrCancerDerived_InhSoilDerm	3.35E-10	0.00E+00

47	ALL	478270.57	3744429.19	8.685E-14	25YrCancerDerived_InhSoilDerm	2.81E-10	0.00E+00
48	ALL	478404.28	3744750.68	8.700E-14	25YrCancerDerived_InhSoilDerm	2.81E-10	0.00E+00
49	ALL	477861.80	3744078.92	8.343E-14	25YrCancerDerived_InhSoilDerm	2.70E-10	0.00E+00
50	ALL	477901.61	3744095.21	8.445E-14	25YrCancerDerived_InhSoilDerm	2.73E-10	0.00E+00
51	ALL	477941.41	3744111.50	8.136E-14	25YrCancerDerived_InhSoilDerm	2.63E-10	0.00E+00
52	ALL	477981.22	3744127.78	9.393E-14	25YrCancerDerived_InhSoilDerm	3.04E-10	0.00E+00
53	ALL	478347.76	3744294.21	7.209E-14	25YrCancerDerived_InhSoilDerm	2.33E-10	0.00E+00
54	ALL	478364.28	3744333.93	7.326E-14	25YrCancerDerived_InhSoilDerm	2.37E-10	0.00E+00
55	ALL	478380.79	3744373.64	7.326E-14	25YrCancerDerived_InhSoilDerm	2.37E-10	0.00E+00
56	ALL	478397.31	3744413.35	7.224E-14	25YrCancerDerived_InhSoilDerm	2.33E-10	0.00E+00
57	ALL	478413.83	3744453.06	7.224E-14	25YrCancerDerived_InhSoilDerm	2.33E-10	0.00E+00
58	ALL	478479.90	3744611.92	7.224E-14	25YrCancerDerived_InhSoilDerm	2.33E-10	0.00E+00
59	ALL	478496.42	3744651.63	5.864E-14	25YrCancerDerived_InhSoilDerm	1.90E-10	0.00E+00
60	ALL	478512.93	3744691.34	5.864E-14	25YrCancerDerived_InhSoilDerm	1.90E-10	0.00E+00
61	ALL	478529.45	3744731.06	5.864E-14	25YrCancerDerived_InhSoilDerm	1.90E-10	0.00E+00
62	ALL	477819.57	3744070.91	8.241E-14	25YrCancerDerived_InhSoilDerm	2.66E-10	0.00E+00
63	ALL	477774.94	3744071.17	8.241E-14	25YrCancerDerived_InhSoilDerm	2.66E-10	0.00E+00
64	ALL	477730.30	3744071.43	8.448E-14	25YrCancerDerived_InhSoilDerm	2.73E-10	0.00E+00
65	ALL	477685.66	3744071.69	8.448E-14	25YrCancerDerived_InhSoilDerm	2.73E-10	0.00E+00
66	ALL	477641.02	3744071.95	8.448E-14	25YrCancerDerived_InhSoilDerm	2.73E-10	0.00E+00
67	ALL	477602.24	3744754.83	1.069E-12	25YrCancerDerived_InhSoilDerm	3.45E-09	0.00E+00
68	ALL	477595.44	3744794.72	1.263E-12	25YrCancerDerived_InhSoilDerm	4.08E-09	0.00E+00
69	ALL	477596.11	3744838.76	1.433E-12	25YrCancerDerived_InhSoilDerm	4.63E-09	0.00E+00
70	ALL	477596.78	3744882.81	1.387E-12	25YrCancerDerived_InhSoilDerm	4.48E-09	0.00E+00
71	ALL	477577.24	3744755.21	8.240E-13	25YrCancerDerived_InhSoilDerm	2.66E-09	0.00E+00
72	ALL	477570.44	3744795.10	9.093E-13	25YrCancerDerived_InhSoilDerm	2.94E-09	0.00E+00
73	ALL	477571.11	3744839.14	1.012E-12	25YrCancerDerived_InhSoilDerm	3.27E-09	0.00E+00
74	ALL	477571.78	3744883.19	9.822E-13	25YrCancerDerived_InhSoilDerm	3.17E-09	0.00E+00
75	ALL	477552.25	3744755.59	6.640E-13	25YrCancerDerived_InhSoilDerm	2.15E-09	0.00E+00
76	ALL	477566.52	3744719.85	6.232E-13	25YrCancerDerived_InhSoilDerm	2.01E-09	0.00E+00
77	ALL	477591.37	3744694.47	6.337E-13	25YrCancerDerived_InhSoilDerm	2.05E-09	0.00E+00
78	ALL	477545.45	3744795.48	7.085E-13	25YrCancerDerived_InhSoilDerm	2.29E-09	0.00E+00
79	ALL	477546.11	3744839.52	7.703E-13	25YrCancerDerived_InhSoilDerm	2.49E-09	0.00E+00
80	ALL	477546.78	3744883.56	7.542E-13	25YrCancerDerived_InhSoilDerm	2.44E-09	0.00E+00
81	ALL	477486.38	3744754.61	4.212E-13	25YrCancerDerived_InhSoilDerm	1.36E-09	0.00E+00
82	ALL	477502.24	3744714.90	4.150E-13	25YrCancerDerived_InhSoilDerm	1.34E-09	0.00E+00
83	ALL	477518.09	3744675.19	3.847E-13	25YrCancerDerived_InhSoilDerm	1.24E-09	0.00E+00
84	ALL	477545.70	3744646.99	3.915E-13	25YrCancerDerived_InhSoilDerm	1.27E-09	0.00E+00
85	ALL	477585.07	3744630.30	4.156E-13	25YrCancerDerived_InhSoilDerm	1.34E-09	0.00E+00
86	ALL	477478.79	3744796.49	4.447E-13	25YrCancerDerived_InhSoilDerm	1.44E-09	0.00E+00
87	ALL	477479.46	3744840.53	4.657E-13	25YrCancerDerived_InhSoilDerm	1.50E-09	0.00E+00
88	ALL	477480.12	3744884.58	4.601E-13	25YrCancerDerived_InhSoilDerm	1.49E-09	0.00E+00
89	ALL	477463.59	3744645.75	3.052E-13	25YrCancerDerived_InhSoilDerm	9.86E-10	0.00E+00
90	ALL	477496.76	3744600.90	2.773E-13	25YrCancerDerived_InhSoilDerm	8.96E-10	0.00E+00
91	ALL	477533.50	3744585.33	2.816E-13	25YrCancerDerived_InhSoilDerm	9.10E-10	0.00E+00
92	ALL	477570.25	3744569.76	2.933E-13	25YrCancerDerived_InhSoilDerm	9.48E-10	0.00E+00
93	ALL	477607.00	3744554.18	3.038E-13	25YrCancerDerived_InhSoilDerm	9.82E-10	0.00E+00
94	ALL	477412.13	3744797.50	3.107E-13	25YrCancerDerived_InhSoilDerm	1.00E-09	0.00E+00
95	ALL	477412.80	3744841.55	3.338E-13	25YrCancerDerived_InhSoilDerm	1.08E-09	0.00E+00
96	ALL	477413.46	3744885.59	3.344E-13	25YrCancerDerived_InhSoilDerm	1.08E-09	0.00E+00
97	ALL	477352.92	3744757.00	2.163E-13	25YrCancerDerived_InhSoilDerm	6.99E-10	0.00E+00
98	ALL	477368.48	3744718.01	2.194E-13	25YrCancerDerived_InhSoilDerm	7.09E-10	0.00E+00
99	ALL	477384.05	3744679.02	2.198E-13	25YrCancerDerived_InhSoilDerm	7.10E-10	0.00E+00
100	ALL	477399.62	3744640.03	2.260E-13	25YrCancerDerived_InhSoilDerm	7.30E-10	0.00E+00
101	ALL	477415.19	3744601.04	2.248E-13	25YrCancerDerived_InhSoilDerm	7.27E-10	0.00E+00
102	ALL	477488.73	3744537.47	2.260E-13	25YrCancerDerived_InhSoilDerm	7.30E-10	0.00E+00
103	ALL	477527.39	3744521.09	2.303E-13	25YrCancerDerived_InhSoilDerm	7.44E-10	0.00E+00
104	ALL	477566.04	3744504.71	2.241E-13	25YrCancerDerived_InhSoilDerm	7.24E-10	0.00E+00
105	ALL	477604.70	3744488.33	2.241E-13	25YrCancerDerived_InhSoilDerm	7.24E-10	0.00E+00
106	ALL	477345.47	3744798.51	2.200E-13	25YrCancerDerived_InhSoilDerm	7.11E-10	0.00E+00
107	ALL	477346.14	3744842.56	2.237E-13	25YrCancerDerived_InhSoilDerm	7.23E-10	0.00E+00
108	ALL	477346.81	3744886.60	2.447E-13	25YrCancerDerived_InhSoilDerm	7.91E-10	0.00E+00
109	ALL	477219.55	3744759.16	1.255E-13	25YrCancerDerived_InhSoilDerm	4.05E-10	0.00E+00
110	ALL	477235.00	3744720.44	1.353E-13	25YrCancerDerived_InhSoilDerm	4.37E-10	0.00E+00
111	ALL	477250.46	3744681.72	1.353E-13	25YrCancerDerived_InhSoilDerm	4.37E-10	0.00E+00
112	ALL	477265.92	3744643.00	1.353E-13	25YrCancerDerived_InhSoilDerm	4.37E-10	0.00E+00
113	ALL	477281.38	3744604.28	1.353E-13	25YrCancerDerived_InhSoilDerm	4.37E-10	0.00E+00
114	ALL	477296.84	3744565.56	1.384E-13	25YrCancerDerived_InhSoilDerm	4.47E-10	0.00E+00
115	ALL	477312.30	3744526.84	1.248E-13	25YrCancerDerived_InhSoilDerm	4.03E-10	0.00E+00

HARP2 - HRACalc (dated 22118) 12/30/2022 11:48:15 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16
Total Exposure Duration: 25

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 25

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: Moderate8HR

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
TIER 2 SETTINGS
Tier2 not used.

****

Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerCancerRisk.csv
Cancer risk total by receptor saved to: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerNCChronicRisk.csv
Chronic risk total by receptor saved to: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerNCAcuteRisk.csv
Acute risk total by receptor saved to: G:\4115.0038\Op (worker)\HARP\RAMONA WORKER\hra\WorkerNCAcuteRiskSumByRec.csv
HRA ran successfully

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