REDLANDS AVENUE EAST INDUSTRIAL PROJECT
Development Plan Review No. DPR 20-00021
Specific Plan Amendment No. SPA 22-05053
Tentative Parcel Map No. TPM 22-05028

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (SCH: 2022100322)

Response to Comments/Revisions

Prepared for:

City of Perris
101 N. D Street
Perris, CA 92570
Contact: Chantal Power, Contract Planner

Applicant:

Lake Creek Industrial LLC
13681 Newport Avenue, Suite 8301
Tustin, CA 92780

Prepared By:

SAGECREST
PLANNING + ENVIRONMENTAL

27128 Paseo Espada, Suite #1524
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Contact: Lindsay Ortega, AICP, Vice President

February 2023

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1. INTRODUCTION

An Initial Study/Mitigated Negative Declaration (IS/MND) was prepared for the proposed Redlands Avenue East Industrial Project (Proposed Project) and made available for public comment during two 30-day public review periods, from October 14, 2022 through November 14, 2022 and from November 28, 2022 through December 27, 2022. Six letters providing comments on the IS/MND were received by the City of Perris by the time that the public review ended.

In accordance with the Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines), Section 15074(b) (14 CCR 15074(b)), before approving the Proposed Project, the City of Perris, as the lead agency under CEQA, will consider the MND with any comments received during the public review period. Specifically, Section 15074(b) of the State CEQA Guidelines (14 CCR 15074(b)) 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."

Pursuant to State CEQA Guidelines Section 15073.5 – Recirculation of a Negative Declaration Prior to Adoption…

(a) A lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has previously been given pursuant to Section 15072, but prior to its adoption. Notice of recirculation shall comply with Sections 15072 and 15073.

(b) A "substantial revision" of the negative declaration shall mean:

  (1) A new, avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance, or

  (2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.

(c) Recirculation is not required under the following circumstances:

  (1) Mitigation measures are replaced with equal or more effective measures pursuant to Section 15074.1.

  (2) New project revisions are added in response to written or verbal comments on the project's effects identified in the proposed negative declaration which are not new avoidable significant effects.

  (3) Measures or conditions of project approval are added after circulation of the

negative declaration which are not required by CEQA, which do not create new significant environmental effects and are not necessary to mitigate an avoidable significant effect.

(4) New information is added to the negative declaration which merely clarifies, amplifies, or makes insignificant modifications to the negative declaration.

Responses to the comments and revisions to the IS/MND contained herein do not meet any of the circumstances in Section 15073.5(b); therefore, recirculation of the IS/MND would not be required.

2. RESPONSES TO COMMENTS

The agencies, organizations, and individuals that provided substantive written comments on the environmental issues addressed within the IS/MND are listed in Table 1. Although CEQA (California Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.) do not explicitly require a lead agency to provide written responses to comments received on a proposed IS/MND, the lead agency may do so voluntarily. A copy of each letter with bracketed comment numbers on the right margin is followed by the response for each comment as indexed in the letter. Comment letters and specific comments are given letters and numbers for reference purposes.

Table 1 – Organizations, Persons, and Public Agencies that Commented on the IS/MND

Comment Letter	Commenting Organization, Person, or Public Agency	Date
A	Riverside County Transportation Commission	October 19, 2022
B	Blum Collins & Ho, LLP on behalf of Golden State Environmental Justice Alliance	November 11, 2022 (withdrawn)
C	Center for Community Action and Environmental Justice	November 14, 2022
D	California Department of Fish and Wildlife	November 14, 2022
E	Adam Salcido	November 15, 2022
F	South Coast Air Quality Management District (SCAQMD)	December 20, 2022

a) **Comment Letter A – Riverside County Traffic Commission**

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

4080 Lemon Street, 3rd Floor • Riverside, CA
Mailing Address: P.O. Box 12008 • Riverside, CA 92502-2208
951.787.7141 • 951.787.7920 • www.rctc.org

October 19, 2022

Chantal Power, AICP
Senior Planner
City of Perris
Department of Development Services – Planning Division
135 N. "D" Street
Perris, CA 92570

Subject: City of Perris - Redlands East Industrial Project (DPR 20-00021, SPA 22-05023, Tentative Parcel Map No. 38385 (TPM 22-05028), and a Mitigated Negative Declaration)

Dear Chantal:

This letter is in response to your letter dated; October 14, 2022, requesting my review and feedback of the possible impacts of the 254,511 square foot Refrigerated Warehouse located on the east side of Redlands Avenue and north of Placentia Avenue and south of E. Rider Street and how it may or may not influence the Mid County Parkway project. It appears that all of the six APNs listed will need to be fully acquired once RCTC begins acquiring right of way for the Mid County Parkway (MCP) Project in this area.

RCTC has begun early acquisition for the MCP Project and may reach out to this developer as the APNs listed fall within the footprint of the project.

Should you have any questions, or need further clarification, please feel free to contact me directly at either tgreen@rctc.org or 951-212-2773

Sincerely,

Timothy Green
Senior Management Analyst-Right of Way/Project Delivery
Riverside County Transportation Commission

NOTICE OF INTENT TO ADOPT MITIGATED NEGATIVE DECLARATION FOR REDLANDS EAST INDUSTRIAL PROJECT LOCATED EAST SIDE OF REDLANDS AVENUE, BETWEEN RIDER STREET AND PLACENTIA AVENUE

October 14, 2022

Subject: Notice oflntent to adopt negative declaration pursuant to Section 21092 and 21092.3 of the Public Resources Code and CEQA Guidelines Section I5072

Project Title: Redlands East Industrial Project (DPR 20-00021, SPA 22-05023, Tentative Parcel Map No. 38385 (TPM 22-05028), and a Mitigated Negative Declaration)

Lead Agency: City of Perris, CA

Contact: Chantal Power, AICP, Senior Planner, (909) 754-1653, cpower@interwestgrp.com

Project Location - City: Perris **Project Location - County:** Riverside

Project Location - Specific: APN 300-210-006, 007, 008, 026 & 027 (see attached Regional Location and Local Vicinity Maps).

Description of the Project: Lake Creek Industrial, LLC (Applicant) is requesting approval of a Specific Plan Amendment, a Tentative Parcel Map, and Development Plan Review for construction and operation of one 254,511 square foot non-refrigerated warehouse with two grade level doors and 31 truck docks and associated landscaping, parking, drive aisles, and road improvements on 12.59 acres. The warehouse is designed to house one tenant, which has not been identified at this time, and includes one 8,000 square foot area for office space. The proposed Project includes the vacation of Walnut Street and merging of six parcels via a tentative parcel map for a total developed site area of 11.61 acres and another approximately 0.98 acres for street improvements and dedication along Redlands Avenue. The Tentative Tract Map No. 38385 (TPM 22-05028) is required to consolidate six parcels into one parcel, vacate the alignment of Walnut Street, and dedicate approximately 0.98 acre for street improvements along Redlands Avenue. The Specific Plan Amendment (Perris Valley Commerce Center Specific Plan) is required to remove Walnut Street from the Circulation Plan of the Perris Valley Commerce Center Specific Plan (PVCCSP).

Location where the Draft Mitigated Negative Declaration is Available
Electronic copy is provided on-line at https://www.cityofperris.org/departments/development-services/planning/environmental-documents-for-public-review

Hard copy documents may be reviewed at the following location, City of Perris Planning Division, by appointment only.
135 North "D" Street
Perris, CA 92570

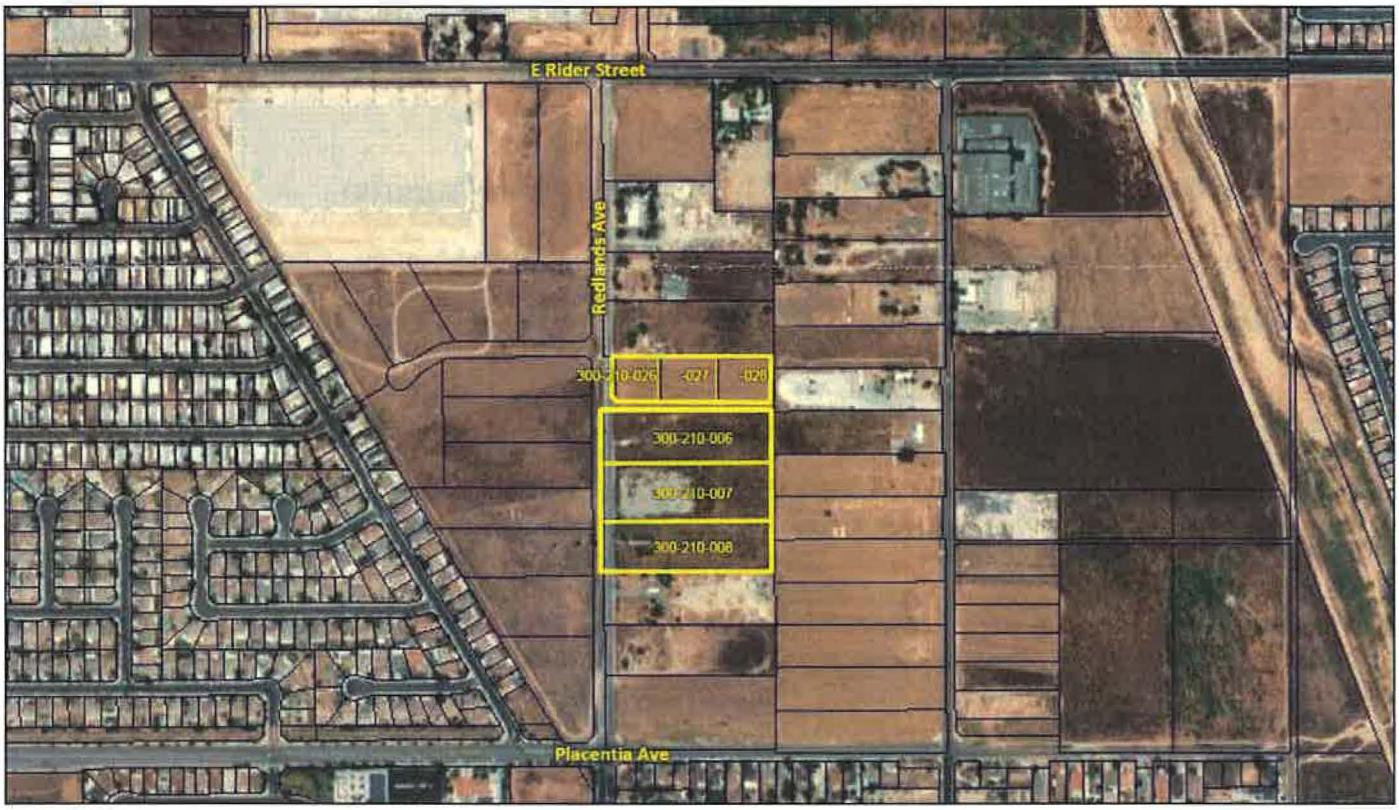
Appointments may be made by calling (909) 754-1653 or emailing: cpower@interwestgrp.com

Public Review Period: The Initial Study is being circulated for a 30-day review period, which will commence on October 14, 2022 and conclude on November 14, 2022. Due to the time limits mandated by State Law, your comments must be received at the earliest date, but no later than **November 14, 2022 at 4:30 pm.** Your comments must be sent to Chantal Power, City of Perris Planning Division, 135 N. "D" Street, Perris, CA 92570-2200 or via email at cpower@interwestgrp.com. Chantal Power office may be reached by phone at (909) 754-1653.

Public Hearing: Written and oral comments regarding the Initial Study/Mitigated Negative Declaration may also be submitted at a public hearing that will be held before the City of Perris Planning Commission. The public hearing is scheduled for **December** 7, **2022,** at a regularly scheduled meeting of the Planning Commission. Please contact Chantal Power, per the contact information above, if you are not currently on the Project distribution list and wish to be notified of future hearing dates. Copies of all relevant material, including the project specifications, the IS/MND, and supporting documents, are available for review as described above.

Hazardous Materials Statement: The project site is not on any list of hazardous waste sites prepared pursuant to Government Code Section 65962.5.

NOTES: California Public Utilities Code (CPUC Section 21676) requires that all jurisdictions (County or City) refer all Specific Plan Amendments within an Airport Land Use Compatibility Plan (ALUCP) for ALUC review. The Project Site is within the March Air Reserve Base Airport Influence Area, outside of the Airport's Accident Potential Zones (APZs) and within the Airport Compatibility Zone B2 and does not conflict with the MARB/IP Land Use Compatibility Plan. The project is scheduled for ALUC review on November 10, 2022. In addition, Tribal Consultations have been conducted.



Response to Comment Letter A – Riverside County Traffic Commission (RCTC)

The comment is acknowledged. The Mid County Parkway (MCP) is a planned 16-mile transportation corridor between the San Jacinto and Perris areas. The improvements will provide connection to Route 79, Interstate 215, and transit facilities that support Metrolink's 91/Perris Valley Line and Riverside Transit Agency routes. With this connection, the Perris and San Jacinto communities will have access to multiple modes of travel.

The Project Site is located in proximity to the proposed alignment of the MCP that would pass through the City of Perris. However, construction of the MCP is not contemplated or adopted in City planning documents and development of the Redlands Avenue East Industrial Project as proposed complies with the City's General Plan and the Perris Valley Commerce Center Specific Plan.

It is understood from this comment letter that the RCTC has initiated early property acquisions for the MCP project and may reach out to the Applicant for the Redlands Avenue East Industrial Project. However, as of the time that the IS/MND was circulated and these responses to comments were prepared, the Applicant has not been contacted by the RCTC regarding acquisition of any portion of the Project Site.

This comment does not question the content or conclusions of the IS/MND. No additional response is required.

b) **Comment Letter B – Blum Collins & Ho, LLP on behalf of Golden State Environmental Justice Alliance**

Please see attachment for complete comment letter.

B.1 – Letter of withdraw received on December 14, 2022
B.2 – Letter received on November 11, 2022

Response to Comment Letter B – Blum Collins & Ho, LLP on behalf of Golden State Environmental Justice Alliance

Response to Comment Letter B.1

As stated in this comment, the original letter submitted to the City on behalf of the Golden State Environmental Justice Alliance (Letter B.2) has been withdrawn. This letter does not question the content or conclusions of the IS/MND and no further response is required.

Response to Comment Letter B.2

As discussed above for Letter B.1, this comment letter has been withdrawn by the commenter. Therefore, no formal response to the comments raised in the letter is required.

c) **Comment Letter C – Center for Community Action and Environmental Justice**

November 14, 2022

City of Perris, Development Services – Planning Division
Attn: Chantal Power, Contract Planner
135 N. D Street
Perris, CA 92570

Submitted via email to cpower@interwestgrp.com.

Re: Redlands Avenue East Industrial Project – Development Plan Review No. 20-00021
Initial Study/Mitigated Negative Declaration (SCH #2022100322)

Dear Ms. Power:

This letter is being submitted on behalf of the Center for Community Action and Environmental Justice (CCAEJ) to respond to the Initial Study/Mitigated Negative Declaration for the proposed Redlands Avenue East Industrial Project (SCH #20221000322) which has been prepared and made available for comment. After reviewing the documents, there are a few comments that we would like to provide regarding the information it provides.

While we do not agree with the conclusion that the Project would have no significant impact due to the cumulative impact of the many projects ongoing in Perris and the broader region, we understand that the analysis has led to that outcome. However, we would like to make sure that the City has a monitoring program in place to ensure that the thresholds are not surpassed in the future such as if cold storage were to be added at a later date that would bring TRU traffic to the site. C-1

Additionally, to ensure that the community has accurate information about emissions once the Project is open, we would like to request that air monitoring equipment designed to feed data to the South Coast Air Quality Management District's air quality monitors be provided at the Project in places such as the truck yard gates to capture the true air quality situation that exists at the site during operation. C-2

We also would like to ensure that the work to construct the Project maximizes the opportunity to use the most up-to-date designs and standards for active transportation. While it is encouraging to see that sidewalks are planned, it is important to make sure that appropriate facilities for bicyclists[1][2] are provided as well, something which the passage of Senate Bill 932 (Portantino, 2022) underscores and will make a requirement for agencies in the near future. C-3

Thank you for your time and attention to these matters and issues. If there are any further questions, please do not hesitate to reach out to have them addressed.

Sincerely,

Marven Norman
Policy Specialist

CCAEJ is a long-standing community based organization with over 40 years of experience advocating for stronger regulations through strategic campaigns and building a base of community power. Most notably, CCAEJ's founder Penny Newman won a landmark federal case against Stringfellow Construction which resulted in the `Stringfellow Acid Pits' being declared one of the first Superfund sites in the nation. ***CCAEJ*** prioritizes community voices as we continue our grassroots efforts to bring lasting environmental justice to the Inland Valley Region.

[1] Schultheiss, B., Goodman, D., Blackburn, L., Wood, A., Reed, D., & M. Elbech (2019). Bikeway selection guide. (FHWA-SA-18-077). Federal Highway Administration: Washington, DC. Retrieved on July 19, 2021 from https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf.

[2] Flournoy, M. (2020, March 11). Contextual guidance for bicycle facilities. California Department of Transportation (Caltrans). Retrieved on July 19, 2021 from https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/planning-contextual-guidance-memo-03-11-20-a11y.pdf.

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Tel: **951-360-8451**
Fax: 951-360-5950
www.ccaej.org

Response to Comment Letter C – Center for Community Action and Environmental Justice

Response to Comment C-1

As stated on page 1 of the IS/MND, "Lake Creek Industrial, LLC (Applicant) proposes to construct a 254,511-square-foot concrete tilt-up **non-refrigerated** [emphasis added] warehouse (Proposed Project) on 12.59 acres located along the east side of Redlands Avenue, between Rider Street and Placentia Avenue, on Assessor's Parcel Numbers (APN) 300-210-026, -027, -028, -006, -007, and -008 (Project Site). The Proposed Project is designed to house one tenant, which has not been designated at this time and will include an office, 33 total docks (two grade level and 31 dock high doors) and includes related site landscaping, drainage, and parking." Although the tenant of the warehouse is currently unknown, the Project will not be equipped with cold storage facilities and TRUs are not anticipated on-site. This is the use that the City is considering for approval; it is not considering approval of a cold storage facility. If a future owner or tenant were to request approval from the City for the construction and operation of the building as a cold storage facility, that requested action would be subject to a subsequent environmental review under CEQA. No additional analysis or monitoring is warranted or required at the present time for the Project as proposed. Impacts remain less than significant.

Response to Comment C-2

As stated in the introduction of the Air Quality Report (AQR/Appendix A of the IS/MND) on page 1, "This study was performed to address the possibility of regional/local air quality impacts and global climate change impacts, from project related air emissions. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- discussion of the health risk impacts
- analysis of the conformity of the proposed project with the SCAQMD AQMP
- analysis of the project's energy use during construction and operation
- recommendations for mitigation measures"

The possibility for the Project to cause air quality impacts to the community during operation has been addressed in the AQR and the Executive Summary shows, on pages v and vi of the AQR, that the closest sensitive receptors will not be exposed to substantial pollutant concentrations generated by the project and none of the emissions would exceed South Coast Air Quality Management District (SCAQMD) regional or localized thresholds of significance. The SCAQMD has developed these air quality thresholds[1] in order to assist lead agencies in determining

[1] 1 http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2

whether or not a project would cause significant impacts to air quality both at a local level and within the South Coast Basin. Furthermore, the Project's emissions were modeled and calculated utilizing the most recent versions of CalEEMod, for the criteria pollutant analysis, and AERMOD, for the health risk analysis, at the time the analysis was completed. These are the analysis tools recommended by the SCAQMD to calculate a project's potential impacts to air quality.

Therefore, although the Project will generate emissions, these emissions are considered to be less than significant. However, if at some point in the future the Proposed Project's operational emissions are in question, the SCAQMD could potentially provide an inspection of the facility and its emission sources to ensure operation is properly following SCAQMD's rules and regulations. However, at this time, as the Proposed Project's emissions are considered to be less than significant and no additional operational monitoring is required.

As discussed on page 20 of the AQR, ambient air quality in the Perris Valley is already monitored at the Perris Monitoring Station at 237 ½ N. D Street in Downtown Perris. This station is owned, maintained, and monitored by the SCAQMD.

Also, the City of Perris is not aware of any warehouse facility that is subject to direct monitoring by the SCAQMD.

Response to Comment C-3

As stated in the Redlands Avenue East Industrial Project Traffic Impact Analysis prepared by Ganddini Group and dated March 8, 2022, "There are currently no existing bicycle lanes along Redlands Avenue adjacent to the project site. It is noted that the City of Perris General Plan bike routes has not been updated to reflect the recent adoption of the Active Transportation Plan.[2] The City of Perris General Plan shows a proposed Class II bicycle lane on Redlands Avenue along the Project Site frontage and the Active Transportation Plan identifies a Class I shared-use path. The proposed site plan includes a Class I shared-use path along the street frontage and is dedicating an additional four feet of right-of-way beyond what is required by the General Plan."

Therefore, the Proposed Project implements the City's Active Transportation Plan regarding appropriate facilities for bicyclists to the extent that it is able to along the frontage of the Project Site.

[2] The City of Perris Active Transportation Plan dated December 8, 2022.

d) **Comment Letter D – California Department of Fish and Wildlife**

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 14, 2022

Mr. Kenneth Phung, Development Services Director
City of Perris
101 North D Street
Perris, CA 92570
Kphung@cityofperris.org

Subject: Mitigated Negative Declaration
Redlands East Industrial Project
State Clearinghouse No. 2022100322

Dear Mr. Phung:

The California Department of Fish and Wildlife (CDFW) received a Mitigated Negative Declaration (MND) from the City of Perris (City) for the Redlands East Industrial Project (Project) for Lake Creek Industrial, LLC. (Project Applicant/Proponent) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802.). Similarly, for purposes of CEQA, CDFW provides, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.). CDFW expects that it may

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code. D-1

CDFW issued Natural Community Conservation Plan approval and take authorization in 2004 for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), as per Section 2800, et seq., of the California Fish and Game Code. The MSHCP established a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with activities covered under the permit. The City of Perris is a permittee to the MSHCP and is responsible for implementation of the MSHCP and its associated Implementation Agreement. CDFW is providing the following comments as they relate to the Project's consistency with the MSHCP and CEQA.

PROJECT DESCRIPTION SUMMARY

Project Location

The 12.59-acre Project site is located north of Placentia Avenue, east of Redlands Avenue, south of East Rider Road, and west of Wilson Road in the City of Perris, Riverside County, California, in Section 17 West, Township 4 South, Range 3 West, of the U.S. Geological Survey 7.5" Perris, California topographic quadrangle map, Assessor's Parcel Numbers 300-210-006, 300-210-007, 300-210-008, 300-210-026, 300-210-027, and 300-210-028.

Project Description

The Project proposes to construct one 254,511 square-foot non-refrigerated warehouse with two grade level doors and 31 truck docks and would include the associated landscaping, parking, drive aisles, and road improvements. In addition, it would include approval of Tentative Parcel Map 38385 to merge six parcels for a total developed site area of 11.61 acres and propose approximately 0.98 acre for street improvements along Redlands Avenue.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations presented below to assist the City in adequately identifying and/or mitigating the Project's potentially significant direct and indirect impacts to biological resources, and in Attachment 1 "Mitigation Monitoring and Reporting Program" for consideration by the City prior to adoption of the MND for the Project. CDFW is concerned about the adequacy of the impact analysis and the

mitigation measures proposed in the IS/MND and the ability of the Project to mitigate the significant, or potentially significant, direct and indirect impacts to native habitats and species that rely on these habitats. The comments and recommendations are offered to enable the City to update the MND to adequately disclose impacts and measures for CDFW and the public to review and comment on the proposed Project with respect to the Project's compliance with the Western Riverside County MSHCP and Fish and Game Code sections 3503, 3503.5, and 3513 and ensure that proposed impacts to fish and wildlife resources are properly identified and mitigated. CDFW recommends that each of these be addressed prior to finalization of the MND.

Western Riverside County Multiple Species Habitat Conservation Plan

Western Riverside County MSHCP Implementation

Compliance with approved habitat plans, such as the MSHCP, is discussed in CEQA. Specifically, Section 15125(d) of the CEQA Guidelines requires that the CEQA document discuss any inconsistencies between a proposed project and applicable general plans and regional plans, including habitat conservation plans and natural community conservation plans. An assessment of the impacts to the MSHCP as a result of this Project is necessary to address CEQA requirements.

The proposed Project occurs within the MSHCP area and is subject to the provisions and policies of the MSHCP. To be considered a covered activity, Permittees need to demonstrate that proposed actions are consistent with the MSHCP, the Permits, and the Implementing Agreement. The City is the Lead Agency and is signatory to the Implementing Agreement of the MSHCP. To demonstrate consistency with the MSHCP, as part of the CEQA review, the City shall ensure the Project pays Local Development Mitigation Fees and other relevant fees as set forth in Section 8.5 of the MSHCP; and demonstrates compliance with: 1) the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2 of the MSHCP); 2) the Protection of Narrow Endemic Plant Species (Section 6.1.3 of the MSHCP); 3) the Urban/Wildlands Interface Guidelines (Section 6.1.4 of the MSHCP); 4) the policies set forth in Section 6.3.2; and 5) the Best Management Practices and the siting, construction, design, operation and maintenance guidelines as set forth in Section 7.0 and Appendix C of the MSHCP. D-2

Narrow Endemic Plant Species

As noted in the MND, the Project site occurs within survey areas for Narrow Endemic Plant Species, including San Diego ambrosia (*Ambrosia pumila,* rare plant rank [RPR] 1B.1), spreading navarretia (*Navarretia fossalis,* RPR 1B.1), California Orcutt grass (*Orcuttia californica*, RPR 1B.1), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii,* RPR 2B.1), which have the potential to occur onsite. While the MND reveals that focused surveys were conducted for Narrow Endemic Plant Species in October and November 2020, the results and details of the surveys were not discussed in detail. D-3 D-4

Based on rainfall in a given year, surveys for San Diego ambrosia, California Orcutt grass, and spreading navarretia should be typically done at peak blooming which can be from April through the end of July. The MND should include surveys for these species done within the appropriate time of years. Absent further survey details and surveys being conducted outside of the blooming period for these species, CDFW cannot confirm presence for Narrow Endemic Plant Species was properly assessed. D-5

Narrow endemic plant species are highly restricted by their habitat affinities, edaphic requirements, or other ecological factors, and for which specific conservation measures have been identified in the MSHCP if the species are present. The special surveys are required to ensure conservation of the species if present on the Project site. The MSHCP specifies that survey results shall be documented in mapped and text form and shall be presented for review by the City. Therefore, CDFW recommends that the City evaluate whether focused surveys for narrow endemic plants followed CDFW guidelines below in MM BIO-4 and include such information in detail in the final MND. If not, CDFW recommends the City adopt MM BIO-XX in the final MND to ensure to avoidance, minimization and mitigation strategies are implemented for the species and to demonstrate consistency with MSHCP requirements. D-6 D-7

MM BIO-XX: **To avoid impacts to Narrow Endemic Plant Species, including San Diego ambrosia (*Ambrosia pumila*, Rare plant rank [RPR] 1B.1), spreading navarretia (*Navarretia fossalis*, RPR 1B.1), California Orcutt grass (*Orcuttia californica*, RPR 1B.1), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*, RPR 2B.1), that may occur on the Project site the City shall ensure that prior to Project implementation, and during the appropriate season, a qualified biologist shall conduct botanical field surveys within the Project area following protocols set forth in the California Department of Fish and Wildlife's (CDFW) 2018 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). The surveys shall be conducted by a CDFW-approved botanist(s) experienced in conducting floristic botanical field surveys, knowledgeable of plant taxonomy and plant community ecology and classification, familiar with the plants of the area, including special-status and locally significant plants, and familiar with the appropriate state and federal statutes related to plants and plant collecting. The botanical field surveys shall be conducted at the appropriate time of year when plants will both be evident and identifiable (usually, during flowering or fruiting) and, in a manner, which maximizes the likelihood of locating special-status plants and sensitive natural communities that may be present. Botanical field surveys shall be conducted floristic in nature, meaning that every plant taxon that occurs in the project area is identified to the taxonomic level necessary to determine rarity and listing status. If any special-status plants are identified, the City shall**

avoid the plant(s), with an appropriate buffer (i.e., fencing or flagging). If complete avoidance is not feasible, the City shall mitigate the loss of the plant(s) through the purchase of in-kind mitigation credits from a CDFW-approved bank or land acquisition and conservation at a 3:1 mitigation ratio of in-kind resources at a site approved by CDFW and the US Fish and Wildlife Service.

Burrowing Owl

In California, burrowing owl are in decline primarily because of habitat loss, as well as disease, predation, and drought[2]. Burrowing owl require specific soil and microhabitat conditions, occur in few locations within a broad habitat category of grassland and some forms of agriculture land, require a relatively large home range to support its life history requirements, occur in relatively low numbers, and are semi-colonial. One mechanism the MSHCP employs to provide for conservation of burrowing owls is to require burrowing owl surveys in suitable habitat to identify suitable occupied nesting habitat for owls that may be required for conservation. The MND identifies that suitable habitat for burrowing owl was identified through aerial imagery and focused burrowing owl surveys were completed during the late October and early November 2020. However, CDFW reviewed the results of the surveys and found that all focused burrowing owl surveys were conducted outside of the nesting period for burrowing owl. CDFW is concerned that nesting owls may be missed by the timing of the surveys, and CDFW recommends that surveys are conducted at least one week apart during the breeding season to adequately detect presence of nesting owls on the site in order to evaluate if the site may be required for conservation. CDFW recommends that the surveys be repeated during the 2023 breeding season and that the focused surveys are conducted at least a week apart to avoid missing owls that may be using the site. CDFW recommends the inclusion of a process to avoid direct take of burrowing owls and to avoid project delays if the owls are detected during the pre-construction surveys. D-8 D-9

CDFW requests the City evaluate the direct, indirect, and cumulative impacts to burrowing owl before approval and certification of the MND. Appropriate analysis would include a discussion of the results of the focused burrowing owl surveys and suitable habitat surveys for the Project site. To avoid take of active nests, appropriate avoidance and minimization measures need to be identified in the MND to protect burrowing owl during the burrowing owl nesting season. CDFW recommends creation of a Burrowing Owl Plan if owls are detected on the Project Site. D-10 D-11

[2] DeSante, D. F., E. D Ruhlen, and R. Scalf. 2007. The distribution and relative abundance of burrowing owls in California during 1991–1993: Evidence for a declining population and thoughts on its conservation. Pages 1-41 in J. H. Barclay, K. W. Hunting, J. L. Lincer, J. Linthicum, and T. A. Roberts, editors. Proceedings of the California Burrowing Owl Symposium, 11-12 November 2003 Sacramento, California, USA. Bird Populations Monographs No. 1. The Institute for Bird Populations and Albion Environmental, Inc., Point Reyes Station, CA.

To avoid take of active burrowing owl burrows (nests), CDFW requests the addition of the following mitigation measure. Requested additions are identified in **bold** and removed measures are in ~~strikeout~~.

D-12

MM BIO-2: Burrowing Owl Survey. To avoid project-related impacts to burrowing owls potentially occurring on or in the vicinity of the project site, project-specific habitat assessments and focused surveys for burrowing owls shall be conducted before implementing development or infrastructure projects within burrowing owl survey areas. A pre-construction survey for resident burrowing owls will also be conducted by a qualified biologist within 30 days prior to commencement of ~~grading and~~ construction activities **(e.g., vegetation clearing, clearing, and grubbing, tree removal, site watering)** within those portions of implementing project sites containing suitable burrowing owl habitat and for those properties within an implementing project site where the biologist could not gain access. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. **The results of the survey should be submitted to the City and California Department of Fish and Wildlife within three days of survey completion.** The pre-construction survey ~~and any relocation activity~~ shall be conducted in accordance with the current Burrowing Owl Instruction for the Western Riverside MSHCP.

If no burrowing owls are observed during the survey, site preparation and construction activities may begin. ~~If active nests are identified on an implementing project site during the pre-construction survey, the nests shall be avoided, or the owls actively or passively relocated. To adequately avoid active nests, no grading or heavy equipment activity shall take place within at least 250 feet of an active nest during the breeding season (February 1 through August 31), and 160 feet during the non-breeding season.~~ **If burrowing owls are found to be present, then avoidance or minimization measures shall be undertaken in consultation with the City of Perris, California Department of Fish and Wildlife (CDFW) and US Fish and Wildlife Service (USFWS). CDFW shall be sent written notification within 48 hours of detection of burrowing owls.** ~~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 Division and the CDFG. 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 1-way doors in burrow entrances. These 1-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 implementing project area shall be monitored daily for 1 week to confirm owl use of burrows before excavating burrows in the impact area. Burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. The CDFG shall be consulted prior to any active relocation to determine acceptable receiving sites available where this species has a greater chance of successful long-term relocation. If avoidance is infeasible, then a DBESP will be required, including associated relocation of burrowing owls. If conservation is not required, then owl relocation will still be required following accepted protocols. Take of active nests will be avoided, so it is strongly recommended that any relocation occur outside of the nesting season.~~ **If active burrowing owl burrows are detected, the Project applicant shall not commence activities until no sign is present that the burrows are being used by adult or juvenile owls or following CDFW approval of a Burrowing Owl Plan as described below. If owl presence is difficult to determine, a qualified biologist shall monitor the burrows with motion-activated trail cameras for at least 24 hours to evaluate burrow occupancy. The onsite qualified biologist will verify the nesting effort has finished according to methods identified in the Burrowing Owl Plan.**

The Burrowing Owl Plan shall be prepared in accordance with guidelines in the CDFW Staff Report on Burrowing Owl (March 2012) and Western Riverside County Multiple Species Habitat Conservation Plan. The qualified biologist and Project Applicant shall coordinate with the City, CDFW, and USFWS to develop a Burrowing Owl Plan to be approved by the City, CDFW, and USFWS prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, relocation, monitoring, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. the City shall implement the Burrowing Owl Plan following CDFW and USFWS review and approval.

If burrowing owls are observed within Project Site(s) during Project implementation and construction, the Project applicant shall notify CDFW immediately in writing within 48 hours of detection. A Burrowing Owl Plan shall be submitted to CDFW for review and approval within

two weeks of detection and no Project activity shall continue within 1000 feet of the burrowing owls until CDFW approves the Burrowing Owl Plan. the City shall be responsible for implementing appropriate avoidance and mitigation measures, including burrow avoidance, passive or active relocation, or other appropriate mitigation measures as identified in the Burrowing Owl Plan.

If ground-disturbing activities occur but the site is left undisturbed for more than 30 days, a preconstruction survey for burrowing owl shall be conducted within 3 days prior to initiation of Project activities and reported to CDFW as described above. If burrowing owl are found, the same coordination described above shall be necessary.

A final report shall be prepared by the qualified biologist documenting the results of the burrowing owl surveys and detailing avoidance, minimization, and mitigation measures. The final report shall be submitted to the City and CDFW within 30 days of completion of the survey and burrowing monitoring for mitigation monitoring compliance record keeping.

Nesting Birds

It is the Project proponent's responsibility to avoid Take of all nesting birds. Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by the rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.). Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. These regulations apply anytime nests or eggs exist on the Project site.

D-13

The timing of the nesting season varies greatly depending on several factors, such as the bird species, weather conditions in any given year, and long-term climate changes (e.g., drought, warming, etc.). CDFW staff have observed that changing climate conditions may result in the nesting bird season occurring earlier and later in the year than historical nesting season dates. CDFW recommends the completion of nesting bird survey regardless of time of year to ensure compliance with all applicable laws pertaining to nesting and to avoid take of nests.

The duration of a pair to build a nest and incubate eggs varies considerably, therefore, CDFW recommends surveying for nesting behavior and/or nests and construction within

three days prior to start of Project construction to ensure all nests on site are identified and to avoid take of nests.

CDFW is concerned that potential impacts to nesting birds are not identified or discussed within the MND and strongly suggests the City evaluate the direct, indirect, and cumulative impacts to nesting birds, before approval and certification of the MND. Appropriate analysis would include conducting focused nesting bird surveys throughout the project site. To address the above issues and help the Project applicant avoid unlawfully taking of nests and eggs, CDFW requests the City include the following mitigation measures in the MND per below (edits are in ~~strikethrough~~ and **bold**), and also included in Attachment 1 "Mitigation Monitoring and Reporting Program". D-14

MM BIO-1: Nesting Bird Survey. In order to avoid violation of the **Migratory Bird Treaty Act (**MBTA**)** and the California Fish and Game Code Sections 3503, 3503.5, and 3513, site preparation activities **(such as ground disturbance, construction activities, and/or** removal of trees and vegetation) for all PVCC implementing development and infrastructure projects shall be avoided, to the greatest extent possible, during the nesting season ~~(generally February 1 to August 31)~~ of potentially occurring native and migratory bird species. If site-preparation activities for an implementing project are proposed ~~during the nesting/breeding season (February 1 to August 31)~~, a pre-activity field survey shall be conducted by a qualified biologist prior to the issuance of grading permits for such project. t~~, to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone.~~ **The nest surveys shall include the project site and adjacent areas where project activities have the potential to cause nest failure. The survey results shall be provided to the City's Planning Department. The Project Applicant shall adhere to the following:**

1. **Applicant shall designate a biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.**

2. **Pre-activity field surveys shall be conducted at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of Project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures. Survey**

duration shall take into consideration the size of the Project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate.

If no nesting birds are observed during the survey, ~~If active nests are not located within the implementing Project Site and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (nonlisted), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season.~~ **site preparation and construction activities may begin.** However, if active nests or **nesting birds (including nesting raptors)** are located ~~during the pre-activity field survey~~**, then** ~~no grading or heavy equipment activity shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected (under MBTA or California Fish and Game Code) bird nests (non listed), or within 100 feet of sensitive or protected songbird nests until the nest is no longer active.~~ **avoidance or minimization measures shall be undertaken in consultation with the City of Perris and California Department of Fish and Wildlife. Measures shall include immediate establishment of an appropriate buffer zone to be established by a qualified biologist, and approved by the City of Perris, based on their best professional judgement and experience. The buffer around the nest shall be delineated and flagged, and no construction activity shall occur within the buffer area until a qualified biologist determines nesting species have fledged and the nest is no longer active or the nest has failed. The Designated Biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer. If the Designated Biologist determines that such project activities may be causing an adverse reaction, the Designated Biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest). The onsite qualified biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Within 30 days of completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping.**

MITIGATION AND MONITORING REPORTING PLAN

CDFW recommends updating the MND's proposed Biological Resources Mitigation Measures to include mitigation measures recommended in this letter. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments [(Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15126.4(a)(2)]. As such, CDFW has provided comments and recommendations to assist the City in developing mitigation measures that are (1) consistent with CEQA Guidelines section 15126.4; (2) specific; (3) detailed (i.e., responsible party, timing, specific actions, location), and (4) clear for a measure to be fully enforceable and implemented successfully via mitigation monitoring and/or reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097). The City is welcome to coordinate with CDFW to further review and refine the Project's mitigation measures. Per Public Resources Code section 21081.6(a)(1), CDFW has provided the City with a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation and Monitoring Reporting Plan (MMRP; Attachment 1). D-15

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. D-16

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.) D-17

CONCLUSION

CDFW appreciates the opportunity to comment on the MND for the Redlands East Industrial Project, State Clearinghouse No. 2022100322 to assist in identifying and mitigating Project impacts on biological resources. CDFW personnel are available for consultation regarding biological resources and strategies to minimize impacts. CDFW

requests that the City of Perris addresses CDFW's comments and concerns prior to adoption of the MND for the Project.

Questions regarding this letter or further coordination should be directed to Katrina Rehrer, Environmental Scientist, at katrina.rehrer@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Kim Freeburn
84F92FFEEFD24C8...

Kim Freeburn
Environmental Program Manager

ec: **California Department of Fish and Wildlife**
Heather Pert, Senior Environmental Scientist Supervisor
Heather.Pert@wildlife.ca.gov

U.S. Fish and Wildlife Service
Karin Cleary-Rose
Karin_Cleary-Rose@fws.gov

Western Riverside County Regional Conservation Authority
Tricia Campbell
tcampbell@rctc.org

Office of Planning and Research, State Clearinghouse, Sacramento
state.clearinghouse@opr.ca.gov.

REFERENCES

California Department of Fish and Game (CDFG). 2012. Staff report on burrowing owl mitigation. State of California, Natural Resources Agency. Available for download at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline=true

ATTACHMENTS

Attachment 1: MMRP for CDFW-Proposed Mitigation Measures

ATTACHMENT 1: MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PURPOSE OF THE MMRP

The purpose of the MMRP is to ensure compliance with mitigation measures during Project implementation. Mitigation measures must be implemented within the time periods indicated in the table below.

TABLE OF MITIGATION MEASURES

The following items are identified for each mitigation measure: Mitigation Measure, Implementation Schedule, and Responsible Party for implementing the mitigation measure. The Mitigation Measure column summarizes the mitigation requirements. The Implementation Schedule column shows the date or phase when each mitigationmeasure will be implemented. The Responsible Party column identifies the person oragency that is primarily responsible for implementing the mitigation measure.

Biological (BIO) Mitigation Measures (MM)	Implementation Schedule	Responsible Party
MM BIO XX. To avoid impacts to Narrow Endemic Plant Species, including San Diego ambrosia (*Ambrosia pumila*, Rare plant rank [RPR] 1B.1), spreading navarretia (*Navarretia fossalis*, RPR 1B.1), California Orcutt grass (*Orcuttia californica*, RPR 1B.1), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*, RPR 2B.1), that may occur on the Project site the City shall ensure that prior to Project implementation, and during the appropriate season, a qualified biologist shall conduct botanical field surveys within the Project area following protocols set forth in the California Department of Fish and Wildlife's (CDFW) 2018 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). The surveys shall be conducted by a CDFW-approved botanist(s) experienced in conducting floristic botanical field surveys, knowledgeable of plant taxonomy and plant community ecology and classification, familiar with the plants of the area, including special-status and locally significant plants, and familiar with the appropriate state and federal statutes related to plants and plant collecting. The botanical field surveys shall be conducted at the appropriate time of year when plants will both be evident and identifiable (usually, during flowering or fruiting) and, in a manner, which maximizes the likelihood of locating special-status plants and sensitive natural communities that may be present. Botanical field surveys shall	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

be conducted floristic in nature, meaning that every plant taxon that occurs in the project area is identified to the taxonomic level necessary to determine rarity and listing status. If any special-status plants are identified, the City shall avoid the plant(s), with an appropriate buffer (i.e., fencing or flagging). If complete avoidance is not feasible, the City shall mitigate the loss of the plant(s) through the purchase of in-kind mitigation credits from a CDFW-approved bank or land acquisition and conservation at a 3:1 mitigation ratio of in-kind resources at a site approved by CDFW and the US Fish and Wildlife Service.		
MM BIO-1: Nesting Bird Survey. In order to avoid violation of the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503, 3503.5, and 3513, site preparation activities (such as ground disturbance, construction activities, and/or removal of trees and vegetation) for all PVCC implementing development and infrastructure projects shall be avoided, to the greatest extent possible, during the nesting season of potentially occurring native and migratory bird species. If site-preparation activities for an implementing project are proposed, a pre-activity field survey shall be conducted by a qualified biologist prior to the issuance of grading permits for such project. The nest surveys shall include the project site and adjacent areas where project activities have the potential to cause nest failure. The survey results shall be provided to the City's Planning Department. The Project Applicant shall adhere to the following: 1. Applicant shall designate a biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures. 2. Pre-activity field surveys shall be conducted at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of Project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures. Survey duration shall take into consideration the size of the Project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. If no nesting birds are observed during the survey,-site preparation and construction activities may begin. However, if active nests or nesting birds (including nesting raptors) are located, then avoidance or minimization measures shall be undertaken in consultation with the City of Perris and California Department of Fish and Wildlife. Measures shall include immediate establishment of an appropriate buffer zone to be established by a qualified biologist, and approved by the City of Perris, based on their best professional judgement and experience. The buffer around the nest shall be delineated and flagged, and no construction activity shall occur within the buffer area until a qualified biologist determines nesting species have fledged and the nest is no longer active or the nest has failed. The Designated Biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer. If the Designated Biologist determines that such project activities may be causing an adverse reaction, the Designated Biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction		

or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest). The onsite qualified biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Within 30 days of completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to the City for mitigation monitoring compliance record keeping.		
MM BIO-2: MM BIO-2: Burrowing Owl Survey. To avoid project-related impacts to burrowing owls potentially occurring on or in the vicinity of the project site, project-specific habitat assessments and focused surveys for burrowing owls shall be conducted before implementing development or infrastructure projects within burrowing owl survey areas. A pre-construction survey for resident burrowing owls will also be conducted by a qualified biologist within 30 days prior to commencement of construction activities (e.g., vegetation clearing, clearing, and grubbing, tree removal, site watering) within those portions of implementing project sites containing suitable burrowing owl habitat and for those properties within an implementing project site where the biologist could not gain access. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The results of the survey should be submitted to the City and California Department of Fish and Wildlife within three days of survey completion. The pre-construction survey shall be conducted in accordance with the current Burrowing Owl Instruction for the Western Riverside MSHCP. If no burrowing owls are observed during the survey, site preparation and construction activities may begin. If burrowing owls are found to be present, then avoidance or minimization measures shall be undertaken in consultation with the City of Perris, California Department of Fish and Wildlife (CDFW) and US Fish and	Prior to commencing ground- or vegetation disturbing activities	Project Proponent

Wildlife Service (USFWS). CDFW shall be sent written notification within 48 hours of detection of burrowing owls. If active burrowing owl burrows are detected, the Project applicant shall not commence activities until no sign is present that the burrows are being used by adult or juvenile owls or following CDFW approval of a Burrowing Owl Plan as described below. If owl presence is difficult to determine, a qualified biologist shall monitor the burrows with motion-activated trail cameras for at least 24 hours to evaluate burrow occupancy. The onsite qualified biologist will verify the nesting effort has finished according to methods identified in the Burrowing Owl Plan. The Burrowing Owl Plan shall be prepared in accordance with guidelines in the CDFW Staff Report on Burrowing Owl (March 2012) and Western Riverside County Multiple Species Habitat Conservation Plan. The qualified biologist and Project Applicant shall coordinate with the City, CDFW, and USFWS to develop a Burrowing Owl Plan to be approved by the City, CDFW, and USFWS prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, relocation, monitoring, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. the City shall implement the Burrowing Owl Plan following CDFW and USFWS review and approval. If burrowing owls are observed within Project Site(s) during Project implementation and construction, the Project applicant shall notify CDFW immediately in writing within 48 hours of detection. A Burrowing Owl Plan shall be submitted to CDFW for review and approval within two weeks of detection and no Project activity shall		

continue within 1000 feet of the burrowing owls until CDFW approves the Burrowing Owl Plan. the City shall be responsible for implementing appropriate avoidance and mitigation measures, including burrow avoidance, passive or active relocation, or other appropriate mitigation measures as identified in the Burrowing Owl Plan. If ground-disturbing activities occur but the site is left undisturbed for more than 30 days, a preconstruction survey for burrowing owl shall be conducted within 3 days prior to initiation of Project activities and reported to CDFW as described above. If burrowing owl are found, the same coordination described above shall be necessary. A final report shall be prepared by the qualified biologist documenting the results of the burrowing owl surveys and detailing avoidance, minimization, and mitigation measures. The final report shall be submitted to the City and CDFW within 30 days of completion of the survey and burrowing monitoring for mitigation monitoring compliance record keeping.		

Response to Comment Letter D – California Department of Fish and Wildlife (CDFW)

NOTE: The following responses reference Appendix B of the Final Draft Initial Study/Mitigated Negative Declaration for the Proposed Project (*General Biology, including Survey for Burrowing Owl (Athene cunicularia), Narrow Endemic Plant Species, Criteria Area Plant Species and other biological resources on the 12.59-acre Redlands Avenue East Industrial Project site (Assessor's Parcel Nos. 300-210-008, 300-210-007, 300-210-006, 300-210-026, 300-210-027, and 300-210-028),* Perris, Riverside County, California, Osborne Biological Consulting, November 28, 2020) throughout as **Appendix B.**

Response to Comment D-1

The comment is acknowledged. The CDFW has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource, pursuant to Fish and Game Code sections 1600 et seq. Section 1602(a) of the Fish and Game Code which requires an entity to notify the CDFW before engaging in activities that would substantially change the bed, channel, or bank of a stream or substantially divert or obstruct the natural flow of a stream.

This Project is not subject to the CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.) because the proposed action would not substantially change the bed, channel, or bank of a stream - or substantially divert, or obstruct the natural flow of a stream. To that end, there are no bed, channel, or bank features / drainages within the Project's proposed disturbance footprint (please review Appendix B [Summary, Section 3 Methods, Section 4 Results, Section 6.0 Conclusions and Section 7 Consistency Analysis]).

Response to Comment D-2

The comment is acknowledged. Appendix B demonstrates that the Proposed Project is consistent with Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis reporting requirements (Section 4 Results, Section 6.0 Conclusions and Section 7 Consistency Analysis). Project Site is not within the boundaries of any MSHCP established Subunit, Cell Group, Criteria Cell, Public/Quasi-Public Land, Linkages/Cores, Conserved Lands, or Regional Conservation Authority (RCA) Easements. No burrowing owl, no riparian or riverine habitats, no vernal pools, and no potential jurisdictional waters/wetlands were detected within the Project's disturbance footprint. Additionally, the Project's proposed disturbance footprint has no potential to support rare, narrow endemic, or MSHCP criteria area plant species.

Furthermore, Appendix B details how this Project is intentionally deigned to meet the goals and objectives of the Reserve System, MSHCP Implementation Structure, etc. As proposed, the Project avoids impacts to:

- Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2 of the MSHCP) – none are in the Project's disturbance footprint (Appendix B - Section 4 Results and Section 6.0 Conclusions); and

- Narrow Endemic Plant Species (Section 6.1.3 of the MSHCP) – none are in the Project's disturbance footprint (Appendix B - Section 4 Results and Section 6.0 Conclusions);

The Project is also implementing the Urban/Wildlands Interface Guidelines laid out in Section 6.1.4 of the MSHCP, the policies set forth in Section 6.3.2, the Best Management Practices and the siting, construction, design, operation and maintenance guidelines as set forth in Section 7.0 and Appendix C of the MSHCP.

Response to Comment D-3

The comment is acknowledged. Appendix B details that the Project's proposed disturbance footprint has "no potential to support rare, narrow endemic, or MSHCP criteria area plant species."

Based on the substantive evidence provided within Appendix B (i.e., Section 3 Methods, Section 4 Results, Section 6.0 Conclusions, and Section 7 Consistency Analysis), no Narrow Endemic Plant Species were encountered during surveys, and the habitats needed to support these species are not present within Project boundaries. Furthermore, Narrow Endemic Plant Species were not observed during the Project Site field investigation and are not expected to occur within the Project Site based on existing site conditions.

Response to Comment D-4

The comment is acknowledged. Appendix B details that the Project's proposed disturbance footprint has "no potential to support rare, narrow endemic, or MSHCP criteria area plant species."

Based on the substantive evidence provided within Appendix B (i.e., Section 3 Methods, Section 4 Results, Section 6.0 Conclusions, and Section 7 Consistency Analysis), no Narrow Endemic Plant Species were encountered during surveys, and the habitats needed to support these species are not present within Project boundaries. Furthermore, Narrow Endemic Plant Species were not observed during the Project Site field investigation and are not expected to occur within the Project Site based on existing site conditions.

Response to Comment D-5 and D-6

The comment is acknowledged, but no additional surveys are proposed at this time. Appendix B details that the Project's proposed disturbance footprint has "no potential to support rare, narrow endemic, or MSHCP criteria area plant species."

Based on the substantive evidence provided within Appendix B (i.e., Section 3 Methods, Section 4 Results, Section 6.0 Conclusions, and Section 7 Consistency Analysis), no Narrow Endemic Plant Species were encountered during the Project Site field investigation, and the habitats needed to support these species are not present within Project boundaries. Furthermore, Narrow Endemic Plant Species are not expected to occur within the Project Site based on existing site conditions.

Please note that the MSHCP states that in general - habitat suitability assessments may be undertaken year-round for rare, narrow endemic, or MSHCP criteria area plant species. Based on the results of a habitat assessment, potential habitat is not present within the Project Site for MSHCP Narrow Endemic Plant Species. According to the MSHCP guidelines, focused surveys are not required for MSHCP Narrow Endemic Plant Species when suitable habitat is not present within a project site, even though the project site is located within a predetermined MSHCP Narrow Endemic Plant Species Survey Area (MSHCP 2004).

Response to Comment D-7

The comment is acknowledged, but the City does not plan to adopt the proposed mitigation measure in the Mitigation Monitoring and Reporting Program. The City of Perris is a permittee to the MSHCP and is responsible for implementation of the MSHCP and its associated Implementation Agreement. Appendix B demonstrates that the Project is consistent with MSHCP Consistency Analysis reporting requirements. Furthermore, the report states that the Project's proposed disturbance footprint has "no potential to support rare, narrow endemic, or MSHCP criteria area plant species." Therefore, no further discussion with deference to MSHCP Narrow Endemic Plant Species is warranted and no mitigation measures are required to avoid impacts to Native Endemic Plan Species.

Response to Comment D-8

In response to this comment, PVCCSP EIR mitigation measure MM Bio 2, which is identified on page 61 of the IS/MND is being replaced with the following Project-specific mitigation measure. The City is implementing this mitigation measure with all applicable projects moving forward.

> **MM BR 2:** The Project proponent shall retain a qualified biologist to conduct a pre-construction survey for resident burrowing owls within 30 days prior to commencement of grading and construction activities on the Project Site. The survey will include the Project Site and all suitable burrowing owl habitat within a 500-foot buffer. The results of the survey will be submitted to the City prior to obtaining a grading permit. In addition, if burrowing owls are observed during the MBTA nesting bird survey, to be conducted within three days prior to ground disturbance or vegetation clearance, the observation shall be reported to the Wildlife Agencies. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity will be conducted in accordance with the current Burrowing Owl Survey Instructions for the Western Riverside MSHCP.
>
> If burrowing owl are detected, the CDFW shall be sent written notification by the City, within three days of detection of burrowing owls. If active nests are identified during the pre-construction survey, the nests shall be avoided and the qualified biologist and Project Applicant shall coordinate with the City of Perris Planning Department, the USFWS, and the CDFW to develop a Burrowing Owl Plan to be approved by the City in consultation with the CDFW and the USFWS prior to commencing Project activities. The Burrowing Owl

Plan shall be prepared in accordance with guidelines in the CDFW Staff Report on Burrowing Owl (March 2012) and MSHCP. The Burrowing Owl Plan shall describe proposed avoidance, minimization, relocation, and monitoring as applicable. The Burrowing Owl Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls and/or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls may also be required in the Burrowing Owl Plan. The Permittee shall implement the Burrowing Owl Plan following CDFW and USFWS review and concurrence. A final letter report shall be prepared by the qualified biologist documenting the results of the Burrowing Owl Plan. The letter shall be submitted to the CDFW prior to the start of Project activities. When a qualified biologist determines that burrowing owls are no longer occupying the Project site per the criteria in the Burrowing Owl Plan, Project activities may begin.

If burrowing owls occupy the Project Site after Project activities have started , then construction activities shall be halted immediately. The Project proponent shall notify the City and the City shall notify the CDFW and the USFWS within 48 hours of detection. A Burrowing Owl Plan, as detailed above, shall be implemented.

Response to Comment D-9 and D-11

The comment is acknowledged. To safeguard there will be no impact to burrowing owl, the Project-specific MMRP will incorporate Project-specific mitigation measure MM BR 2 as identified above.

Response to Comment D-10

The comment is acknowledged. The City of Perris is a permittee to the MSHCP and is responsible for implementation of the MSHCP and its associated Implementation Agreement. The Project shall comply with all applicable codes, laws, ordinances, and regulations to minimize or avoid adverse effects to state and federally-listed animals, or species proposed for listing to the greatest extent practical. All other projects – even if not planned at the present time, would also be required to comply with the same local, state, and federal codes, ordinances, laws, and other required regulations. Therefore, this Project's incremental contribution to cumulative effects on common, special status species or their habitats is not expected to be considerable.

Appendix B demonstrates that the Project is consistent with MSHCP Consistency Analysis reporting requirements. The 2006 Burrowing Owl Survey Instructions for the MSHCP were implemented, and no burrowing owls were observed within Project limits. Furthermore, the burrowing owl is not State or Federally listed, and under the MSHCP, the burrowing owl is considered an adequately conserved covered species.

Response to Comment D-12

In response to this comment, PVCCSP EIR mitigation measure MM Bio 2, which is identified on page 61 of the IS/MND is being replaced with Project-specific mitigation measure MM BR 2 as identified above. The City is implementing this mitigation measure with all applicable projects moving forward.

Response to Comment D-13 and D-14

In response to this comment, PVCCSP EIR mitigation measure MM Bio 1, which is identified on page 61 of the IS/MND is being replaced with the following Project-specific mitigation measure. The City is implementing this mitigation measure with all applicable projects moving forward.

> **MM BR 1:** In order to avoid violation of the MBTA and the California Fish and Game Code, site preparation activities (ground disturbance, construction activities, staging equipment, and/or removal of trees and vegetation) for the Project shall be avoided, to the greatest extent possible, during the nesting season of potentially occurring native and migratory bird species.
>
> If site-preparation activities are proposed during the nesting/breeding season, the Project proponent shall retain a qualified biologist to conduct a pre-activity field survey prior to the issuance of grading permits for the Project to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone.
>
> If active nests are not located within the Project site and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (non-listed), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, the Biologist shall immediately establish a conservative avoidance buffer surrounding the nest based on their best professional judgement and experience. The Biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer. If the Biologist determines that such project activities may be causing an adverse reaction, the Biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest). The on-site qualified biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping.

Response to Comment D-15

The comment is acknowledged. The Project-specific MMRP will incorporate Project-specific mitigation measures MM BR 1 and MM BR 2 as identified above.

Response to Comment D-16

The comment is acknowledged. The Project Site is not within the boundaries of any MSHCP established Subunit, Cell Group, Criteria Cell, Public/Quasi-Public Land, Linkages/Cores, Conserved Lands, or RCA Easements. No burrowing owl, no riparian or riverine habitats, no vernal pools, and no potential jurisdictional waters/wetlands were detected within the Project's disturbance footprint. Additionally, the Project's proposed disturbance footprint has no potential to support rare, narrow endemic, or MSHCP criteria area plant species. Therefore, there were no special status species and no natural communities detected during Project surveys to report to the California Natural Diversity Database.

Response to Comment D-17

The comment is acknowledged. The Applicant/Developer shall pay all required evironmental document filing fees at the time the Notice of Determination for the Proposed Project is filed with the Riverside County Clerk Recorder.

e) **Comment Letter E – Adam Salcido**

From:	Kenneth Phung
To:	A S
Cc:	Unknown; jbourgeois029@gmail.com; Terrance Lucio; PATRICK HANINGER; Chantal Power; Patricia Brenes
Subject:	RE: Redlands East Industrial Project - DPR 20-00021, SPA 22-05053, TPM 22-05028
Date:	Tuesday, November 15, 2022 9:48:22 AM

Hi Adam,

Thanks for letting me know about the additional notification request and email senders.

In the future, please also email the assigned planner identified in the public notice (i.e., contract planner Chantal Powers in this case) and the Planning Manager, Patricia Brenes, who oversees the day-to-day operation of the planning department. They are both cc'd on this email. Thank you.

Kenneth Phung
Director of Development Services
City of Perris
135 North "D" Street
Perris, CA 92570
(951) 943-5003, ext. 257
kphung@cityofperris.org

Please be informed that the Development Services Department is temporarily relocating to the following location:

- Front Counter staff consisting of building, planning, housing, and business license has relocated temporarily to 11 S. D Street effective Tuesday, September 6th. Please mail and submit plans to the new location.

- The balance of the Planning and Housing staff will be relocating temporarily to 1093 Harley Knox Boulevard. Due to limited office areas, staff will be available to meet via zoom until further notice by emailing dsplanning@cityofperris.org or the assigned planner. Special arraignment can be made to meet in person by request.

Below are some helpful City links:

Link for City applications: https://www.cityofperris.org/our-city/city-hall/city-forms/-folder-155
Link for City cannabis applications: https://www.cityofperris.org/our-city/city-hall/city-forms/-folder-147
Link for City fee schedule:
https://www.cityofperris.org/home/showpublisheddocument/2537/637217201195900000
Link for City Development Impact Fees:
https://www.cityofperris.org/home/showpublisheddocument/13652/637775940661530000
Link for City GIS / Zoning Information: https://www.cityofperris.org/departments/development-services/zoning
Link for City Municipal Code: https://library.municode.com/ca/perris/codes/code_of_ordinances
Link for City Specific Plans: https://www.cityofperris.org/departments/development-services/specific-plans
Link for City General Plan, Special Studies, and Policy Documents:

https://www.cityofperris.org/departments/development-services/general-plan
Link for CEQA Documents in Public Review:
https://www.cityofperris.org/departments/development-services/planning/environmental-documents-for-public-review

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From: A S <asalcido.07@gmail.com>
Sent: Tuesday, November 15, 2022 9:42 AM
To: Kenneth Phung <Kphung@cityofperris.org>
Cc: Unknown <jbourg2271@aol.com>; jbourgeois029@gmail.com; Terrance Lucio <t.lucio57@gmail.com>; PATRICK HANINGER <phaninger1@gmail.com>
Subject: Redlands East Industrial Project - DPR 20-00021, SPA 22-05053, TPM 22-05028

Good Morning Mr. Phung,

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

Mailing Address:

P.O. Box 79222

Corona, CA 92877

Please confirm receipt of this email.

Thank You,

Adam Salcido

Response to Comment Letter E – Adam Salcido

The comment is acknowledged. The letter asks for confirmation that the email and mailing addresses listed in the letter will receive updates and notifications regarding the Proposed Project and clarification regarding the hearing schedule for the Proposed Project. Notification will be provided to these addresses and the current schedule for the Planning Commission hearing on the Project is correct. This comment does not question the content or conclusions of the IS/MND. No further response is required.

f) **Comment Letter F – South Coast Air Quality Management District**

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

SENT VIA E-MAIL:
cpower@interwestgrp.com
Chantal Power, AICP, Senior Planner
City of Perris, Planning Division
135 North D Street
Perris, California 92570

December 20, 2022

Mitigated Negative Declaration (MND) for the Proposed Redlands Avenue East Industrial 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 recommended revisions to the cumulative impacts during operation and information about South Coast AQMD permits that the Lead Agency should include in the Final MND.

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

Based on the MND, the Lead Agency proposes developing a 254,511-square-foot non-refrigerated warehouse with 31 dock doors on 11.61 acres site.[1] The Proposed Project also includes approximately 0.98 acres for off-site improvements.[2] The Proposed Project is located east of Redlands Avenue, north of Placentia Avenue, and south of East Rider Street in the City of Perris.[3] The Proposed Project is located within the Perris Valley Commerce Center Specific Plan (PVCCSP) planning area of the City of Perris and is designated as a light industrial zone.[4] Based on the ariel photographs, South Coast AQMD staff found that the nearest sensitive receptor (residence) is adjacent to the south of the Proposed Project. The Proposed Project's construction is anticipated to occur in one phase, beginning in Fall 2022 and last approximately 12 months.[5] The Proposed Project's operations are anticipated to start in Fall 2023.[6]

South Coast AQMD Staff's Comments on the MND

Cumulative Impacts during Operation

As mentioned in the MND, the Proposed Project site is on six vacant parcels that will be consolidated into one parcel within the Perris Valley Commerce Center Specific Plan (PVCCSP) planning area.[7] The PVCCSP was adopted by the City of Perris pursuant to a certified

F-1

[1] MND. Page 9.
[2] *Ibid*.
[3] *Ibid*. Page 5.
[4] *Ibid*. Page 8.
[5] *Ibid*. Page 12.
[6] *Ibid*.
[7] *Ibid*. Page 8.

Environmental Impact Report (EIR) on 1/10/2012.[8] Prior to certification of the PVCCSP, a Draft EIR was released for public review and comment between 7/20/2011 – 9/6/2011.[9] During this public review period, the South Coast AQMD submitted a comment recommending that 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 reducing 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.[10] 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.

F-1

According to the City of Perris webpage under Planning – Environmental Documents for Public Review,[11] other development projects are located from 50 to 150 feet west and northwest of the Proposed Project, based on the ariel photographs. These projects are the Initial Study/Mitigated Negative Declaration (IS/MND) for the Redlands Avenue West Industrial Project[12] (prepared in September 2022) and IS/MND for Chartwell Warehouse at Rider Street and Redlands Avenue Project[13] (prepared in August 2022). 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 perform a qualitative analysis to provide the potential cumulative impacts from air toxics in consideration and listing of all surrounding past, present, and probable future projects. The Lead Agency may also perform a more detailed and robust quantitative analysis of cumulative air toxic and potential health risk implications to be included in the Final MND.

South Coast AQMD Permits and Responsible Agency

If the implementation of the Proposed Project would require the use of new stationary equipment, such as emergency generators, fire pumps, etc., permits from South Coast AQMD are required. The Final MND should include a discussion on stationary equipment requiring South Coast AQMD permits and identify South Coast AQMD as a Responsible Agency for the Proposed Project. Any assumptions used for the stationary sources in the Final MND will also be used as the basis for the permit conditions and limits for the Proposed Project. Please contact South Coast

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[8] ORDINANCE NUMBER 1284.
Accessed at: https://www.cityofperris.org/home/showpublisheddocument/2923/637250482796800000
[9] Perris Valley Commerce Center Specific Plan Final EIR. 9.0 Introduction, Public Review Summary. Page 9.0-1
Accessed at: https://www.cityofperris.org/home/showpublisheddocument/2645/637455522835370000
[10] Perris Valley Commerce Center Specific Plan Amendment No. 12, approved January 11, 2022, available at https://www.cityofperris.org/home/showpublisheddocument/2647/637799977032200000
[11] City of Perris. Planning – Environmental Documents. Access at: https://www.cityofperris.org/departments/development-services/planning/environmental-documents-for-public-review.
[12] Redlands Avenue West Industrial Project. Access at: https://www.cityofperris.org/departments/development-services/planning/environmental-documents-for-public-review/-folder-338.
[13] Chartwell Warehouse at Rider Street and Redlands Avenue Project. Access at: https://www.cityofperris.org/departments/development-services/planning/environmental-documents-for-public-review/-folder-322.

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. F-2

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.

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 Danica Nguyen, Air Quality Specialist, at dnguyen1@aqmd.gov should you have any questions.

Sincerely,

Sam Wang

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

SW:DN
RVC221018-03
Control Number

Response to Comment Letter F – South Coast Air Quality Management District (SCAQMD)

Response to Comment F-1

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 implementing development and infrastructure projects, must be examined to determine whether an additional environmental document is required.[3] This evaluation takes place as part of the City's normal development review process.

Because at the programmatic level, there were no specific implementing development projects proposed or truck trip data available, a meaningful analysis of health risk impacts could not be performed at this stage of master planning. Therefore, the PVCCSP EIR concluded that any such analysis would be, at best, speculative (PVCCSP DEIR, p. 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 a health risk assessment to identify project-specific impacts resulting from the use of diesel trucks from potential 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. Therefore, a community wide HRA was not required for the PVCCSP. Furthermore, the City 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 nearly every individual light industrial project proposed within the PVCCSP planning area.

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% of the South Coast Air Basin 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 South Coast Air Basin 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

[3] State CEQA Guidelines Section 15168(c).

per the State CEQA Guidelines, the Project 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 Comment F-2

This comment is acknowledged. A diesel fire pump will be required as part of the fire safety infrastructure for the Proposed Project, which is subject to compliance with SCAQMD Rule 402, and an AQMD permit shall be required. Please see Section 3, Revisions to the IS/MND, for specific details on the text updates which have been made to include language related to the SCAQMD permitting process.

3. REVISIONS TO THE IS/MND

In response to comments, minor clarifying revisions were made to the Draft IS/MND and Appendix A.

Revisions to Appendix A:

- Page I to iv, Table of Contents

  Page numbering has been updated to reflect changes created by updates to Cumulative Air Quality Impacts section.

- Page 40, Cumulative Air Quality Impacts

  In response to Comment F-1, the "Project Specific Impacts" subsection was expanded to incoprorate additional reference to SCAQMD criteria related TACs and TAC thresholds. No additional analysis or modeling was required, and none of the findings have changed related to cumulative air quality impactsof the Proposed Project.

- Minor typos and scrivener's errors that do not affect the meaning of the text have been updated throughout the document.

Revisions to the Draft IS/MND:
The following revisions corresponding to those made in Appendices A were made:

- Page iv, Appendices

  Reference for Appendix A has been updated to reflect the date of the revised report:

  Appendix A – *Redlands Avenue West Industrial Project Air Quality, Global Climate Change, HRA and Energy Impact Analysis*, Ganddini Group, February 22, 2022, revised January 27, 2023.

- Page 50

  In response to Comment F-2, the following text updates have been made to include language related to SCAQMD permitting process:

  "Potential sources that may emit odors during the on-going operations of the Proposed Project would include odor emissions from diesel truck emissions, ~~and~~ trash storage areas, and a proposed diesel fire pump. Due to the distance of the nearest receptors from the Project Site and through compliance with the SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the Proposed

Project. Furthermore, the Applicant shall be required to obtain a permit for operation of the diesel fire pump prior to commencement of operations at the Project Site. Therefore, potential impacts associated with other emissions, such as those leading to odors adversely affecting a substantial number of people, would be less than significant, and no mitigation would be required."

- Page 58

  In response to Comment D-12, the following text updates have been made to include language related to the new Project-specific mitigation measure MM BR 1:

  "The Proposed Project is required to comply with PVCCSP EIR mitigation measure MM Bio 1 to ensure that Project-specific impacts to nesting birds, including BUOW would be less than significant. PVCCSP EIR mitigation measure MM Bio 1 is replaced with Project-specific mitigation measure MM BR 1 based on input from the CDFW. No other biological issues were identified with construction or operation of the Proposed Project."

- Pages 61 and 62

  In response to Comment D-8 and Comment D-12, the following text updates have been made to include language related to the new Project-specific mitigation measures MM BR 1 and MM BR 2:

  "construction. The Project applicant is required to implement measures from Appendix C and Section 7.5.3. Implementation of Project-specific mitigation measures MM BR 1 and MM BR 2, which replace PVCCSP EIR mitigation measures MM Bio 1 and MM Bio 2 based on input from the CDFW will address potential construction impacts. Thus, with mitigation the proposed Project is compliant with Appendix C and Section 7.5.3 of the MSHCP."

  "Implementation of Project-specific ~~PVCCSP EIR~~ mitigation measures **MM ~~Bio~~ BR 1** and **MM ~~Bio~~ BR 2** would reduce potential impacts of the Proposed Project associated with Biological Resources to less than significant levels."

  "MM BR ~~Bio~~ 1:

  In order to avoid violation of the MBTA and the California Fish and Game Code, site preparation activities (ground disturbance, construction activities, staging equipment, and/or removal of trees and vegetation) for the Project shall be avoided, to the greatest extent possible, during the nesting season of potentially occurring native and migratory bird species. ~~In order to avoid violation of the MBTA and the California Fish and Game Code, site preparation activities (removal of trees and vegetation) for all PVCC implementing development and infrastructure projects shall be avoided, to the greatest~~

~~extent possible, during the nesting season (generally February 1 to August 31) of potentially occurring native and migratory bird species.~~

If site-preparation activities are proposed during the nesting/breeding season, the Project proponent shall retain a qualified biologist to conduct a pre-activity field survey prior to the issuance of grading permits for the Project to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone.

If active nests are not located within the Project site and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (non-listed), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, the Biologist shall immediately establish a conservative avoidance buffer surrounding the nest based on their best professional judgement and experience. The Biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer. If the Biologist determines that such project activities may be causing an adverse reaction, the Biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest). The on-site qualified biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping. ~~If site-preparation activities for an implementing project are proposed during the nesting/breeding season (February 1 to August 31), a pre-activity field survey shall be conducted by a qualified biologist prior to the issuance of grading permits for such project, to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone. If active nests are not located within the implementing Project Site and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (non-listed), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, no grading or heavy equipment activity shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected (under MBTA or California Fish and Game Code) bird nests (non-listed), or within 100 feet of sensitive or protected songbird nests until the nest is no longer active."~~

"MM BR ~~Bio~~ 2:

The Project proponent shall retain a qualified biologist to conduct a pre-construction survey for resident burrowing owls within 30 days prior to commencement of grading and construction activities on the Project Site. The survey will include the Project Site and all suitable burrowing owl habitat within a 500-foot buffer. The results of the survey will be submitted to the City prior to obtaining a grading permit. In addition, if burrowing owls are observed during the MBTA nesting bird survey, to be conducted within three days prior to ground disturbance or vegetation clearance, the observation shall be reported to the Wildlife Agencies. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity will be conducted in accordance with the current Burrowing Owl Survey Instructions for the Western Riverside MSHCP. ~~Project-specific habitat assessments and focused surveys for burrowing owls will be conducted for implementing development or infrastructure projects within burrowing owl survey areas. A pre-construction survey for resident burrowing owls will also be conducted by a qualified biologist within 30 days prior to commencement of grading and construction activities within those portions of implementing project sites containing suitable burrowing owl habitat and for those properties within an implementing project site where the biologist could not gain access. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity will be conducted in accordance with the current Burrowing Owl Instruction for the Western Riverside MSHCP.~~

If burrowing owl are detected, the CDFW shall be sent written notification by the City, within three days of detection of burrowing owls. If active nests are identified during the pre-construction survey, the nests shall be avoided and the qualified biologist and Project Applicant shall coordinate with the City of Perris Planning Department, the USFWS, and the CDFW to develop a Burrowing Owl Plan to be approved by the City in consultation with the CDFW and the USFWS prior to commencing Project activities. The Burrowing Owl Plan shall be prepared in accordance with guidelines in the CDFW Staff Report on Burrowing Owl (March 2012) and MSHCP. The Burrowing Owl Plan shall describe proposed avoidance, minimization, relocation, and monitoring as applicable. The Burrowing Owl Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls and/or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls may also be required in the Burrowing Owl Plan. The Permittee shall implement the Burrowing Owl Plan following CDFW and USFWS review and concurrence. A final letter report shall be prepared by the qualified biologist documenting the results of the Burrowing Owl Plan. The letter shall be submitted to the CDFW prior to the start of Project activities. When a qualified biologist determines that burrowing owls are no

longer occupying the Project site per the criteria in the Burrowing Owl Plan, Project activities may begin. ~~If active nests are identified on an implementing project site during the pre-construction survey, the nests shall be avoided, or the owls actively or passively relocated. To adequately avoid active nests, no grading or heavy equipment activity shall take place within at least 250 feet of an active nest during the breeding season (February 1 through August 31), and 160 feet during the non-breeding season.~~

If burrowing owls occupy the Project Site after Project activities have started, then construction activities shall be halted immediately. The Project proponent shall notify the City and the City shall notify the CDFW and the USFWS within 48 hours of detection. A Burrowing Owl Plan, as detailed above, shall be implemented. ~~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 Division and the CDFG. 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 1-way doors in burrow entrances. These 1-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 implementing project area shall be monitored daily for 1 week to confirm owl use of burrows before excavating burrows in the impact area. Burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. The CDFG shall be consulted prior to any active relocation to determine acceptable receiving sites available where this species has a greater chance of successful long-term relocation. If avoidance is infeasible, then a DBESP will be required, including associated relocation of burrowing owls. If conservation is not required, then owl relocation will still be required following accepted protocols. Take of active nests will be avoided, so it is strongly recommended that any relocation occur outside of the nesting season.~~"

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In response to Comment D-8 and Comment D-12, the following text updates have been made to include language related to the new Project-specific mitigation measures MM BR 1 and MM BR 2:

"**Less Than Significant With Mitigation Incorporated.** The Project Site is vacant, contains no drainages, does not contain suitable habitat for any sensitive species, and would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, other approved local, regional, or state habitat conservation plan. ~~However, the Project Site is within the PVCCSP planning area and the PVCCSP EIR requires that projects comply with PVCCSP EIR~~ Implementation of Project-specific mitigation

measure~~s~~ **MM ~~Bio~~ BR 1** ~~to~~ would reduce potential impacts to nesting birds and Project-specific mitigation measure **MM ~~Bio~~ BR 2** ~~to~~ would reduce potential impacts to burrowing owl to less than significant levels."

"With the implementation of ~~PVCCSP EIR~~ Project-specific mitigation measures **MM ~~Bio~~ BR 1**~~, and~~ **MM ~~Bio~~ BR 2,** and ~~project mitigation measures~~ **MM CR-1, MM CR-2,** and **MM GEO-1,** the Proposed Project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or an endangered plant or animal or eliminate important examples of the major periods of California history or prehistory."

No further revisions to the Draft IS/MND were required based upon: (1) additional or revised information required to prepare a response to a specific comment; (2) applicable updated information that was not available at the time of IS/MND publication; and/or (3) typographical errors.

4. Attachment A – Letter B.1 and B.2 - Blum Collins & Ho, LLP on behalf of Golden State Environmental Justice Alliance

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

December 14, 2022

Kenneth Phung
Director of Development Services
City of Perris
Kphung@cityofperris.org

Chantal Power
Planner
City of Perris
cpower@interwestgrp.com

Re: Redlands West Industrial, SCH NO. 2022110113, and Redlands East Industrial, SCH NO. 2022100322

Dear Mr. Phung and Ms. Power:

On behalf of the Golden State Environmental Justice Alliance ("GSEJA"), I am writing to you regarding the Redlands West Industrial, SCH NO. 2022110113, and Redlands East Industrial, SCH NO. 2022100322 (collectively, the "Projects").

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

Sincerely,

Joe Bourgeois
Executive Director

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

November 11, 2022

Kenneth Phung

City of Perris

Planning Division
135 North "D" Street
Perris, California 92570

VIA EMAIL TO:

kphung@cityofperris.org

SUBJECT: COMMENTS ON REDLANDS EAST INDUSTRIAL PROJECT - DPR 20-00021, SPA 22-05053, TPM 22-05028 MND (SCH NO. 2022100322)

Dear Mr. Phung:

Thank you for the opportunity to comment on the Mitigated Negative Declaration (MND) for the proposed Redlands East Industrial 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 Summary

The project proposes the construction and operation of one 254,511-square-foot (sf) non-refrigerated warehouse comprised of 8,000 sf of office space and 246,511 sf of warehouse space on a 12.59 acre site. The building includes two grade level doors, 31 truck/trailer dock doors, 47 truck/trailer parking spaces, and 106 passenger car parking spaces.

The warehouse is designed to house one tenant that has not been identified at this time. The Proposed Project includes the vacation of Walnut Street and merging of six parcels via a tentative parcel map for a total developed site area of 11.61 acres and another approximately 0.98 acre for street improvements and dedication along Redlands Avenue.

The project is located within the Perris Valley Commercial Center Specific Plan (PVCCSP) area. An amendment to the PVCCSP is required to remove Walnut Street from the Circulation Plan in the Perris Valley Commerce Center Specific Plan.

3.0 Project Description and Project Piecemealing

The MND states that "The PVCCSP EIR is a program EIR and projectspecific evaluations in later-tier environmental documents for individual development projects within the Specific Plan area were anticipated," and "The environmental analysis for the Proposed Project presented in this Initial Study is based on, or "tiered" from, the analysis presented in the PVCCSP EIR, when applicable, and the PVCCSP EIR is incorporated by reference."

CEQA Guidelines Section 15152 (f) states that "a later EIR shall be required when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR." The environmental analysis within the MND severely misrepresents the project and under-represents the project's significant impacts. This on its face warrants the production of an EIR for the proposed project in compliance with CEQA Guidelines Section 15152 (f). The production of an EIR is also necessary as significant new information has been produced since the 2009 PVCC SP EIR, including the VMT analysis requirements enacted in 2020 by SB 743. The required Specific Plan Amendment also presents new information that was not analyzed in the 2009 PVCC SP EIR.

Additionally, the MND does not accurately or adequately describe the project, meaning "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" (CEQA § 15378). The proposed project is a piecemealed portion of a larger overall project in the immediate vicinity, including at least one other known project referred to as Redlands West Industrial Project (334,040 sf industrial building). The MND misleads the public and decision makers by circumventing adequate and accurate environmental analysis for the whole of the action - construction and operation of all Lake Creek Industrial Buildings as a whole. A project EIR must be prepared that accurately represents the whole of the action without piecemealing the project into separate, smaller development projects to present unduly low environmental impacts. CEQA Section 15161 describes project EIRs as examining "the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation." The specific development project is the construction and operation of both Redlands East and Redlands West Industrial Projects. Additionally, CEQA Section 15146 requires that the degree of specificity in an EIR "will

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

5.3 Air Quality, 5.6 Energy, and 5.8 Greenhouse Gas Emissions

Attached is a comprehensive air quality analysis prepared by SWAPE.

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 (6065042618) experiences high rates of pollution burden. The surrounding community, including residences to the south, west, and east, and May Ranch Elementary School to the northeast, bears the impact of multiple sources of pollution. For example, the project census tract ranks in the 97th percentile for ozone burden and the 53rd percentile for PM 2.5 burden; both of these environmental factors are typically attributed to heavy truck activity in the area. Ozone can cause lung irritation, inflammation, and worsening of existing chronic health conditions, even at low levels of exposure[2].

Further, the census tract is a diverse community including 85% Hispanic and 6% African-American residents, which are especially vulnerable to the impacts of pollution. The community has a high rate of low educational attainment, meaning 92% 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 90% 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[3]. Poor communities are often located in areas with high levels of pollution[4]. Poverty can cause stress that weakens the immune system and causes people to become ill from pollution[5]. Living in poverty is also an indication that residents may lack health insurance

[1] CalEnviroScreen 4.0 https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[2] OEHHA Ozone https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone
[3] OEHHA Poverty https://oehha.ca.gov/calenviroscreen/indicator/poverty
[4] Ibid.
[5] Ibid.

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 61% of the census tract speaks little to no English and faces further inequities as a result.

Additionally, the census tracts surrounding the project site (6065042620 and 6065042706) are identified as SB 535 Disadvantaged Communities[6], 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.

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[7]. 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.

5.9 Hazards and Hazardous Materials

The proposed Project site is within March Air Reserve Base (MARB)/Inland Port Airport Compatibility Zone B2. The MND concludes that the project is not required to go through Airport Land Use Commission (ALUC) review because "the City created an Airport Overlay Zone component to the City's land use planning to accommodate development within the City consistent with the land use designations of the MARB/IPA LUCP." However, Implementation Measures of the General Plan require MARB review and comment prior to making any land use decisions:

1. Land Use Element Implementation Measure V.C.I. Circulate all development plans within the Clear Zone and Accident Potential Zones of the March Air Reserve Base/Inland Port Plan to Department of the Air Force, MARCH Air Reserve Base to provide recommendations and

[6] OEHHA SB 535 Census Tracts https://oehha.ca.gov/calenviroscreen/sb535
[7] 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

guidance on land use compatibility in accordance with the policies of the most recent Air Force Instruction (AFI) 32-7063.

2. 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 stating that any airport compatibility review beyond that of the City is not required. 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 that includes a review and comment letter regarding the proposed development plans from MARB. This is especially vital as the project requires a legislative action (Specific Plan Amendment) to proceed.

Notably, the Notice of Intent to adopt the MND states that the "California Public Utilities Code (CPUC Section 21676) requires that all jurisdictions (County or City) refer all Specific Plan Amendments within an Airport Land Use Compatibility Plan (ALUCP) for ALUC review. The Project site is within March Air Reserve Base Airport Influence Area, outside of the Airport's Accident Potential Zones (APZ) and within the Airport Compatibility Zone B2 and does not conflict with the MARB/IP Land Use Compatibility Plan. The Project is scheduled for ALUC review on November 10, 2022." This conflicts with the analysis within the MND. Review of the Riverside ALUC Agendas indicates that they did not hold a meeting on November 10, 2022. Their meeting was held on November 8, 2022[8] and the proposed project was not on the agenda.

An EIR must be prepared that includes the review and comment letter regarding the proposed development plans from the MARB ALUC. Also, delaying the ALUC review until after the MND has been published for public comment is implementation of the project prior to CEQA review and deferred mitigation in violation of CEQA.

5.11 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

[8] November 8, 2022 RC ALUC Agenda https://www.rcaluc.org/Portals/13/ALUCAGDA%2011-10-22.pdf?ver=2022-10-26-132546-633

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:

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. Land Use Element Implementation Measure V.C.I. Circulate all development plans within the Clear Zone and Accident Potential Zones of the March Air Reserve Base/Inland Port Plan to Department of the Air Force, MARCH Air Reserve Base to provide recommendations and guidance on land use compatibility in accordance with the policies of the most recent Air Force Instruction (AFI) 32-7063.

6. 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.

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. For example, the MND concludes that the project will not have significant impacts to VMT even though Table 4.2 of the Air Quality Appendix CalEEMod output sheets concludes that

the project will generate 3,584,027 VMT annually (9,819 VMT per day). An EIR must be prepared to include revised, accurate modeling and a consistency analysis with all goals of the RTP/SCS.

5.14 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. The MND states that "it is *anticipated* that the *majority* of new jobs would be filled by workers who already reside in the City and that the Proposed Project would not attract a *significant* number of new residents to the City" 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. Relying on the entire labor force within an undefined distance, potentially the greater SCAG region, to fill the project's construction and operational jobs will increase VMT and emissions during all phases of construction and operations and an EIR must be prepared to account for longer worker trip distances.

The MND does not provide any quantified analysis of the construction or operational employees generated by the proposed project. There is also no 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:

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

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

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

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

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

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

13. 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 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 any calculation of the jobs generated by the project or evidence that the region's workforce population is qualified for or interested in work in the industrial sector. SCAG's Employment Density Study[9] 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: 246,511 sf / 581 sf = 425 employees
Office: 8,000 sf / 481 sf = 17 employees

Total: 442 employees

Utilizing SCAG's Employment Density Study ratios, the proposed project will generate 442 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 demographic and geographic information on the location of qualified workers to fill these positions in order to provide an accurate environmental analysis.

[9] SCAG Employment Density Study
http://www.mwcog.org/file.aspx?A=QTTlTR24POOOUIw5mPNzK8F4d8djdJe4LF9Exj6lXOU%3D

SCAG's Connect SoCal Demographics and Growth Forecast[10] notes that the City will add 10,300 jobs between 2016 - 2045. Utilizing the SCAG Employment Density Study calculation of 442 employees, the project represents 4.3% 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), and Ramona-Indian Warehouse (440 employees) combined with the proposed project will cumulatively generate 5,240 employees, which is 50.8% of the City's employment growth forecast over 29 years. Including the piecemealed portion of the proposed project known as Redlands West (579 employees) in the cumulative total (5,819 employees) is 56.5% of the City's employment growth forecast over 29 years.

5.17 Transportation

The VMT analysis concludes the project will generate less than significant VMT impacts because it is located in a Low VMT TAZ. The VMT analysis does not adequately or accurately represent the VMT impacts of the proposed project and an EIR must be prepared to reflect this. The operational nature of industrial/warehouse uses involves high rates of truck/trailer VMT due to traveling from large regional distribution centers to smaller industrial parks and then to their final delivery destinations. Table 4.2 Trip Summary of the Air Quality Appendix CalEEMod output sheets indicates that the project will generate approximately 3,584,027 annual VMT (3,584,027 / 365 days = 9,819 daily total VMT). This is exponentially higher than the VMTs reported in Appendix I. Notably, the VMT Scoping Form that provides the VMT analysis states that the project TAZ VMT is 9.95 VMT per employee, which is lower than the Citywide employment-based VMT of 11.62 VMT per employee. The project's 9,819 daily total VMT divided by its 461 average daily vehicle trips is approximately 21.29 VMT per trip. This is 113% greater than the TAZ VMT per employee and 83% greater than the Citywide employment-based VMT per employee. An EIR must be prepared that includes this information for analysis and a finding of significance due to exceeding the local VMT thresholds.

[10] 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

Additionally, it must also be noted that the VMT Scoping Form does not include any of the WRCOG VMT Screening input parameters and output maps. The MND states that "based on the WRCOG web app screening map, the Traffic Impact Analysis (Appendix I) identified that the Project Site is in an area of Perris mapped with low VMT." However, those maps and the input parameters are not included for public review, which does not comply with CEQA's requirements for adequate informational documents and meaningful disclosure (CEQA § 15121 and 21003(b)). Incorporation by reference (CEQA § 15150 (f)) is not appropriate as the WRCOG web app screening map and associated input parameters contribute directly to analysis of the problem at hand. An EIR must be prepared to include these items for public review in order to provide an adequate and accurate environmental analysis.

Appendix I sources the Governor's Office of Planning and Research (OPR) 2018 CEQA Guidelines Update and Technical Advisory[11] as contributing to the methodology for VMT analysis. The VMT analysis does not include any truck/trailer trips for analysis. The MND does not provide a statutory source of exemption for medium/heavy trucks. The OPR's 2018 Technical Advisory which states that "here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks." However, the purpose of the OPR Technical Advisory document is purely advisory, stating in its introduction:

"The purpose of this document is to provide advice and recommendations, which agencies and other entities may use at their discretion. This document does not alter lead agency discretion in preparing environmental documents subject to CEQA. This document should not be construed as legal advice."

The OPR document is not a legal interpretation, court decision, or amendment to the CEQA statute that clarifies the definition of automobile. The term "automobile" is not defined in the CEQA statute and application of the OPR interpretation is speculative and does not provide an analysis of the "worst-case scenario" for environmental impacts. Widespread public understanding and perception indicates that trucks, including medium/heavy-duty truck/trailer trips associated with the industrial nature of warehouse operations, are automobiles. An EIR must be prepared to include all truck/trailer activity for quantified VMT analysis. The operational nature of industrial/warehouse uses involves high rates of truck/trailer 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 delivery vans across the region as part of the daily operations as a warehouse facility, which will drastically increase project-generated VMT. The project's truck/trailer and delivery van activity

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

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 to adequately and accurately analyze the potentially significant project transportation impacts.

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 heavy truck maneuvering at every point on the site, including truck/trailer parking spaces. 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 prepared for the proposed project with this analysis in order to provide an adequate and accurate environmental analysis.

The MND also does not discuss the potentially significant cumulative impacts of the proposed PVCCSP Specific Plan Amendment to remove Walnut Street from the PVCCSP Circulation Plan. This is especially vital given the 12 amendments that have been approved in the PVCCSP, including 2 amendments to amend the Circulation Plan that differs from the circulation originally planned for and analyzed 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 and to update all graphics to reflect the street vacation of Nance and Markham Streets between Redlands Avenue and the Perris Valley Storm Channel. This amendment also reflects the street vacation and general plan amendment (GPA 12-02-0001) to the circulation element for the removal of Harley Knox Blvd. from Redland Avenue to Perris Valley Storm Channel.

2. Amendment No. 12 (approved: January 11, 2022) to modify Circulation Plan Map pg.3.0-1, Truck Route Plan map pg. 3.0-7, and last sentence of pg 3.0-6 to update the PVCC SP truck routes.

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 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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November 11, 2022

Gary Ho
Blum Collins LLP
707 Wilshire Blvd, Ste. 4880
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Subject: Comments on the Redlands Avenue East Industrial Project (SCH No. 2022100322)

Dear Mr. Ho,

We have reviewed the September 2022 Initial Study and Mitigated Negative Declaration ("IS/MND") for the Redlands Avenue East Industrial Project ("Project") located in the City of Perris ("City"). The Project proposes to construct a 254,511-square-foot ("SF") warehouse, including 8,000-SF of office space, and 106 parking spaces on the 12.59-acre site.

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

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The IS/MND's air quality analysis relies on emissions calculated with the California Emissions Estimator Model ("CalEEMod") Version 2020.4.0 (p. 75).[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental

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

Quality Act ("CEQA") requires that such changes be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Redlands Avenue East Industrial Project Air Quality, Global Climate Change, Health Risk Assessment and Energy Impact Analysis ("AQ, GHG, HRA, & Energy Analysis") as Appendix A to the IS/MND, we found that several model inputs were not consistent with information disclosed in the IS/MND. As a result, the Project's construction and operational emissions are underestimated. An EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Failure to Account for All Potential Cold Storage Requirements

Review of the Project's CalEEMod output files demonstrates that the "19371 Redlands Avenue East Industrial Project" model includes the entirety of the warehouse space as unrefrigerated (see excerpt below) (Appendix A, pp. 121, 146; Appendix D, pp. 384).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	254.51	1000sqft	5.75	254,511.00	0
Other Asphalt Surfaces	3.97	Acre	3.97	172,933.20	0
Other Non-Asphalt Surfaces	61.75	1000sqft	1.42	61,752.00	0
Parking Lot	161.00	Space	1.45	64,400.00	0

As demonstrated above, the model fails to include the proposed refrigerated warehouse space. However, this is incorrect, as the IS/MND indicates that the future tenants of the proposed warehouses are currently unknown. Specifically, the IS/MND states:

> "The Proposed Project is designed to house one tenant, which has not been designated at this time" (p. 1).

Thus, as future site tenants are unknown, the proposed warehouse may require cold storage for operation. Therefore, as refrigerated warehouse space is the most energy-intensive, the Project should have included all of the proposed warehouse space as cold storage in order to conduct the most conservative analysis.

This presents an issue, as refrigerated warehouses release more criteria air pollutant and GHG emissions when compared to unrefrigerated land uses for three reasons. First, warehouses equipped with cold storage, such as refrigerators and freezers, are known to consume more energy when compared to warehouses without cold storage.[2] Second, warehouses equipped with cold storage typically require refrigerated trucks, which are known to idle for much longer when compared to unrefrigerated hauling

[2] "Warehouses." Business Energy Advisor, *available at*: https://ouc.bizenergyadvisor.com/article/warehouses.

trucks.[3] Lastly, according to a July 2014 *Warehouse Truck Trip Study Data Results and Usage* presentation prepared by the South Coast Air Quality Management District ("SCAQMD"), hauling trucks that require refrigeration result in greater truck trip rates when compared to non-refrigerated hauling trucks.[4] Furthermore, as discussed by SCAQMD, "CEQA requires the use of 'conservative analysis' to afford 'fullest possible protection of the environment.'"[5] As such, the model should have included the warehouse land use as refrigerated in order account for the additional emissions that refrigeration requirements may generate.

By failing to account for potential cold storage requirements, the model may underestimate the Project's operational emissions and should not be relied upon to determine Project significance. An EIR should be prepared to account for the possibility of refrigerated warehouse needs by all future tenants.

Unsubstantiated Reductions to Architectural Coating Emission Factors

Review of the CalEEMod output files demonstrates that the "19371 Redlands Avenue East Industrial Project" model includes a couple reductions to the default architectural coating emission factors (see excerpt below) (Appendix A, pp. 122, 147; Appendix D, pp. 385).

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00

As demonstrated in the excerpt above, the nonresidential interior and exterior architectural coating emission factors are reduced from the default value of 100- to 50-grams per liter ("g/L"). As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[6] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

> "SCAQMD Rule 1113 limits architectural coatings for buildings to 50 g/L VOC." (Appendix A, pp. 121, 146; Appendix D, pp. 384).

Furthermore, the IS/MND states:

> "The construction contractor shall be required to utilize "Super-Compliant" VOC paints, which are defined in SCAQMD's Rule 1113." (p. 53).

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[3] "Estimation of Fuel Use by Idling Commercial Trucks." Transportation Research Record Journal of the Transportation Research Board, January 2006, p. 8, *available at:* https://www.researchgate.net/publication/245561735_Estimation_of_Fuel_Use_by_Idling_Commercial_Trucks.

[4] "Warehouse Truck Trip Study Data Results and Usage" Presentation. SCAQMD Mobile Source Committee, July 2014, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/finaltrucktripstudymsc072514.pdf?sfvrsn=2, p. 7, 9.

[5] "Warehouse Truck Trip Study Data Results and Usage" Presentation. SCAQMD Inland Empire Logistics Council, June 2014, *available at*: http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc_6-19-2014.pdf?sfvrsn=2.

[6] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.

However, these changes remain unsupported for two reasons.

First, the IS/MND fails to explicitly require *super compliant coatings* for architectural coatings used during Project construction in a formal mitigation measure. This is incorrect, as AEP guidance states:

> "While not "mitigation", a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact."[7]

As demonstrated above, design features that are not formally included as mitigation measures in a Mitigation Monitoring and Reporting Program ("MMRP") may be eliminated from the Project's design altogether. Thus, as the use of super compliant coatings is not formally included as a mitigation measure, we cannot guarantee that it would be implemented, monitored, and enforced on the Project site. As such, the reductions remain unsubstantiated.

Second, we cannot verify the accuracy of the revised architectural coating emission factors based on SCAQMD Rule 1113 alone. The SCAQMD Rule 1113 Table of Standards provides the required VOC limits (grams of VOC per liter of coating) for 57 different coating categories.[8] The VOC limits for each coating varies from a minimum value of 50 g/L to a maximum value of 730 g/L. As such, we cannot verify that SCAQMD Rule 1113 substantiates reductions to the default coating values without more information regarding what category of coating will be used. As the IS/MND and associated documents fail to explicitly require the use of specific types of coatings, we are unable to verify the revised emission factors included in the model.

These unsubstantiated reductions present an issue, as CalEEMod uses the architectural coating emission factors to calculate the Project's reactive organic gas/volatile organic compound ("ROG"/"VOC") emissions.[9] Thus, by including unsubstantiated reductions to the default architectural coating emission factors, the model may underestimate the Project's construction-related ROG/VOC emissions and should not be relied upon to determine Project significance.

Failure to Include Material Export

Regarding the amount of material export required for Project construction, the IS/MND states:

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[7] "CEQA Portal Topic Paper Mitigation Measures." Association of Environmental Professionals (AEP), February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.
[8] "SCAQMD Rule 1113 Advisory Notice." SCAQMD, February 2016, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=24, p. 14, Table of Standards 1.
[9] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 35, 40.

> "[D]ue to the presence of unconsolidated fill identified during geotechnical exploration, remedial grading consisting of approximately 30,404 cubic yards exported offsite and 26,435 cubic yards of new import is anticipated" (p. 12).

As such, the model should have included 30,404 cubic yards ("cy") of material export. However, review of the CalEEMod output files demonstrates that the "19371 Redlands Avenue East Industrial Project" model fails to include any amount of material export. As such, the material export required for Project construction is underestimated and the model is inconsistent with the IS/MND.

This underestimation presents an issue, as the inclusion of material export within the model is used to calculate emissions produced from material movement, including truck loading and unloading, and additional hauling truck trips.[10] Thus, by failing to include the amount of material export required for Project construction, the model underestimates the Project's construction-related emissions and should not be relied upon to determine Project significance.

Updated Analysis Indicates a Potentially Significant Air Quality Impact

In an effort to more accurately estimate the Project's construction-related and operational emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the IS/MND. In our updated model, we included the correct land uses; omitted the unsubstantiated changes to the architectural coating emission factors; and included the correct amount of material export.[11]

Our updated analysis estimates that the Project's construction-related ROG 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. 44, Table 3) (see table below).[12]

SWAPE Criteria Air Pollutant Emissions	
Construction	**ROG** (lbs/day)
IS/MND	47.6
SWAPE	86.9
% Increase	83%
SCAQMD Threshold	**75**
Exceeds?	***Yes***

As demonstrated in the table above, the Project's construction-related ROG emissions, as estimated by SWAPE, increase by approximately 83% 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

[10] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 2, 34.
[11] See Attachment A for updated air modeling.
[12] "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.

prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the environment.

Diesel Particulate Matter Emissions Inadequately Evaluated

The IS/MND estimates that the maximum incremental cancer risk posed to nearby, existing residential sensitive receptors as a result of heavy-duty diesel trucks entering and leaving the site during Project operation would be 1.74 in one million, which would not exceed the SCAQMD significance threshold of 10 in one million (p. 50). Furthermore, Regarding the health risk impacts associated with the Project construction, the IS/MND states:

> "Given the relatively limited number of heavy-duty construction equipment and construction schedule, the Proposed Project would not result in a long-term substantial source of toxic air containment emissions and corresponding individual cancer risk. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the Proposed Project, and no mitigation would be required" (p. 49).

As demonstrated above, the IS/MND concludes that the Project would result in a less-than-significant construction-related health risk impact because the limited number of heavy-duty equipment and short-term construction schedule would not result in substantial diesel particulate matter ("DPM") emissions. However, the IS/MND fails to conduct a construction health risk analysis ("HRA") or discuss the toxic air contaminant ("TAC") emissions associated with Project construction whatsoever. Thus, the IS/MND's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for three reasons.

First, by failing to prepare a quantified construction HRA, the Project is inconsistent with CEQA's requirement to make "a reasonable effort to substantively connect a project's air quality impacts to likely health consequences."[13] This poses a problem, as construction of the Project would produce DPM emissions through the exhaust stacks of construction equipment over a duration of approximately 12 months (p. 23). However, the IS/MND fails to evaluate the TAC emissions associated with Project construction or indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's construction-related TAC emissions to the potential health risks posed to nearby receptors, the IS/MND is inconsistent with CEQA's requirement to correlate Project-generated emissions with potential adverse impacts on human health.

Second, the State of California Department of Justice recommends that warehouse projects prepare a quantitative HRA pursuant to the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, as well as local air

[13] "Sierra Club v. County of Fresno." Supreme Court of California, December 2018, a*vailable at:* https://ceqaportal.org/decisions/1907/Sierra%20Club%20v.%20County%20of%20Fresno.pdf.

district guidelines.[14] OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015, as referenced by the IS/MND (p. 48). Specifically, OEHHA recommends that all short-term projects lasting at least 2 months assess cancer risks.[15] Furthermore, according to OEHHA:

> "Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009)."[16]

Thus, as the Project's anticipated construction duration exceeds the 2-month and 6-month requirements set forth by OEHHA, construction of the Project meets the threshold warranting a quantified HRA under OEHHA guidance and should be evaluated for the entire 12-month construction period. These recommendations reflect the most recent state health risk policies, and as such, an EIR should be prepared to include an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions.

Third, while the IS/MND includes a mobile-source HRA evaluating the health risk impacts to nearby, existing receptors as a result of Project operation, the HRA fails to evaluate the combined lifetime cancer risk to nearby, existing receptors as a result of Project construction and operation together. According to OEHHA guidance "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."[17] However, the IS/MND's HRA fails to sum each age bin to evaluate the total cancer risk over the course of the Project's total construction and operation. This is incorrect and thus, an updated analysis should quantify and sum the entirety of the Project's construction and operational cancer risks to compare to the SCAQMD specific numeric threshold of 10 in one million, as referenced by the IS/MND (p. 50).

Screening-Level Analysis Demonstrates Potentially Significant Health Risk Impact

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening level air quality dispersion model.[18] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA and the California Air Pollution Control Officers Associated ("CAPCOA") guidance as the

[14] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, *available at*: https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf, p. 6.
[15] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[16] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[17] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4
[18] "AERSCREEN Released as the EPA Recommended Screening Model," U.S. EPA, April 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs").[19, 20] A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction-related health risk impact to residential sensitive receptors using the annual PM_{10} exhaust estimates from the IS/MND's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life.[21] The IS/MND's CalEEMod model indicates that construction activities will generate approximately 106 pounds of DPM over the 273-day construction period.[22] The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{105.8\ lbs}{273\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00203\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.00203 grams per second ("g/s"). Construction was simulated as a 12.59-acre rectangular area source in AERSCREEN, with approximate dimensions of 319- by 160-meters. A release height of three meters was selected to represent the height of stacks of operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. The population of Perris was obtained from U.S. 2020 Census data.[23]

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project Site. U.S. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant to be estimated by multiplying the single-hour concentration by 10%.[24] According to the IS/MND the nearest sensitive receptor is a single-family residential land use located approximately 720 feet, or 219 meters, from the Project site (p. 46). Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.003 µg/m^3 DPM at approximately

[19] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[20] "Health Risk Assessments for Proposed Land Use Projects." CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.
[21] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[22] See Attachment B for health risk calculations.
[23] "Perris." U.S. Census Bureau, 2020, *available at:* https://datacommons.org/place/geoId/0656700.
[24] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." U.S. EPA, October 1992, *available at:* http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf.

225 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.1003 µg/m^3 for Project construction at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA, as recommended by SCAQMD.[25] Specifically, guidance from OEHHA and CARB recommends the use of a standard point estimate approach, including high-point estimate (i.e. 95th percentile) breathing rates and age sensitivity factors ("ASF") in order to account for the increased sensitivity to carcinogens during early-in-life exposure and accurately assess risk for susceptible subpopulations such as children. The residential exposure parameters, such as the daily breathing rates ("BR/BW"), exposure duration ("ED"), age sensitivity factors ("ASF"), fraction of time at home ("FAH"), and exposure frequency ("EF") utilized for the various age groups in our screening-level HRA are as follows:

Exposure Assumptions for Residential Individual Cancer Risk

Age Group	Breathing Rate (L/kg-day)[26]	Age Sensitivity Factor[27]	Exposure Duration (years)	Fraction of Time at Home[28]	Exposure Frequency (days/year)[29]	Exposure Time (hours/day)
3rd Trimester	361	10	0.25	1	350	24
Infant (0 - 2)	1090	10	2	1	350	24
Child (2 - 16)	572	3	14	1	350	24
Adult (16 - 30)	261	1	14	0.73	350	24

For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor ("CPF") in units of inverse dose expressed in milligrams per kilogram per day

[25] "AB 2588 and Rule 1402 Supplemental Guidelines." SCAQMD, October 2020, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19, p. 2.

[26] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act." SCAQMD, October 2020, available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19, p. 19; see also "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[27] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-5 Table 8.3.

[28] "Risk Assessment Procedures." SCAQMD, August 2017, available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

[29] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 5-24.

("mg/kg/day^{-1}") to derive the cancer risk estimate. Therefore, to assess exposures, we utilized the following dose algorithm:

$$Dose_{AIR,per\ age\ group} = C_{air} \times EF \times \left[\frac{BR}{BW}\right] \times A \times CF$$

where:

$Dose_{AIR}$ = dose by inhalation (mg/kg/day), per age group
C_{air} = concentration of contaminant in air (µg/m3)
EF = exposure frequency (number of days/365 days)
BR/BW = daily breathing rate normalized to body weight (L/kg/day)
A = inhalation absorption factor (default = 1)
CF = conversion factor (1x10-6, µg to mg, L to m3)

To calculate the overall cancer risk, we used the following equation for each appropriate age group:

$$Cancer\ Risk_{AIR} = Dose_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

where:

$Dose_{AIR}$ = dose by inhalation (mg/kg/day), per age group
CPF = cancer potency factor, chemical-specific $(mg/kg/day)^{-1}$
ASF = age sensitivity factor, per age group
FAH = fraction of time at home, per age group (for residential receptors only)
ED = exposure duration (years)
AT = averaging time period over which exposure duration is averaged (always 70 years)

Consistent with the 273-day construction schedule, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years) and first 0.5 years of the infantile stage of life (0 – 2 years). The results of our calculations are shown in the table below.

The Maximally Exposed Individual at an Existing Residential Receptor				
Age Group	**Emissions Source**	**Duration** (years)	**Concentration** (ug/m3)	**Cancer Risk**
3rd Trimester	Construction	0.25	0.1003	1.36E-06
	Construction	*0.50*	*0.1003*	*8.20E-06*
	Operation	*1.50*	*	*
Infant (0 - 2)	Total	2		8.20E-06
Child (2 - 16)	Operation	14	*	*
Adult (16 - 30)	Operation	14	*	*
Lifetime		**30**		**9.57E-06**

As demonstrated in the table above, the excess cancer risks to the 3rd trimester of pregnancy and infant receptors at the MEIR located approximately 225 meters away, over the course of Project construction, are approximately 1.36 and 8.20 in one million, respectively. The total excess cancer risk associated with Project construction is approximately 9.57 in one million. When summing the Project's construction-related cancer risk, as estimated by SWAPE, with the IS/MND's operational cancer risk of 1.74 in one million, we estimate an excess cancer risk of approximately 11.31 in one million over the course of a 30-year residential lifetime (p. 50).[30] As such, the lifetime cancer risk exceeds the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND.

Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. The purpose of the screening-level HRA is to demonstrate the potential link between Project-generated emissions and adverse health risk impacts. According to the U.S. EPA:

> "EPA's Exposure Assessment Guidelines recommend completing exposure assessments iteratively using a *tiered approach* to *'strike a balance between the costs of adding detail and refinement to an assessment and the benefits associated with that additional refinement' (U.S. EPA, 1992).*
>
> In other words, an assessment using basic tools (e.g., simple exposure calculations, default values, rules of thumb, conservative assumptions) can be conducted as the first phase (or tier) of the overall assessment (i.e., a screening-level assessment).

[30] Calculated: 9.57 in one million + 1.74 in one million = 11.31 in one million.

> The exposure assessor or risk manager can then determine whether the results of the screening-level assessment warrant further evaluation through refinements of the input data and exposure assumptions or by using more advanced models."[31]

As demonstrated above, screening-level analyses warrant further evaluation in a refined modeling approach. Thus, as our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, an EIR should be prepared to include a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The IS/MND estimates that the Project would generate net annual GHG emissions of 2,406.11 metric tons of carbon dioxide equivalents per year ("MT CO_2e/year") (see excerpt below) (p. 92, Table 7).

Table 7 – Project Related Greenhouse Gas Annual Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Area Sources[1]	0.00	0.01	0.01	0.00	0.00	0.01
Energy Usage[2]	0.00	136.01	136.01	0.01	0.00	136.74
Mobile Sources[3]	0.00	1,852.33	1,852.33	0.05	0.18	1,907.30
Waste[4]	48.56	0.00	48.56	2.87	0.00	120.31
Water[5]	18.67	135.91	154.58	1.93	0.05	216.72
Construction[6]	0.00	21.58	24.58	0.00	0.00	22.03
Total Emissions	**67.24**	**2,148.84**	**2,216.08**	**4.86**	**0.23**	**2,406.11**
SCAQMD Draft Screening Threshold for Industrial Land Uses						**10,000**
Exceeds Threshold?						**No**

Notes:
Source: CalEEMod Version 2020.4.0 for Opening Year 2023.
(1) Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
(2) Energy usage consist of GHG emissions from electricity and natural gas usage.
(3) Mobile sources consist of GHG emissions from vehicles.
(4) Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
(5) Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
(6) Construction GHG emissions CO2e based on a 30-year amortization rate.

As such, the IS/MND concludes:

> "Therefore, as the Proposed Project's emissions meet the threshold for compliance with Executive Order S-3-05, the Proposed Project's emissions also comply with the goals of AB 32 and the City of Perris CAP. Additionally, as the Proposed Project meets the current interim emissions targets/thresholds established by the SCAQMD, the Proposed Project would also be on track to meet the reduction target of 40 percent below 1990 levels by 2030 mandated by SB-32. Furthermore, all of the post 2020 reductions in GHG emissions are addressed via regulatory

[31] "Exposure Assessment Tools by Tiers and Types - Screening-Level and Refined." U.S. EPA, *available at:* https://www.epa.gov/expobox/exposure-assessment-tools-tiers-and-types-screening-level-and-refined.

requirements at the State level and the Proposed Project will be required to comply with these regulations as they come into effect.

Therefore, potential impacts associated with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases would be less than significant, and no mitigation would be required" (p. 93).

As stated above, the IS/MND's analysis relies upon the Project's consistency with the CARB *Scoping Plan* and City's Climate Action Plan ("CAP") to conclude that the Project would result in a less-than-significant GHG impact. However, the IS/MND's analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect for five reasons.

(1) The IS/MND's quantitative GHG analysis relies upon an incorrect and unsubstantiated air model;
(2) The IS/MND's quantitative GHG analysis relies upon an outdated threshold;
(3) The IS/MND's unsubstantiated air model indicates a potentially significant impact;
(4) The IS/MND fails to consider the performance-based standards under CARB's *Scoping Plan*; and
(5) The IS/MND fails to correctly demonstrate the Project's consistency with the City's CAP.

1) Incorrect and Unsubstantiated Quantitative Analysis of Emissions

As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,406.11 MT CO_2e/year (p. 92, Table 7). However, the IS/MND's quantitative GHG analysis is unsubstantiated. As previously discussed, when we reviewed the Project's CalEEMod output files, provided in the AQ and HRA Analysis as Appendix A to the IS/MND, we found that several of the values inputted into the model are not consistent with information disclosed in the IS/MND. As a result, the model underestimates the Project's emissions, and the IS/MND's quantitative GHG analysis should not be relied upon to determine Project significance. An EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the surrounding environment.

2) Incorrect Reliance on an Outdated Quantitative GHG Threshold

As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,406.11 MT CO_2e/year, which would not exceed the SCAQMD threshold of 10,000 MT CO_2e/year (p. 92, Table 7). However, the guidance that provided the 10,000 MT CO_2e/year threshold, the SCAQMD's 2008 *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans* report, was developed when the Global Warming Solutions Act of 2006, commonly known as "AB 32", was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020.[32] Furthermore, AEP guidance states:

[32] HEALTH & SAFETY CODE 38550, *available at:* https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=38550.

> "[F]or evaluating projects with a post 2020 horizon, the threshold will need to be revised based on a new gap analysis that would examine 17 development and reduction potentials out to the next GHG reduction milestone."[33]

As it is currently November 2022, thresholds for 2020 are not applicable to the proposed Project and should be revised to reflect the current GHG reduction target. As such, the SCAQMD threshold of 10,000 MT CO_2e/year is outdated and inapplicable to the proposed Project, and the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. Instead, we recommend that the Project apply the SCAQMD 2035 efficiency target of 3.0 MT CO_2e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets.[34]

3) Failure to Identify a Potentially Significant GHG Impact

In an effort to quantitatively evaluate the Project's GHG emissions, we compared the Project's GHG emissions, as estimated by the IS/MND, to the SCAQMD 2035 service population efficiency target of 3.0 MT CO_2e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets.[35] When applying this threshold, the Project's incorrect and unsubstantiated air model indicates a potentially significant GHG impact. As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 2,406.11 MT CO_2e/year (p. 92, Table 7). According to CAPCOA's *CEQA & Climate Change* report, a service population ("SP") is defined as "the sum of the number of residents and the number of jobs supported by the project."[36] As the Project does not include any residential land uses, the SP would include the number of jobs supported by the Project. According to the IS/MND, the Project will employ approximatly 30 people during operation (p. 13). As such, we estimate a SP of 30 people. When dividing the Project's net annual GHG emissions, as estimated by the IS/MND, by a SP of 30 people, we find that the Project would emit approximately 80.20 MT CO_2e/SP/year (see table below).[37]

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[33] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, *available at:* https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 39.

[34] "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf, p. 2.

[35] "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf, p. 2.

[36] CAPCOA (Jan. 2008) CEQA & Climate Change, p. 71-72, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf.

[37] Calculated: (2,406.11 MT CO_2e/year) / (30 service population) = (80.20 MT CO_2e/SP/year).

IS/MND Greenhouse Gas Emissions	
Annual Emissions (MT CO_2e/year)	2,406.11
Service Population	30
Service Population Efficiency (MT CO_2e/SP/year)	80.20
SCAQMD 2035 Threshold	**3.0**
Exceeds?	***Yes***

As demonstrated above, the Project's service population efficiency value, as estimated by the IS/MND's provided net annual GHG emission estimates and SP, vastly exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO_2e/SP/year, indicating a potentially significant impact not previously identified or addressed by the IS/MND. As a result, the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. An EIR should be prepared, including an updated GHG analysis and incorporating additional mitigation measures to reduce the Project's GHG emissions to less-than-significant levels.

4) Failure to Consider Performance-based Standards Under CARB's 2017 Scoping Plan

As previously discussed, the IS/MND concludes that the Project would be consistent with CARB's 2017 Climate Change Scoping Plan (p. 93). However, this is incorrect, as the IS/MND fails to consider performance-based measures proposed by CARB.

i. Passenger & Light Duty VMT Per Capita Benchmarks per SB 375

In reaching the State's long-term GHG emission reduction goals, CARB's 2017 *Scoping Plan* explicitly cites to SB 375 and the VMT reductions anticipated under the implementation of Sustainable Community Strategies.[38] CARB has identified the population and daily VMT from passenger autos and light-duty vehicles at the state and county level for each year between 2010 to 2050 under a "baseline scenario" that includes "current projections of VMT included in the existing Regional Transportation Plans/Sustainable Communities Strategies (RTP/SCSs) adopted by the State's 18 Metropolitan Planning Organizations (MPOs) pursuant to SB 375 as of 2015."[39] By dividing the projected daily VMT by the population, we calculated the daily VMT per capita for each year at the state and county level for 2010 (baseline year), 2023 (Project operational year), and 2030 (target years under SB 32) (see table below).

[38] "California's 2017 Climate Change Scoping Plan." CARB, November 2017, *available at*: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, p. 25, 98, 101-103.
[39] "Supporting Calculations for 2017 Scoping Plan-Identified VMT Reductions," Excel Sheet "Readme." CARB, January 2019, *available at*: https://ww2.arb.ca.gov/sites/default/files/2019-01/sp_mss_vmt_calculations_jan19_0.xlsx.

2017 Scoping Plan Daily VMT Per Capita						
	Riverside County			State		
Year	Population	LDV VMT Baseline	VMT Per Capita	Population	LDV VMT Baseline	VMT Per Capita
2010	2,196,083	52,385,344.80	23.85	37,335,085	836,463,980.46	22.40
2023	2,613,313	62,311,461.25	23.84	41,659,526	924,184,228.61	22.18
2030	2,857,496	65,276,502.05	22.84	43,939,250	957,178,153.19	21.78

As the IS/MND fails to evaluate the Project's consistency with the CARB 2017 *Scoping Plan* performance-based daily VMT per capita projections, the IS/MND's claim that the proposed Project would not conflict with the CARB 2017 *Scoping Plan* is unsupported. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

5) Incorrect Reliance on the City's CAP

As previously stated, the IS/MND relies on the City of Perris's CAP to conclude that the proposed Project would result in a less-than-significant GHG impact (p. 93). Regarding Project consistency with the City's CAP, the IS/MND states:

> "[G]iven the Proposed Project's consistency with AB 32, the City's CAP, and the SCAQMD's 10,000 MTCO2e per year threshold for industrial uses, the Proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Therefore, the contribution of the Proposed Project to cumulative GHG impacts is less than significant" (p. 93).

Furthermore, according to the IS/MND:

> "Through the CAP, the city has developed multiple sustainable strategies to directly benefit the community by decreasing carbon emissions while adapting to a changing climate. The programs and actions provided in the CAP were developed to help the city grow healthily, resourcefully, and sustainably." (p. 50).

However, the IS/MND's claim that the Project is consistent with the City's CAP is unsupported. Simply stating that the proposed Project would include sustainability strategies addressing carbon emissions does not guarantee that the Project will be consistent with the City's CAP. Without including such sustainability strategies as formal mitigation measures, we cannot guarantee that they would be implemented, monitored, and enforced on the Project site. According to the AEP *CEQA Portal Topic Paper* on Mitigation Measures:

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

that could eliminate one or more of the design features without understanding the resulting environmental impact."

As such, in order to be consistent with the City's CAP, we recommend the Project include all sustainability strategies as formal mitigation measures. Until then, the IS/MND's conclusion that the project would be consistent with the City of Perris's CAP is unsubstantiated (p. 93). Therefore, the Project's GHG analysis is insufficient and the IS/MND's less-than-significant impact conclusion should not be relied upon.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

The IS/MND's analysis demonstrates that the Project would result in potentially significant air quality, health risk, and GHG impacts that should be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in the Department of Justice Warehouse Project Best Practices document.[40] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

- Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.
- Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
- 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 two 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.

[40] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, *available at:* https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf, p. 6 – 9.

- 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 that all facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on-site demonstrating compliance with this requirement and shall make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.
- Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging 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 two 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 air district, and the building manager.
- 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.
- Constructing electric truck charging stations proportional to the number of dock doors at the project.
- Constructing electric plugs for electric transport refrigeration units at every dock door, if the warehouse use could include refrigeration.
- Constructing electric light-duty vehicle charging stations proportional to the number of parking spaces at the project.
- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity, such as equal to the building's projected energy needs.
- 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.
- Achieving certification of compliance with LEED green building 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 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.

Furthermore, additional feasible mitigation measures can be found in SCAG's 2020 *RTP/SCS* PEIR's Air Quality Project Level Mitigation Measures ("PMM-AQ-1") and Greenhouse Gas Project Level Mitigation Measures ("PMM-GHG-1"), as described below: [41]

SCAG RTP/SCS 2020-2045
Air Quality Project Level Mitigation Measures – PMM-AQ-1: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency:
a) Minimize land disturbance.
b) Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.
c) Cover trucks when hauling dirt.

[41] "4.0 Mitigation Measures." Connect SoCal Program Environmental Impact Report Addendum #1, September 2020, available at: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_addendum_4_mitigationmeasures.pdf?1606004420, p. 4.0-2 – 4.0-10; 4.0-19 – 4.0-23; See also: "Certified Final Connect SoCal Program Environmental Impact Report." Southern California Association of Governments (SCAG), May 2020, *available at:* https://scag.ca.gov/peir.

d) Stabilize the surface of dirt piles if not removed immediately.
e) Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
f) Minimize unnecessary vehicular and machinery activities.
g) Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
h) Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.
j) Require contractors to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that could be used an aggregate of 40 or more hours for the construction project. Prepare a plan for approval by the applicable air district demonstrating achievement of the applicable percent reduction for a CARB-approved fleet.
k) Ensure that all construction equipment is properly tuned and maintained.
l) Minimize idling time to 5 minutes—saves fuel and reduces emissions.
m) Provide an operational water truck on-site at all times. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
n) Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
o) Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
p) As appropriate require that portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, obtain CARB Portable Equipment Registration with the state or a local district permit. Arrange appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site.
q) Require projects within 500 feet of residences, hospitals, or schools to use Tier 4 equipment for all engines above 50 horsepower (hp) unless the individual project can demonstrate that Tier 4 engines would not be required to mitigate emissions below significance thresholds.
r) Projects located within the South Coast Air Basin should consider applying for South Coast AQMD “SOON” funds which provides funds to applicable fleets for the purchase of commercially available low-emission heavy-duty engines to achieve near-term reduction of NOx emissions from in-use off-road diesel vehicles.
s) Projects located within AB 617 communities should review the applicable Community Emissions Reduction Plan (CERP) for additional mitigation that can be applied to individual projects.
t) Where applicable, projects should provide information about air quality related programs to schools, including the Environmental Justice Community Partnerships (EJCP), Clean Air Ranger Education (CARE), and Why Air Quality Matters programs.
u) Projects should work with local cities and counties to install adequate signage that prohibits truck idling in certain locations (e.g., near schools and sensitive receptors).
y) Projects that will introduce sensitive receptors within 500 feet of freeways and other sources should consider installing high efficiency of enhanced filtration units, such as Minimum Efficiency Reporting Value (MERV) 13 or better. Installation of enhanced filtration units can be verified during occupancy inspection prior to the issuance of an occupancy permit.
z) Develop an ongoing monitoring, inspection, and maintenance program for the MERV filters.
aa) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities.
bb) The following criteria related to diesel emissions shall be implemented on by individual project sponsors as appropriate and feasible:

- Diesel nonroad vehicles on site for more than 10 total days shall have either (1) engines that meet EPA on road emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%
- Diesel generators on site for more than 10 total days shall be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
- Nonroad diesel engines on site shall be Tier 2 or higher.
- Diesel nonroad construction equipment on site for more than 10 total days shall have either (1) engines meeting EPA Tier 4 nonroad emissions standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines for 50 hp and greater and by a minimum of 20% for engines less than 50 hp.
- Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.
- Diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend approved by the original engine manufacturer with sulfur content of 15 ppm or less.
- The construction contractor shall maintain a list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:
    i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.
    ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation.
    iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.
- The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
- The contractor shall maintain a monthly report that, for each on road diesel vehicle, nonroad construction equipment, or generator onsite, includes:
    i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
    ii. Any problems with the equipment or emission controls.
    iii. Certified copies of fuel deliveries for the time period that identify:
        1. Source of supply
        2. Quantity of fuel
        3. Quantity of fuel, including sulfur content (percent by weight)

cc) Project should exceed Title-24 Building Envelope Energy Efficiency Standards (California Building Standards Code). The following measures can be used to increase energy efficiency:

- Provide pedestrian network improvements, such as interconnected street network, narrower roadways and shorter block lengths, sidewalks, accessibility to transit and transit shelters, traffic calming measures, parks and public spaces, minimize pedestrian barriers.
- Provide traffic calming measures, such as:
    i. Marked crosswalks
    ii. Count-down signal timers
    iii. Curb extensions iv. Speed tables
    iv. Raised crosswalks
    v. Raised intersections
    vi. Median islands
    vii. Tight corner radii
    viii. Roundabouts or mini-circles
    ix. On-street parking

x. Chicanes/chokers

- Create urban non-motorized zones
- Provide bike parking in non-residential and multi-unit residential projects
- Dedicate land for bike trails
- Limit parking supply through:
    i. Elimination (or reduction) of minimum parking requirements
    ii. Creation of maximum parking requirements
    iii. Provision of shared parking
- Require residential area parking permit.
- Provide ride-sharing programs
    i. Designate a certain percentage of parking spacing for ride sharing vehicles
    ii. Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles
    iii. Providing a web site or messaging board for coordinating rides
    iv. Permanent transportation management association membership and finding requirement.

Greenhouse Gas Project Level Mitigation Measures – PMM-GHG-1

In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency:

b) Reduce emissions resulting from projects through implementation of project features, project design, or other measures, such as those described in Appendix F of the State CEQA Guidelines.

c) Include off-site measures to mitigate a project's emissions.

d) Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to:

i. Use energy and fuel-efficient vehicles and equipment;
ii. Deployment of zero- and/or near zero emission technologies;
iii. Use lighting systems that are energy efficient, such as LED technology;
iv. Use the minimum feasible amount of GHG-emitting construction materials;
v. Use cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production;
vi. Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse;
vii. Incorporate design measures to reduce energy consumption and increase use of renewable energy;
viii. Incorporate design measures to reduce water consumption;
ix. Use lighter-colored pavement where feasible;
x. Recycle construction debris to maximum extent feasible;
xi. Plant shade trees in or near construction projects where feasible; and
xii. Solicit bids that include concepts listed above.

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

i. Promote transit-active transportation coordinated strategies;
ii. Increase bicycle carrying capacity on transit and rail vehicles;
iii. Improve or increase access to transit;
iv. Increase access to common goods and services, such as groceries, schools, and day care;

v. Incorporate affordable housing into the project;
vi. Incorporate the neighborhood electric vehicle network;
vii. Orient the project toward transit, bicycle and pedestrian facilities;
viii. Improve pedestrian or bicycle networks, or transit service;
ix. Provide traffic calming measures;
x. Provide bicycle parking;
xi. Limit or eliminate park supply;
xii. Unbundle parking costs;
xiii. Provide parking cash-out programs;
xiv. Implement or provide access to commute reduction program;

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

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

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

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

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

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

i. Developing on infill and brownfields sites;
ii. Building compact and mixed-use developments near transit;
iii. Retaining on-site mature trees and vegetation, and planting new canopy trees;
iv. Measures that increase vehicle efficiency, encourage use of zero and low emissions vehicles, or reduce the carbon content of fuels, including constructing or encouraging construction of electric vehicle charging stations or neighborhood electric vehicle networks, or charging for electric bicycles; and
v. Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse.

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

l) Require at least five percent of all vehicle parking spaces include electric vehicle charging stations, or at a minimum, require the appropriate infrastructure to facilitate sufficient electric charging for passenger vehicles and trucks to plug-in.

m) Encourage telecommuting and alternative work schedules, such as:

i. Staggered starting times ii. Flexible schedules iii. Compressed work weeks
n) Implement commute trip reduction marketing, such as: i. New employee orientation of trip reduction and alternative mode options ii. Event promotions iii. Publications
o) Implement preferential parking permit program
p) Implement school pool and bus programs
q) Price workplace parking, such as: i. Explicitly charging for parking for its employees; ii. Implementing above market rate pricing; iii. Validating parking only for invited guests; iv. Not providing employee parking and transportation allowances; and v. Educating employees about available alternatives.

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 EIR should be prepared to include all feasible mitigation measures, as well as include updated air quality and health risk analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The 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: Health Risk Calculations
Attachment C: AERSCREEN Output Files
Attachment D: Matt Hagemann CV
Attachment E: Paul Rosenfeld CV

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

19371 Redlands Avenue East Industrial Project

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	254.51	1000sqft	5.75	254,511.00	0
Other Asphalt Surfaces	3.97	Acre	3.97	172,933.00	0
Other Non-Asphalt Surfaces	61.75	1000sqft	1.42	61,752.00	0
Parking Lot	161.00	Space	1.45	64,400.00	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 - See SWAPE comment on "Failure to Account for All Potential Cold Storage Requirements."

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

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Grading - See SWAPE comment on "Failure to Include Material Export."

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Architectural Coating - See SWAPE comment on "Unsubstantiated Reductions to Architectural Coating Emission Factors."

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

Sequestration - Consistent with the IS/MND's model.

Construction Off-road Equipment Mitigation - Consistent with the IS/MND's model.

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

Water Mitigation - Consistent with the IS/MND's model.

Waste Mitigation - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	155.00
tblFleetMix	HHD	0.02	0.17
tblFleetMix	LDA	0.53	0.42
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.17	0.14
tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD2	7.3100e-003	9.7020e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.14	0.11
tblFleetMix	MH	5.4680e-003	0.00
tblFleetMix	MHD	0.01	0.06
tblFleetMix	OBUS	6.1600e-004	0.00
tblFleetMix	SBUS	1.1000e-003	0.00
tblFleetMix	UBUS	3.1500e-004	0.00
tblGrading	MaterialExported	0.00	30,404.00
tblGrading	MaterialImported	0.00	26,435.00
tblLandUse	LandUseSquareFeet	254,510.00	254,511.00

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tblLandUse	LandUseSquareFeet	172,933.20	172,933.00
tblLandUse	LandUseSquareFeet	61,750.00	61,752.00
tblLandUse	LotAcreage	5.84	5.75
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblSequestration	NumberOfNewTrees	0.00	169.00
tblVehicleTrips	CNW_TL	6.90	40.00
tblVehicleTrips	CNW_TTP	41.00	27.00
tblVehicleTrips	CW_TTP	59.00	73.00
tblVehicleTrips	ST_TR	2.12	1.81
tblVehicleTrips	SU_TR	2.12	1.81
tblVehicleTrips	WD_TR	2.12	1.81

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0911	1.2574	0.7728	3.5400e-003	0.2282	0.0385	0.2667	0.0790	0.0358	0.1148	0.0000	330.7297	330.7297	0.0356	0.0333	341.5332
2023	1.4717	1.8950	2.3982	5.7100e-003	0.2305	0.0808	0.3113	0.0621	0.0758	0.1380	0.0000	512.3655	512.3655	0.0704	0.0198	520.0238
Maximum	**1.4717**	**1.8950**	**2.3982**	**5.7100e-003**	**0.2305**	**0.0808**	**0.3113**	**0.0790**	**0.0758**	**0.1380**	**0.0000**	**512.3655**	**512.3655**	**0.0704**	**0.0333**	**520.0238**

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	0.0911	1.2574	0.7728	3.5400e-003	0.2282	0.0385	0.2667	0.0790	0.0358	0.1148	0.0000	330.7296	330.7296	0.0356	0.0333	341.5331
2023	1.4717	1.8950	2.3982	5.7100e-003	0.2305	0.0808	0.3113	0.0621	0.0758	0.1380	0.0000	512.3652	512.3652	0.0704	0.0198	520.0235
Maximum	**1.4717**	**1.8950**	**2.3982**	**5.7100e-003**	**0.2305**	**0.0808**	**0.3113**	**0.0790**	**0.0758**	**0.1380**	**0.0000**	**512.3652**	**512.3652**	**0.0704**	**0.0333**	**520.0235**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	**11-1-2022**	**1-31-2023**	1.6564	1.6564
2	**2-1-2023**	**4-30-2023**	0.9015	0.9015
3	**5-1-2023**	**7-31-2023**	2.1259	2.1259
4	**8-1-2023**	**9-30-2023**	0.0297	0.0297
		Highest	2.1259	2.1259

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	1.0617	6.0000e-005	6.1400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Energy	0.0710	0.6454	0.5421	3.8700e-003		0.0491	0.0491		0.0491	0.0491	0.0000	2,504.8113	2,504.8113	0.1656	0.0313	2,518.2838
Mobile	0.3289	2.2887	4.3373	0.0195	1.4007	0.0264	1.4270	0.3784	0.0251	0.4035	0.0000	1,852.3318	1,852.3318	0.0482	0.1804	1,907.2999
Waste						0.0000	0.0000		0.0000	0.0000	48.5636	0.0000	48.5636	2.8700	0.0000	120.3142
Water						0.0000	0.0000		0.0000	0.0000	18.6721	135.9099	154.5821	1.9293	0.0467	216.7228
Total	**1.4616**	**2.9342**	**4.8855**	**0.0234**	**1.4007**	**0.0754**	**1.4761**	**0.3784**	**0.0741**	**0.4526**	**67.2357**	**4,493.0650**	**4,560.3007**	**5.0131**	**0.2584**	**4,762.6335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.0617	6.0000e-005	6.1400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Energy	0.0710	0.6454	0.5421	3.8700e-003		0.0491	0.0491		0.0491	0.0491	0.0000	2,504.8113	2,504.8113	0.1656	0.0313	2,518.2838
Mobile	0.2439	1.5163	2.8595	0.0120	0.8450	0.0160	0.8611	0.2283	0.0153	0.2435	0.0000	1,136.2159	1,136.2159	0.0324	0.1127	1,170.6060
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	18.6721	135.9099	154.5821	1.9293	0.0467	216.7228
Total	**1.3766**	**2.1617**	**3.4077**	**0.0159**	**0.8450**	**0.0651**	**0.9101**	**0.2283**	**0.0643**	**0.2926**	**18.6721**	**3,776.9491**	**3,795.6212**	**2.1273**	**0.1907**	**3,905.6254**

	ROG	NOx	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	**5.82**	**26.33**	**30.25**	**32.29**	**39.67**	**13.67**	**38.34**	**39.67**	**13.23**	**35.34**	**72.23**	**15.94**	**16.77**	**57.57**	**26.21**	**17.99**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	119.6520
Total	**119.6520**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	11/1/2022	12/12/2022	5	30	
2	Building Construction	Building Construction	12/13/2022	7/17/2023	5	155	
3	Paving	Paving	6/1/2023	6/28/2023	5	20	
4	Architectural Coating	Architectural Coating	6/21/2023	8/1/2023	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 6.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 381,767; Non-Residential Outdoor: 127,256; Striped Parking Area: 17,945 (Architectural Coating – sqft)

OffRoad Equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	2	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
Grading	8	20.00	0.00	7,105.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	13	233.00	91.00	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	47.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 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					0.1417	0.0000	0.1417	0.0554	0.0000	0.0554	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633
Total	**0.0544**	**0.5827**	**0.4356**	**9.3000e-004**	**0.1417**	**0.0245**	**0.1662**	**0.0554**	**0.0226**	**0.0779**	**0.0000**	**81.8019**	**81.8019**	**0.0265**	**0.0000**	**82.4633**

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	0.0110	0.4784	0.1021	2.0400e-003	0.0613	5.2800e-003	0.0666	0.0168	5.0500e-003	0.0219	0.0000	197.7328	197.7328	2.6600e-003	0.0312	207.0817
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0500e-003	8.2000e-004	0.0102	3.0000e-005	3.3000e-003	2.0000e-005	3.3100e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.6074	2.6074	7.0000e-005	7.0000e-005	2.6306
Total	**0.0121**	**0.4792**	**0.1123**	**2.0700e-003**	**0.0646**	**5.3000e-003**	**0.0699**	**0.0177**	**5.0700e-003**	**0.0228**	**0.0000**	**200.3402**	**200.3402**	**2.7300e-003**	**0.0312**	**209.7123**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 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	tons/yr										MT/yr					
Fugitive Dust					0.1417	0.0000	0.1417	0.0554	0.0000	0.0554	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632
Total	**0.0544**	**0.5827**	**0.4356**	**9.3000e-004**	**0.1417**	**0.0245**	**0.1662**	**0.0554**	**0.0226**	**0.0779**	**0.0000**	**81.8018**	**81.8018**	**0.0265**	**0.0000**	**82.4632**

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	0.0110	0.4784	0.1021	2.0400e-003	0.0613	5.2800e-003	0.0666	0.0168	5.0500e-003	0.0219	0.0000	197.7328	197.7328	2.6600e-003	0.0312	207.0817
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0500e-003	8.2000e-004	0.0102	3.0000e-005	3.3000e-003	2.0000e-005	3.3100e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.6074	2.6074	7.0000e-005	7.0000e-005	2.6306
Total	**0.0121**	**0.4792**	**0.1123**	**2.0700e-003**	**0.0646**	**5.3000e-003**	**0.0699**	**0.0177**	**5.0700e-003**	**0.0228**	**0.0000**	**200.3402**	**200.3402**	**2.7300e-003**	**0.0312**	**209.7123**

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3.3 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	0.0180	0.1628	0.1598	2.7000e-004		8.2200e-003	8.2200e-003		7.7100e-003	7.7100e-003	0.0000	23.2573	23.2573	5.8900e-003	0.0000	23.4047
Total	**0.0180**	**0.1628**	**0.1598**	**2.7000e-004**		**8.2200e-003**	**8.2200e-003**		**7.7100e-003**	**7.7100e-003**	**0.0000**	**23.2573**	**23.2573**	**5.8900e-003**	**0.0000**	**23.4047**

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	1.0100e-003	0.0283	9.5300e-003	1.2000e-004	4.0200e-003	3.9000e-004	4.4100e-003	1.1600e-003	3.7000e-004	1.5300e-003	0.0000	11.1550	11.1550	1.2000e-004	1.6600e-003	11.6512
Worker	5.7000e-003	4.4400e-003	0.0556	1.5000e-004	0.0179	9.0000e-005	0.0180	4.7600e-003	8.0000e-005	4.8400e-003	0.0000	14.1753	14.1753	3.8000e-004	3.9000e-004	14.3017
Total	**6.7100e-003**	**0.0327**	**0.0651**	**2.7000e-004**	**0.0220**	**4.8000e-004**	**0.0224**	**5.9200e-003**	**4.5000e-004**	**6.3700e-003**	**0.0000**	**25.3303**	**25.3303**	**5.0000e-004**	**2.0500e-003**	**25.9529**

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3.3 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	tons/yr										MT/yr					
Off-Road	0.0180	0.1628	0.1598	2.7000e-004		8.2200e-003	8.2200e-003		7.7100e-003	7.7100e-003	0.0000	23.2573	23.2573	5.8900e-003	0.0000	23.4046
Total	**0.0180**	**0.1628**	**0.1598**	**2.7000e-004**		**8.2200e-003**	**8.2200e-003**		**7.7100e-003**	**7.7100e-003**	**0.0000**	**23.2573**	**23.2573**	**5.8900e-003**	**0.0000**	**23.4046**

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	1.0100e-003	0.0283	9.5300e-003	1.2000e-004	4.0200e-003	3.9000e-004	4.4100e-003	1.1600e-003	3.7000e-004	1.5300e-003	0.0000	11.1550	11.1550	1.2000e-004	1.6600e-003	11.6512
Worker	5.7000e-003	4.4400e-003	0.0556	1.5000e-004	0.0179	9.0000e-005	0.0180	4.7600e-003	8.0000e-005	4.8400e-003	0.0000	14.1753	14.1753	3.8000e-004	3.9000e-004	14.3017
Total	**6.7100e-003**	**0.0327**	**0.0651**	**2.7000e-004**	**0.0220**	**4.8000e-004**	**0.0224**	**5.9200e-003**	**4.5000e-004**	**6.3700e-003**	**0.0000**	**25.3303**	**25.3303**	**5.0000e-004**	**2.0500e-003**	**25.9529**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	0.1671	1.5120	1.5950	2.7400e-003		0.0719	0.0719		0.0675	0.0675	0.0000	234.3089	234.3089	0.0590	0.0000	235.7828
Total	**0.1671**	**1.5120**	**1.5950**	**2.7400e-003**		**0.0719**	**0.0719**		**0.0675**	**0.0675**	**0.0000**	**234.3089**	**234.3089**	**0.0590**	**0.0000**	**235.7828**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9500e-003	0.2200	0.0876	1.1200e-003	0.0405	1.8300e-003	0.0424	0.0117	1.7500e-003	0.0134	0.0000	107.9411	107.9411	1.0900e-003	0.0160	112.7247
Worker	0.0533	0.0395	0.5157	1.5000e-003	0.1806	8.6000e-004	0.1814	0.0479	7.9000e-004	0.0487	0.0000	139.0227	139.0227	3.4300e-003	3.6500e-003	140.1948
Total	**0.0603**	**0.2595**	**0.6033**	**2.6200e-003**	**0.2211**	**2.6900e-003**	**0.2238**	**0.0596**	**2.5400e-003**	**0.0622**	**0.0000**	**246.9638**	**246.9638**	**4.5200e-003**	**0.0196**	**252.9195**

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3.3 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	tons/yr										MT/yr					
Off-Road	0.1671	1.5120	1.5950	2.7400e-003		0.0719	0.0719		0.0675	0.0675	0.0000	234.3086	234.3086	0.0590	0.0000	235.7825
Total	**0.1671**	**1.5120**	**1.5950**	**2.7400e-003**		**0.0719**	**0.0719**		**0.0675**	**0.0675**	**0.0000**	**234.3086**	**234.3086**	**0.0590**	**0.0000**	**235.7825**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9500e-003	0.2200	0.0876	1.1200e-003	0.0405	1.8300e-003	0.0424	0.0117	1.7500e-003	0.0134	0.0000	107.9411	107.9411	1.0900e-003	0.0160	112.7247
Worker	0.0533	0.0395	0.5157	1.5000e-003	0.1806	8.6000e-004	0.1814	0.0479	7.9000e-004	0.0487	0.0000	139.0227	139.0227	3.4300e-003	3.6500e-003	140.1948
Total	**0.0603**	**0.2595**	**0.6033**	**2.6200e-003**	**0.2211**	**2.6900e-003**	**0.2238**	**0.0596**	**2.5400e-003**	**0.0622**	**0.0000**	**246.9638**	**246.9638**	**4.5200e-003**	**0.0196**	**252.9195**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	7.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**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**

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	4.7100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2695	1.2695	3.0000e-005	3.0000e-005	1.2802
Total	**4.9000e-004**	**3.6000e-004**	**4.7100e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2695**	**1.2695**	**3.0000e-005**	**3.0000e-005**	**1.2802**

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3.4 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	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	7.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**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**

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	4.7100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2695	1.2695	3.0000e-005	3.0000e-005	1.2802
Total	**4.9000e-004**	**3.6000e-004**	**4.7100e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2695**	**1.2695**	**3.0000e-005**	**3.0000e-005**	**1.2802**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	1.2213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8700e-003	0.0195	0.0272	4.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	3.8299	3.8299	2.3000e-004	0.0000	3.8356
Total	**1.2241**	**0.0195**	**0.0272**	**4.0000e-005**		**1.0600e-003**	**1.0600e-003**		**1.0600e-003**	**1.0600e-003**	**0.0000**	**3.8299**	**3.8299**	**2.3000e-004**	**0.0000**	**3.8356**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7000e-003	0.0221	6.0000e-005	7.7500e-003	4.0000e-005	7.7900e-003	2.0600e-003	3.0000e-005	2.0900e-003	0.0000	5.9666	5.9666	1.5000e-004	1.6000e-004	6.0169
Total	**2.2900e-003**	**1.7000e-003**	**0.0221**	**6.0000e-005**	**7.7500e-003**	**4.0000e-005**	**7.7900e-003**	**2.0600e-003**	**3.0000e-005**	**2.0900e-003**	**0.0000**	**5.9666**	**5.9666**	**1.5000e-004**	**1.6000e-004**	**6.0169**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	tons/yr										MT/yr					
Archit. Coating	1.2213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8700e-003	0.0195	0.0272	4.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	3.8299	3.8299	2.3000e-004	0.0000	3.8356
Total	**1.2241**	**0.0195**	**0.0272**	**4.0000e-005**		**1.0600e-003**	**1.0600e-003**		**1.0600e-003**	**1.0600e-003**	**0.0000**	**3.8299**	**3.8299**	**2.3000e-004**	**0.0000**	**3.8356**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7000e-003	0.0221	6.0000e-005	7.7500e-003	4.0000e-005	7.7900e-003	2.0600e-003	3.0000e-005	2.0900e-003	0.0000	5.9666	5.9666	1.5000e-004	1.6000e-004	6.0169
Total	**2.2900e-003**	**1.7000e-003**	**0.0221**	**6.0000e-005**	**7.7500e-003**	**4.0000e-005**	**7.7900e-003**	**2.0600e-003**	**3.0000e-005**	**2.0900e-003**	**0.0000**	**5.9666**	**5.9666**	**1.5000e-004**	**1.6000e-004**	**6.0169**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	0.2439	1.5163	2.8595	0.0120	0.8450	0.0160	0.8611	0.2283	0.0153	0.2435	0.0000	1,136.2159	1,136.2159	0.0324	0.1127	1,170.6060
Unmitigated	0.3289	2.2887	4.3373	0.0195	1.4007	0.0264	1.4270	0.3784	0.0251	0.4035	0.0000	1,852.3318	1,852.3318	0.0482	0.1804	1,907.2999

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	460.66	460.66	460.66	3,584,027	2,162,201
Total	460.66	460.66	460.66	3,584,027	2,162,201

4.3 Trip Type Information

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.60	8.40	40.00	73.00	0.00	27.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Non-Asphalt Surfaces	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
Refrigerated Warehouse-No Rail	0.420472	0.044042	0.135720	0.110853	0.035298	0.009702	0.056000	0.169000	0.000000	0.000000	0.018912	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,802.2312	1,802.2312	0.1521	0.0184	1,811.5286
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,802.2312	1,802.2312	0.1521	0.0184	1,811.5286
NaturalGas Mitigated	0.0710	0.6454	0.5421	3.8700e-003		0.0491	0.0491		0.0491	0.0491	0.0000	702.5801	702.5801	0.0135	0.0129	706.7552
NaturalGas Unmitigated	0.0710	0.6454	0.5421	3.8700e-003		0.0491	0.0491		0.0491	0.0491	0.0000	702.5801	702.5801	0.0135	0.0129	706.7552

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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
Refrigerated Warehouse-No Rail	1.31659e+007	0.0710	0.6454	0.5421	3.8700e-003		0.0491	0.0491		0.0491	0.0491	0.0000	702.5801	702.5801	0.0135	0.0129	706.7552
Total		**0.0710**	**0.6454**	**0.5421**	**3.8700e-003**		**0.0491**	**0.0491**		**0.0491**	**0.0491**	**0.0000**	**702.5801**	**702.5801**	**0.0135**	**0.0129**	**706.7552**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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
Refrigerated Warehouse-No Rail	1.31659e+007	0.0710	0.6454	0.5421	3.8700e-003		0.0491	0.0491		0.0491	0.0491	0.0000	702.5801	702.5801	0.0135	0.0129	706.7552
Total		**0.0710**	**0.6454**	**0.5421**	**3.8700e-003**		**0.0491**	**0.0491**		**0.0491**	**0.0491**	**0.0000**	**702.5801**	**702.5801**	**0.0135**	**0.0129**	**706.7552**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	22540	3.9974	3.4000e-004	4.0000e-005	4.0180
Refrigerated Warehouse-No Rail	1.01397e+007	1,798.2339	0.1518	0.0184	1,807.5106
Total		**1,802.2312**	**0.1521**	**0.0184**	**1,811.5286**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	22540	3.9974	3.4000e-004	4.0000e-005	4.0180
Refrigerated Warehouse-No Rail	1.01397e+007	1,798.2339	0.1518	0.0184	1,807.5106
Total		**1,802.2312**	**0.1521**	**0.0184**	**1,811.5286**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.0617	6.0000e-005	6.1400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Unmitigated	1.0617	6.0000e-005	6.1400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127

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	0.1221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e-004	6.0000e-005	6.1400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Total	**1.0617**	**6.0000e-005**	**6.1400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0119**	**0.0119**	**3.0000e-005**	**0.0000**	**0.0127**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e-004	6.0000e-005	6.1400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Total	**1.0617**	**6.0000e-005**	**6.1400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0119**	**0.0119**	**3.0000e-005**	**0.0000**	**0.0127**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	154.5821	1.9293	0.0467	216.7228
Unmitigated	154.5821	1.9293	0.0467	216.7228

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	58.8554 / 0	154.5821	1.9293	0.0467	216.7228
Total		**154.5821**	**1.9293**	**0.0467**	**216.7228**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	58.8554 / 0	154.5821	1.9293	0.0467	216.7228
Total		**154.5821**	**1.9293**	**0.0467**	**216.7228**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	48.5636	2.8700	0.0000	120.3142

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	239.24	48.5636	2.8700	0.0000	120.3142
Total		**48.5636**	**2.8700**	**0.0000**	**120.3142**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces		0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces		0.0000	0.0000	0.0000	0.0000
Parking Lot		0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail		0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	119.6520	0.0000	0.0000	119.6520

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	169	119.6520	0.0000	0.0000	119.6520
Total		**119.6520**	**0.0000**	**0.0000**	**119.6520**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

19371 Redlands Avenue East Industrial Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	254.51	1000sqft	5.75	254,511.00	0
Other Asphalt Surfaces	3.97	Acre	3.97	172,933.00	0
Other Non-Asphalt Surfaces	61.75	1000sqft	1.42	61,752.00	0
Parking Lot	161.00	Space	1.45	64,400.00	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 - See SWAPE comment on "Failure to Account for All Potential Cold Storage Requirements."

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

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Grading - See SWAPE comment on "Failure to Include Material Export."

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating - See SWAPE comment on "Unsubstantiated Reductions to Architectural Coating Emission Factors."

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

Sequestration - Consistent with the IS/MND's model.

Construction Off-road Equipment Mitigation - Consistent with the IS/MND's model.

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

Water Mitigation - Consistent with the IS/MND's model.

Waste Mitigation - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	155.00
tblFleetMix	HHD	0.02	0.17
tblFleetMix	LDA	0.53	0.42
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.17	0.14
tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD2	7.3100e-003	9.7020e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.14	0.11
tblFleetMix	MH	5.4680e-003	0.00
tblFleetMix	MHD	0.01	0.06
tblFleetMix	OBUS	6.1600e-004	0.00
tblFleetMix	SBUS	1.1000e-003	0.00
tblFleetMix	UBUS	3.1500e-004	0.00
tblGrading	MaterialExported	0.00	30,404.00
tblGrading	MaterialImported	0.00	26,435.00
tblLandUse	LandUseSquareFeet	254,510.00	254,511.00

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	172,933.20	172,933.00
tblLandUse	LandUseSquareFeet	61,750.00	61,752.00
tblLandUse	LotAcreage	5.84	5.75
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblSequestration	NumberOfNewTrees	0.00	169.00
tblVehicleTrips	CNW_TL	6.90	40.00
tblVehicleTrips	CNW_TTP	41.00	27.00
tblVehicleTrips	CW_TTP	59.00	73.00
tblVehicleTrips	ST_TR	2.12	1.81
tblVehicleTrips	SU_TR	2.12	1.81
tblVehicleTrips	WD_TR	2.12	1.81

2.0 Emissions Summary

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	4.4526	69.1416	36.5650	0.2003	13.8123	1.9876	15.7998	4.8858	1.8415	6.7273	0.0000	20,744.3368	20,744.3368	2.1458	2.2934	21,481.4048
2023	86.9010	36.5811	51.0661	0.1095	3.8803	1.6423	5.5226	1.0423	1.5366	2.5789	0.0000	10,806.8620	10,806.8620	1.7376	0.3184	10,945.1685
Maximum	**86.9010**	**69.1416**	**51.0661**	**0.2003**	**13.8123**	**1.9876**	**15.7998**	**4.8858**	**1.8415**	**6.7273**	**0.0000**	**20,744.3368**	**20,744.3368**	**2.1458**	**2.2934**	**21,481.4048**

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	4.4526	69.1416	36.5650	0.2003	13.8123	1.9876	15.7998	4.8858	1.8415	6.7273	0.0000	20,744.3368	20,744.3368	2.1458	2.2934	21,481.4048
2023	86.9010	36.5811	51.0661	0.1095	3.8803	1.6423	5.5226	1.0423	1.5366	2.5789	0.0000	10,806.8620	10,806.8620	1.7376	0.3184	10,945.1685
Maximum	**86.9010**	**69.1416**	**51.0661**	**0.2003**	**13.8123**	**1.9876**	**15.7998**	**4.8858**	**1.8415**	**6.7273**	**0.0000**	**20,744.3368**	**20,744.3368**	**2.1458**	**2.2934**	**21,481.4048**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Energy	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Mobile	1.9772	11.8789	26.4099	0.1108	7.8209	0.1449	7.9658	2.1099	0.1378	2.2477		11,576.1324	11,576.1324	0.2928	1.0860	11,907.0829
Total	**8.1852**	**15.4157**	**29.4296**	**0.1321**	**7.8209**	**0.4138**	**8.2347**	**2.1099**	**0.4067**	**2.5166**		**15,819.8651**	**15,819.8651**	**0.3744**	**1.1638**	**16,176.0403**

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	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Energy	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Mobile	1.5042	7.8865	17.1778	0.0679	4.7182	0.0882	4.8064	1.2729	0.0838	1.3567		7,095.9380	7,095.9380	0.1945	0.6781	7,302.8879
Total	**7.7122**	**11.4233**	**20.1975**	**0.0891**	**4.7182**	**0.3571**	**5.0753**	**1.2729**	**0.3528**	**1.6256**		**11,339.6707**	**11,339.6707**	**0.2762**	**0.7559**	**11,571.8452**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	**5.78**	**25.90**	**31.37**	**32.50**	**39.67**	**13.71**	**38.37**	**39.67**	**13.27**	**35.40**	**0.00**	**28.32**	**28.32**	**26.24**	**35.05**	**28.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	11/1/2022	12/12/2022	5	30	
2	Building Construction	Building Construction	12/13/2022	7/17/2023	5	155	
3	Paving	Paving	6/1/2023	6/28/2023	5	20	
4	Architectural Coating	Architectural Coating	6/21/2023	8/1/2023	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 6.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 381,767; Non-Residential Outdoor: 127,256; Striped Parking Area: 17,945 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	2	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
Grading	8	20.00	0.00	7,105.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	13	233.00	91.00	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	47.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 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					9.4435	0.0000	9.4435	3.6901	0.0000	3.6901			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.4435**	**1.6349**	**11.0784**	**3.6901**	**1.5041**	**5.1942**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

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	0.7489	30.2470	6.7262	0.1362	4.1452	0.3516	4.4968	1.1365	0.3364	1.4728		14,526.2184	14,526.2184	0.1965	2.2883	15,213.0381
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	0.0788	0.0511	0.7973	2.0300e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0300e-003	0.0603		206.7078	206.7078	5.1200e-003	5.0800e-003	208.3509
Total	**0.8277**	**30.2981**	**7.5235**	**0.1382**	**4.3688**	**0.3527**	**4.7214**	**1.1957**	**0.3374**	**1.5331**		**14,732.9263**	**14,732.9263**	**0.2016**	**2.2934**	**15,421.3890**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 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					9.4435	0.0000	9.4435	3.6901	0.0000	3.6901			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.4435**	**1.6349**	**11.0784**	**3.6901**	**1.5041**	**5.1942**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

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	0.7489	30.2470	6.7262	0.1362	4.1452	0.3516	4.4968	1.1365	0.3364	1.4728		14,526.2184	14,526.2184	0.1965	2.2883	15,213.0381
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	0.0788	0.0511	0.7973	2.0300e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0300e-003	0.0603		206.7078	206.7078	5.1200e-003	5.0800e-003	208.3509
Total	**0.8277**	**30.2981**	**7.5235**	**0.1382**	**4.3688**	**0.3527**	**4.7214**	**1.1957**	**0.3374**	**1.5331**		**14,732.9263**	**14,732.9263**	**0.2016**	**2.2934**	**15,421.3890**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.5671	23.2609	22.8270	0.0388		1.1737	1.1737		1.1017	1.1017		3,662.4028	3,662.4028	0.9280		3,685.6038
Total	**2.5671**	**23.2609**	**22.8270**	**0.0388**		**1.1737**	**1.1737**		**1.1017**	**1.1017**		**3,662.4028**	**3,662.4028**	**0.9280**		**3,685.6038**

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	0.1481	3.8480	1.3380	0.0166	0.5829	0.0555	0.6384	0.1678	0.0531	0.2209		1,755.8026	1,755.8026	0.0186	0.2604	1,833.8597
Worker	0.9182	0.5951	9.2887	0.0237	2.6044	0.0130	2.6174	0.6907	0.0120	0.7027		2,408.1462	2,408.1462	0.0597	0.0592	2,427.2876
Total	**1.0663**	**4.4431**	**10.6267**	**0.0402**	**3.1873**	**0.0685**	**3.2557**	**0.8585**	**0.0650**	**0.9236**		**4,163.9487**	**4,163.9487**	**0.0782**	**0.3196**	**4,261.1474**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.5671	23.2609	22.8270	0.0388		1.1737	1.1737		1.1017	1.1017	0.0000	3,662.4028	3,662.4028	0.9280		3,685.6038
Total	**2.5671**	**23.2609**	**22.8270**	**0.0388**		**1.1737**	**1.1737**		**1.1017**	**1.1017**	**0.0000**	**3,662.4028**	**3,662.4028**	**0.9280**		**3,685.6038**

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	0.1481	3.8480	1.3380	0.0166	0.5829	0.0555	0.6384	0.1678	0.0531	0.2209		1,755.8026	1,755.8026	0.0186	0.2604	1,833.8597
Worker	0.9182	0.5951	9.2887	0.0237	2.6044	0.0130	2.6174	0.6907	0.0120	0.7027		2,408.1462	2,408.1462	0.0597	0.0592	2,427.2876
Total	**1.0663**	**4.4431**	**10.6267**	**0.0402**	**3.1873**	**0.0685**	**3.2557**	**0.8585**	**0.0650**	**0.9236**		**4,163.9487**	**4,163.9487**	**0.0782**	**0.3196**	**4,261.1474**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.3697	21.4474	22.6243	0.0388		1.0199	1.0199		0.9574	0.9574		3,663.5648	3,663.5648	0.9218		3,686.6108
Total	**2.3697**	**21.4474**	**22.6243**	**0.0388**		**1.0199**	**1.0199**		**0.9574**	**0.9574**		**3,663.5648**	**3,663.5648**	**0.9218**		**3,686.6108**

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	0.1026	2.9730	1.2242	0.0159	0.5829	0.0259	0.6088	0.1678	0.0248	0.1926		1,685.9661	1,685.9661	0.0172	0.2491	1,760.6382
Worker	0.8513	0.5260	8.5478	0.0229	2.6044	0.0122	2.6166	0.6907	0.0113	0.7019		2,344.4530	2,344.4530	0.0535	0.0547	2,362.0804
Total	**0.9538**	**3.4991**	**9.7720**	**0.0388**	**3.1873**	**0.0381**	**3.2254**	**0.8585**	**0.0360**	**0.8945**		**4,030.4191**	**4,030.4191**	**0.0707**	**0.3038**	**4,122.7187**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.3697	21.4474	22.6243	0.0388		1.0199	1.0199		0.9574	0.9574	0.0000	3,663.5648	3,663.5648	0.9218		3,686.6108
Total	**2.3697**	**21.4474**	**22.6243**	**0.0388**		**1.0199**	**1.0199**		**0.9574**	**0.9574**	**0.0000**	**3,663.5648**	**3,663.5648**	**0.9218**		**3,686.6108**

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	0.1026	2.9730	1.2242	0.0159	0.5829	0.0259	0.6088	0.1678	0.0248	0.1926		1,685.9661	1,685.9661	0.0172	0.2491	1,760.6382
Worker	0.8513	0.5260	8.5478	0.0229	2.6044	0.0122	2.6166	0.6907	0.0113	0.7019		2,344.4530	2,344.4530	0.0535	0.0547	2,362.0804
Total	**0.9538**	**3.4991**	**9.7720**	**0.0388**	**3.1873**	**0.0381**	**3.2254**	**0.8585**	**0.0360**	**0.8945**		**4,030.4191**	**4,030.4191**	**0.0707**	**0.3038**	**4,122.7187**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.7100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7428**	**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	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0548**	**0.0339**	**0.5503**	**1.4700e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**150.9305**	**150.9305**	**3.4500e-003**	**3.5200e-003**	**152.0653**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.7100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7428**	**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	0.0339	0.5503	1.4700e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		150.9305	150.9305	3.4500e-003	3.5200e-003	152.0653
Total	**0.0548**	**0.0339**	**0.5503**	**1.4700e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**150.9305**	**150.9305**	**3.4500e-003**	**3.5200e-003**	**152.0653**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	81.4166					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	**81.6082**	**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	0.1717	0.1061	1.7242	4.6200e-003	0.5254	2.4600e-003	0.5278	0.1393	2.2700e-003	0.1416		472.9154	472.9154	0.0108	0.0110	476.4712
Total	**0.1717**	**0.1061**	**1.7242**	**4.6200e-003**	**0.5254**	**2.4600e-003**	**0.5278**	**0.1393**	**2.2700e-003**	**0.1416**		**472.9154**	**472.9154**	**0.0108**	**0.0110**	**476.4712**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	81.4166					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	**81.6082**	**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	0.1717	0.1061	1.7242	4.6200e-003	0.5254	2.4600e-003	0.5278	0.1393	2.2700e-003	0.1416		472.9154	472.9154	0.0108	0.0110	476.4712
Total	**0.1717**	**0.1061**	**1.7242**	**4.6200e-003**	**0.5254**	**2.4600e-003**	**0.5278**	**0.1393**	**2.2700e-003**	**0.1416**		**472.9154**	**472.9154**	**0.0108**	**0.0110**	**476.4712**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.5042	7.8865	17.1778	0.0679	4.7182	0.0882	4.8064	1.2729	0.0838	1.3567		7,095.9380	7,095.9380	0.1945	0.6781	7,302.8879
Unmitigated	1.9772	11.8789	26.4099	0.1108	7.8209	0.1449	7.9658	2.1099	0.1378	2.2477		11,576.1324	11,576.1324	0.2928	1.0860	11,907.0829

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	460.66	460.66	460.66	3,584,027	2,162,201
Total	460.66	460.66	460.66	3,584,027	2,162,201

4.3 Trip Type Information

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.60	8.40	40.00	73.00	0.00	27.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Non-Asphalt Surfaces	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
Refrigerated Warehouse-No Rail	0.420472	0.044042	0.135720	0.110853	0.035298	0.009702	0.056000	0.169000	0.000000	0.000000	0.018912	0.000000	0.000000

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	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
NaturalGas Unmitigated	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Refrigerated Warehouse-No Rail	36070.8	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Total		**0.3890**	**3.5364**	**2.9705**	**0.0212**		**0.2688**	**0.2688**		**0.2688**	**0.2688**		**4,243.6274**	**4,243.6274**	**0.0813**	**0.0778**	**4,268.8452**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Refrigerated Warehouse-No Rail	36.0708	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Total		**0.3890**	**3.5364**	**2.9705**	**0.0212**		**0.2688**	**0.2688**		**0.2688**	**0.2688**		**4,243.6274**	**4,243.6274**	**0.0813**	**0.0778**	**4,268.8452**

6.0 Area Detail

6.1 Mitigation Measures Area

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Unmitigated	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122

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	0.6692					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5500e-003	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Total	**5.8190**	**4.5000e-004**	**0.0491**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1053**	**0.1053**	**2.8000e-004**		**0.1122**

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	0.6692					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5500e-003	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Total	**5.8190**	**4.5000e-004**	**0.0491**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1053**	**0.1053**	**2.8000e-004**		**0.1122**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

19371 Redlands Avenue East Industrial Project

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	254.51	1000sqft	5.75	254,511.00	0
Other Asphalt Surfaces	3.97	Acre	3.97	172,933.00	0
Other Non-Asphalt Surfaces	61.75	1000sqft	1.42	61,752.00	0
Parking Lot	161.00	Space	1.45	64,400.00	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 - See SWAPE comment on "Failure to Account for All Potential Cold Storage Requirements."

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

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Off-road Equipment - Consistent with the IS/MND's model.

Grading - See SWAPE comment on "Failure to Include Material Export."

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating - See SWAPE comment on "Unsubstantiated Reductions to Architectural Coating Emission Factors."

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

Sequestration - Consistent with the IS/MND's model.

Construction Off-road Equipment Mitigation - Consistent with the IS/MND's model.

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

Water Mitigation - Consistent with the IS/MND's model.

Waste Mitigation - Consistent with the IS/MND's model.

Fleet Mix - Consistent with the IS/MND's model.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	155.00
tblFleetMix	HHD	0.02	0.17
tblFleetMix	LDA	0.53	0.42
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.17	0.14
tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD2	7.3100e-003	9.7020e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.14	0.11
tblFleetMix	MH	5.4680e-003	0.00
tblFleetMix	MHD	0.01	0.06
tblFleetMix	OBUS	6.1600e-004	0.00
tblFleetMix	SBUS	1.1000e-003	0.00
tblFleetMix	UBUS	3.1500e-004	0.00
tblGrading	MaterialExported	0.00	30,404.00
tblGrading	MaterialImported	0.00	26,435.00
tblLandUse	LandUseSquareFeet	254,510.00	254,511.00

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	172,933.20	172,933.00
tblLandUse	LandUseSquareFeet	61,750.00	61,752.00
tblLandUse	LotAcreage	5.84	5.75
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblSequestration	NumberOfNewTrees	0.00	169.00
tblVehicleTrips	CNW_TL	6.90	40.00
tblVehicleTrips	CNW_TTP	41.00	27.00
tblVehicleTrips	CW_TTP	59.00	73.00
tblVehicleTrips	ST_TR	2.12	1.81
tblVehicleTrips	SU_TR	2.12	1.81
tblVehicleTrips	WD_TR	2.12	1.81

2.0 Emissions Summary

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	4.4117	70.8001	36.5985	0.2002	13.8123	1.9880	15.8003	4.8858	1.8419	6.7278	0.0000	20,735.9533	20,735.9533	2.1441	2.2953	21,473.5391
2023	86.8259	36.7860	49.0729	0.1068	3.8803	1.6424	5.5227	1.0423	1.5367	2.5790	0.0000	10,532.2927	10,532.2927	1.7371	0.3208	10,671.3160
Maximum	**86.8259**	**70.8001**	**49.0729**	**0.2002**	**13.8123**	**1.9880**	**15.8003**	**4.8858**	**1.8419**	**6.7278**	**0.0000**	**20,735.9533**	**20,735.9533**	**2.1441**	**2.2953**	**21,473.5391**

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	4.4117	70.8001	36.5985	0.2002	13.8123	1.9880	15.8003	4.8858	1.8419	6.7278	0.0000	20,735.9533	20,735.9533	2.1441	2.2953	21,473.5391
2023	86.8259	36.7860	49.0729	0.1068	3.8803	1.6424	5.5227	1.0423	1.5367	2.5790	0.0000	10,532.2927	10,532.2927	1.7371	0.3208	10,671.3159
Maximum	**86.8259**	**70.8001**	**49.0729**	**0.2002**	**13.8123**	**1.9880**	**15.8003**	**4.8858**	**1.8419**	**6.7278**	**0.0000**	**20,735.9533**	**20,735.9533**	**2.1441**	**2.2953**	**21,473.5391**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Energy	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Mobile	1.7840	12.5710	23.0168	0.1065	7.8209	0.1450	7.9659	2.1099	0.1379	2.2478		11,136.9712	11,136.9712	0.2910	1.0924	11,469.7787
Total	**7.9920**	**16.1078**	**26.0365**	**0.1278**	**7.8209**	**0.4140**	**8.2348**	**2.1099**	**0.4069**	**2.5167**		**15,380.7039**	**15,380.7039**	**0.3726**	**1.1702**	**15,738.7361**

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	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Energy	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Mobile	1.3204	8.3606	15.2478	0.0654	4.7182	0.0883	4.8065	1.2729	0.0840	1.3568		6,834.0285	6,834.0285	0.1957	0.6827	7,042.3587
Total	**7.5284**	**11.8974**	**18.2674**	**0.0866**	**4.7182**	**0.3572**	**5.0755**	**1.2729**	**0.3529**	**1.6258**		**11,077.7612**	**11,077.7612**	**0.2773**	**0.7605**	**11,311.3161**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	**5.80**	**26.14**	**29.84**	**32.23**	**39.67**	**13.70**	**38.37**	**39.67**	**13.26**	**35.40**	**0.00**	**27.98**	**27.98**	**25.58**	**35.01**	**28.13**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	11/1/2022	12/12/2022	5	30	
2	Building Construction	Building Construction	12/13/2022	7/17/2023	5	155	
3	Paving	Paving	6/1/2023	6/28/2023	5	20	
4	Architectural Coating	Architectural Coating	6/21/2023	8/1/2023	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 90

Acres of Paving: 6.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 381,767; Non-Residential Outdoor: 127,256; Striped Parking Area: 17,945 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	2	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
Grading	8	20.00	0.00	7,105.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	13	233.00	91.00	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	47.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 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					9.4435	0.0000	9.4435	3.6901	0.0000	3.6901			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.4435**	**1.6349**	**11.0784**	**3.6901**	**1.5041**	**5.1942**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

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	0.7133	31.9036	6.9109	0.1363	4.1452	0.3520	4.4972	1.1365	0.3368	1.4733		14,537.3080	14,537.3080	0.1948	2.2901	15,224.6104
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	0.0736	0.0530	0.6462	1.8400e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0300e-003	0.0603		187.2348	187.2348	5.0800e-003	5.2000e-003	188.9129
Total	**0.7869**	**31.9567**	**7.5570**	**0.1381**	**4.3688**	**0.3532**	**4.7219**	**1.1957**	**0.3378**	**1.5336**		**14,724.5427**	**14,724.5427**	**0.1998**	**2.2953**	**15,413.5232**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 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					9.4435	0.0000	9.4435	3.6901	0.0000	3.6901			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.4435**	**1.6349**	**11.0784**	**3.6901**	**1.5041**	**5.1942**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

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	0.7133	31.9036	6.9109	0.1363	4.1452	0.3520	4.4972	1.1365	0.3368	1.4733		14,537.3080	14,537.3080	0.1948	2.2901	15,224.6104
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	0.0736	0.0530	0.6462	1.8400e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0300e-003	0.0603		187.2348	187.2348	5.0800e-003	5.2000e-003	188.9129
Total	**0.7869**	**31.9567**	**7.5570**	**0.1381**	**4.3688**	**0.3532**	**4.7219**	**1.1957**	**0.3378**	**1.5336**		**14,724.5427**	**14,724.5427**	**0.1998**	**2.2953**	**15,413.5232**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.5671	23.2609	22.8270	0.0388		1.1737	1.1737		1.1017	1.1017		3,662.4028	3,662.4028	0.9280		3,685.6038
Total	**2.5671**	**23.2609**	**22.8270**	**0.0388**		**1.1737**	**1.1737**		**1.1017**	**1.1017**		**3,662.4028**	**3,662.4028**	**0.9280**		**3,685.6038**

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	0.1417	4.0540	1.3894	0.0166	0.5829	0.0556	0.6385	0.1678	0.0532	0.2210		1,757.7175	1,757.7175	0.0183	0.2609	1,835.9131
Worker	0.8578	0.6177	7.5279	0.0214	2.6044	0.0130	2.6174	0.6907	0.0120	0.7027		2,181.2850	2,181.2850	0.0592	0.0606	2,200.8349
Total	**0.9995**	**4.6716**	**8.9173**	**0.0380**	**3.1873**	**0.0686**	**3.2559**	**0.8585**	**0.0652**	**0.9237**		**3,939.0025**	**3,939.0025**	**0.0775**	**0.3215**	**4,036.7479**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.5671	23.2609	22.8270	0.0388		1.1737	1.1737		1.1017	1.1017	0.0000	3,662.4028	3,662.4028	0.9280		3,685.6038
Total	**2.5671**	**23.2609**	**22.8270**	**0.0388**		**1.1737**	**1.1737**		**1.1017**	**1.1017**	**0.0000**	**3,662.4028**	**3,662.4028**	**0.9280**		**3,685.6038**

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	0.1417	4.0540	1.3894	0.0166	0.5829	0.0556	0.6385	0.1678	0.0532	0.2210		1,757.7175	1,757.7175	0.0183	0.2609	1,835.9131
Worker	0.8578	0.6177	7.5279	0.0214	2.6044	0.0130	2.6174	0.6907	0.0120	0.7027		2,181.2850	2,181.2850	0.0592	0.0606	2,200.8349
Total	**0.9995**	**4.6716**	**8.9173**	**0.0380**	**3.1873**	**0.0686**	**3.2559**	**0.8585**	**0.0652**	**0.9237**		**3,939.0025**	**3,939.0025**	**0.0775**	**0.3215**	**4,036.7479**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.3697	21.4474	22.6243	0.0388		1.0199	1.0199		0.9574	0.9574		3,663.5648	3,663.5648	0.9218		3,686.6108
Total	**2.3697**	**21.4474**	**22.6243**	**0.0388**		**1.0199**	**1.0199**		**0.9574**	**0.9574**		**3,663.5648**	**3,663.5648**	**0.9218**		**3,686.6108**

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	0.0950	3.1530	1.2654	0.0159	0.5829	0.0260	0.6088	0.1678	0.0249	0.1927		1,690.1503	1,690.1503	0.0169	0.2500	1,765.0612
Worker	0.7979	0.5458	6.9410	0.0208	2.6044	0.0122	2.6166	0.6907	0.0113	0.7019		2,124.2851	2,124.2851	0.0534	0.0559	2,142.2900
Total	**0.8929**	**3.6987**	**8.2063**	**0.0367**	**3.1873**	**0.0382**	**3.2255**	**0.8585**	**0.0361**	**0.8946**		**3,814.4353**	**3,814.4353**	**0.0702**	**0.3059**	**3,907.3511**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	2.3697	21.4474	22.6243	0.0388		1.0199	1.0199		0.9574	0.9574	0.0000	3,663.5648	3,663.5648	0.9218		3,686.6108
Total	**2.3697**	**21.4474**	**22.6243**	**0.0388**		**1.0199**	**1.0199**		**0.9574**	**0.9574**	**0.0000**	**3,663.5648**	**3,663.5648**	**0.9218**		**3,686.6108**

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	0.0950	3.1530	1.2654	0.0159	0.5829	0.0260	0.6088	0.1678	0.0249	0.1927		1,690.1503	1,690.1503	0.0169	0.2500	1,765.0612
Worker	0.7979	0.5458	6.9410	0.0208	2.6044	0.0122	2.6166	0.6907	0.0113	0.7019		2,124.2851	2,124.2851	0.0534	0.0559	2,142.2900
Total	**0.8929**	**3.6987**	**8.2063**	**0.0367**	**3.1873**	**0.0382**	**3.2255**	**0.8585**	**0.0361**	**0.8946**		**3,814.4353**	**3,814.4353**	**0.0702**	**0.3059**	**3,907.3511**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.7100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7428**	**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	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0514**	**0.0351**	**0.4468**	**1.3400e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**136.7566**	**136.7566**	**3.4300e-003**	**3.6000e-003**	**137.9157**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.7100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7428**	**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	0.0514	0.0351	0.4468	1.3400e-003	0.1677	7.9000e-004	0.1685	0.0445	7.2000e-004	0.0452		136.7566	136.7566	3.4300e-003	3.6000e-003	137.9157
Total	**0.0514**	**0.0351**	**0.4468**	**1.3400e-003**	**0.1677**	**7.9000e-004**	**0.1685**	**0.0445**	**7.2000e-004**	**0.0452**		**136.7566**	**136.7566**	**3.4300e-003**	**3.6000e-003**	**137.9157**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	81.4166					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	**81.6082**	**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	0.1610	0.1101	1.4001	4.1900e-003	0.5254	2.4600e-003	0.5278	0.1393	2.2700e-003	0.1416		428.5039	428.5039	0.0108	0.0113	432.1358
Total	**0.1610**	**0.1101**	**1.4001**	**4.1900e-003**	**0.5254**	**2.4600e-003**	**0.5278**	**0.1393**	**2.2700e-003**	**0.1416**		**428.5039**	**428.5039**	**0.0108**	**0.0113**	**432.1358**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	81.4166					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	**81.6082**	**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	0.1610	0.1101	1.4001	4.1900e-003	0.5254	2.4600e-003	0.5278	0.1393	2.2700e-003	0.1416		428.5039	428.5039	0.0108	0.0113	432.1358
Total	**0.1610**	**0.1101**	**1.4001**	**4.1900e-003**	**0.5254**	**2.4600e-003**	**0.5278**	**0.1393**	**2.2700e-003**	**0.1416**		**428.5039**	**428.5039**	**0.0108**	**0.0113**	**432.1358**

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.3204	8.3606	15.2478	0.0654	4.7182	0.0883	4.8065	1.2729	0.0840	1.3568		6,834.0285	6,834.0285	0.1957	0.6827	7,042.3587
Unmitigated	1.7840	12.5710	23.0168	0.1065	7.8209	0.1450	7.9659	2.1099	0.1379	2.2478		11,136.9712	11,136.9712	0.2910	1.0924	11,469.7787

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	460.66	460.66	460.66	3,584,027	2,162,201
Total	460.66	460.66	460.66	3,584,027	2,162,201

4.3 Trip Type Information

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.60	8.40	40.00	73.00	0.00	27.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Non-Asphalt Surfaces	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
Refrigerated Warehouse-No Rail	0.420472	0.044042	0.135720	0.110853	0.035298	0.009702	0.056000	0.169000	0.000000	0.000000	0.018912	0.000000	0.000000

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	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
NaturalGas Unmitigated	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Refrigerated Warehouse-No Rail	36070.8	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Total		**0.3890**	**3.5364**	**2.9705**	**0.0212**		**0.2688**	**0.2688**		**0.2688**	**0.2688**		**4,243.6274**	**4,243.6274**	**0.0813**	**0.0778**	**4,268.8452**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Refrigerated Warehouse-No Rail	36.0708	0.3890	3.5364	2.9705	0.0212		0.2688	0.2688		0.2688	0.2688		4,243.6274	4,243.6274	0.0813	0.0778	4,268.8452
Total		**0.3890**	**3.5364**	**2.9705**	**0.0212**		**0.2688**	**0.2688**		**0.2688**	**0.2688**		**4,243.6274**	**4,243.6274**	**0.0813**	**0.0778**	**4,268.8452**

6.0 Area Detail

6.1 Mitigation Measures Area

19371 Redlands Avenue East Industrial Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Unmitigated	5.8190	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122

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	0.6692					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5500e-003	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Total	**5.8190**	**4.5000e-004**	**0.0491**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1053**	**0.1053**	**2.8000e-004**		**0.1122**

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	0.6692					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5500e-003	4.5000e-004	0.0491	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1053	0.1053	2.8000e-004		0.1122
Total	**5.8190**	**4.5000e-004**	**0.0491**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1053**	**0.1053**	**2.8000e-004**		**0.1122**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Construction	
2022	
Annual Emissions (tons/year)	0.0357
Daily Emissions (lbs/day)	0.195616438
Construction Duration (days)	61
Total DPM (lbs)	11.93260274
Total DPM (g)	5412.628603
Start Date	11/1/2022
End Date	1/1/2023
Construction Days	61
2023	
Annual Emissions (tons/year)	0.0808
Daily Emissions (lbs/day)	0.442739726
Construction Duration (days)	212
Total DPM (lbs)	93.86082192
Total DPM (g)	42575.26882
Start Date	1/1/2023
End Date	8/1/2023
Construction Days	212
Total	
Total DPM (lbs)	105.7934247
Total DPM (g)	47987.89742
Emission Rate (g/s)	0.002034489
Release Height (meters)	3
Total Acreage	12.59
Max Horizontal (meters)	319.22
Min Horizontal (meters)	159.61
Initial Vertical Dimension (meters)	1.5
Setting	Urban
Population	79,835
Start Date	11/1/2022
End Date	8/1/2023
Total Construction Days	273
Total Years of Construction	0.75
Total Years of Operation	29.25

Operation	
Emission Rate	
Annual Emissions (tons/year)	
Daily Emissions (lbs/day)	0
Total DPM (lbs)	0
Emission Rate (g/s)	0
Release Height (meters)	3
Total Acreage	12.59
Max Horizontal (meters)	319.22
Min Horizontal (meters)	159.61
Initial Vertical Dimension (meters)	1.5
Setting	Urban
Population	79,835

AERSCREEN 21112 / AERMOD 21112 11/07/22
13:09:02

TITLE: Redlands Avenue East Industrial, Construction

********** AREA PARAMETERS **********

SOURCE EMISSION RATE:	0.203E-02	g/s	0.161E-01	lb/hr
AREA EMISSION RATE:	0.399E-07	g/(s-m2)	0.317E-06	lb/(hr-m2)
AREA HEIGHT:	3.00	meters	9.84	feet
AREA SOURCE LONG SIDE:	319.22	meters	1047.31	feet
AREA SOURCE SHORT SIDE:	159.61	meters	523.65	feet
INITIAL VERTICAL DIMENSION:	1.50	meters	4.92	feet
RURAL OR URBAN:	URBAN			
POPULATION:	79835			
INITIAL PROBE DISTANCE =	5000.	meters	16404.	feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********

25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	1.687	5	150.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	10	10	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

********** AERSCREEN AUTOMATED DISTANCES **********
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	1.301	2525.00	0.4460E-01

25.00	1.382	2550.00	0.4402E-01
50.00	1.457	2575.00	0.4344E-01
75.00	1.523	2600.00	0.4287E-01
100.00	1.582	2625.00	0.4232E-01
125.00	1.637	2650.00	0.4179E-01
150.00	1.687	2675.00	0.4126E-01
175.00	1.678	2700.00	0.4074E-01
200.00	1.222	2725.00	0.4024E-01
225.00	1.003	2750.00	0.3974E-01
250.00	0.8664	2775.00	0.3926E-01
275.00	0.7735	2800.00	0.3878E-01
300.00	0.6994	2825.00	0.3832E-01
325.00	0.6368	2850.00	0.3786E-01
350.00	0.5830	2875.00	0.3741E-01
375.00	0.5367	2900.00	0.3698E-01
400.00	0.4962	2925.00	0.3655E-01
425.00	0.4607	2950.00	0.3613E-01
450.00	0.4294	2975.00	0.3614E-01
475.00	0.4014	3000.00	0.3573E-01
500.00	0.3765	3025.00	0.3533E-01
525.00	0.3540	3050.00	0.3493E-01
550.00	0.3339	3075.00	0.3455E-01
575.00	0.3156	3100.00	0.3417E-01
600.00	0.2988	3125.00	0.3379E-01
625.00	0.2836	3150.00	0.3343E-01
650.00	0.2698	3175.00	0.3307E-01
675.00	0.2569	3200.00	0.3271E-01
700.00	0.2452	3225.00	0.3237E-01
725.00	0.2343	3250.00	0.3203E-01
750.00	0.2243	3275.00	0.3169E-01
775.00	0.2148	3300.00	0.3136E-01
800.00	0.2061	3325.00	0.3104E-01
825.00	0.1980	3350.00	0.3072E-01
850.00	0.1905	3375.00	0.3041E-01
875.00	0.1835	3400.00	0.3011E-01
900.00	0.1769	3425.00	0.2981E-01
925.00	0.1705	3450.00	0.2951E-01
950.00	0.1646	3475.00	0.2922E-01
975.00	0.1591	3500.00	0.2894E-01
1000.00	0.1539	3525.00	0.2866E-01
1025.00	0.1490	3550.00	0.2838E-01
1050.00	0.1443	3575.00	0.2811E-01
1075.00	0.1400	3600.00	0.2784E-01
1100.00	0.1357	3625.00	0.2758E-01
1125.00	0.1318	3650.00	0.2732E-01
1150.00	0.1280	3675.00	0.2707E-01
1175.00	0.1244	3700.00	0.2682E-01
1200.00	0.1209	3725.00	0.2657E-01
1225.00	0.1177	3750.00	0.2633E-01
1250.00	0.1145	3775.00	0.2609E-01

1275.00	0.1116	3800.00	0.2586E-01
1300.00	0.1087	3825.00	0.2563E-01
1325.00	0.1060	3850.00	0.2540E-01
1350.00	0.1034	3875.00	0.2518E-01
1375.00	0.1009	3900.00	0.2495E-01
1400.00	0.9852E-01	3925.00	0.2474E-01
1425.00	0.9621E-01	3950.00	0.2452E-01
1450.00	0.9399E-01	3975.00	0.2431E-01
1475.00	0.9187E-01	4000.00	0.2411E-01
1500.00	0.8983E-01	4025.00	0.2390E-01
1525.00	0.8787E-01	4050.00	0.2370E-01
1550.00	0.8598E-01	4075.00	0.2350E-01
1575.00	0.8416E-01	4100.00	0.2330E-01
1600.00	0.8241E-01	4125.00	0.2311E-01
1625.00	0.8073E-01	4150.00	0.2292E-01
1650.00	0.7911E-01	4175.00	0.2273E-01
1675.00	0.7753E-01	4200.00	0.2255E-01
1700.00	0.7600E-01	4225.00	0.2237E-01
1725.00	0.7453E-01	4250.00	0.2219E-01
1750.00	0.7311E-01	4275.00	0.2201E-01
1775.00	0.7173E-01	4300.00	0.2183E-01
1800.00	0.7040E-01	4325.00	0.2166E-01
1825.00	0.6911E-01	4350.00	0.2149E-01
1850.00	0.6786E-01	4375.00	0.2132E-01
1875.00	0.6664E-01	4400.00	0.2116E-01
1900.00	0.6545E-01	4425.00	0.2100E-01
1925.00	0.6430E-01	4450.00	0.2083E-01
1950.00	0.6319E-01	4475.00	0.2068E-01
1975.00	0.6211E-01	4500.00	0.2052E-01
2000.00	0.6106E-01	4525.00	0.2036E-01
2025.00	0.6005E-01	4550.00	0.2021E-01
2050.00	0.5906E-01	4575.00	0.2006E-01
2075.00	0.5811E-01	4600.00	0.1991E-01
2100.00	0.5718E-01	4625.00	0.1976E-01
2125.00	0.5627E-01	4650.00	0.1962E-01
2150.00	0.5539E-01	4675.00	0.1947E-01
2175.00	0.5453E-01	4700.00	0.1933E-01
2200.00	0.5370E-01	4725.00	0.1919E-01
2225.00	0.5288E-01	4750.00	0.1906E-01
2250.00	0.5209E-01	4775.00	0.1892E-01
2275.00	0.5132E-01	4800.00	0.1878E-01
2300.00	0.5057E-01	4825.00	0.1865E-01
2325.00	0.4984E-01	4850.00	0.1852E-01
2350.00	0.4913E-01	4875.00	0.1839E-01
2375.00	0.4843E-01	4900.00	0.1826E-01
2400.00	0.4775E-01	4925.00	0.1814E-01
2425.00	0.4709E-01	4950.00	0.1801E-01
2450.00	0.4645E-01	4975.00	0.1789E-01
2475.00	0.4582E-01	5000.00	0.1776E-01
2500.00	0.4520E-01		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	1.708	1.708	1.708	1.708	N/A
DISTANCE FROM SOURCE	161.00 meters				
IMPACT AT THE AMBIENT BOUNDARY	1.301	1.301	1.301	1.301	N/A
DISTANCE FROM SOURCE	1.00 meters				

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

5. **Attachment B** – ***Redlands Avenue West Industrial Project Air Quality, Global Climate Change, HRA and Energy Impact Analysis*, Ganddini Group, February 25,2022, <u>revised January 27, 2023.</u>**