

FINAL ENVIROMENTAL IMPACT REPORT

I-15 Industrial Park

State Clearinghouse No. 2021060397
November 2022



Prepared for:

City of Hesperia
Planning Department
9700 Seventh Avenue
Hesperia, CA 92645

CONTACT:
Ryan Leonard
Senior Planner



Prepared by:

DUDEK

38 N. Marengo Avenue
Pasadena, CA 91101

CONTACT:
Patrick Cruz
Project Manager

Environmental Impact Report

I-15 Industrial Park Project

State Clearinghouse No. 2021060397

NOVEMBER 2022

Prepared for:

CITY OF HESPERIA, PLANNING DEPARTMENT

9700 Seventh Avenue
Hesperia, California 92645

Prepared by:

DUDEK

3615 Main Street, Suite 103
Riverside, California 92501

Table of Contents

SECTION	PAGE NO.
1	Introduction..... 1-1
1.1	Introduction..... 1-1
1.2	Contents and Organization 1-3
1.3	California Environmental Quality Act Review 1-3
2	Changes to the Draft Environmental Impact Report..... 2-1
2.1	Introduction..... 2-1
2.2	Changes to the Draft Environmental Impact Report 2-1
2.2.1	Section 4.2, Air Quality & Section 4.6, Greenhouse Gas Emissions 2-1
2.2.2	Section 4.3, Biological Resources 2-5
3	Response to Comments..... 3-1
	Response to Comment Letter 1 3-2
	Response to Comment Letter 2A 3-14
	Response to Comment Letter 2B..... 3-15
4	Mitigation Monitoring and Reporting Program..... 4-1
4.1	Introduction..... 4-1
4.2	Mitigation Monitoring and Reporting Program Table 4-3

APPENDICES

A	2022 Mohave Ground Squirrel Protocol Survey Results
B	Draft EIR Comment Letters
C	Carbon Sequestration Potential of Joshua Tree Woodland

INTENTIONALLY LEFT BLANK

1 Introduction

1.1 Introduction

This Final Environmental Impact Report (EIR) was prepared for the I-15 Industrial Park Project (Project) in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code Sections 21000-21177).

Project Overview

The Project would involve construction and operation of two industrial/warehouse buildings. Building 1 (the easternmost building) would be approximately 1,108,000 square feet, and Building 2 (the westernmost building) would be 742,000 square feet. In total, the Project would provide 1,850,000 square feet of industrial/warehouse space and associated improvements, including loading docks, tractor-trailer stalls, passenger vehicle parking spaces, and landscaping. The Project would also include several off-site utility and public street improvements, including improvements within Mesa Linda Street and Cataba Road, including frontage landscaping and pedestrian improvements, as well as installation of or upsizing of water and sewer lines in the immediate vicinity of the Project site. A detailed description of the Project is contained in the Draft EIR in Chapter 3, Project Description. As described below, the Draft EIR is incorporated herein as part of the Final EIR but provided under a separate cover.

Contents and Use of a Final EIR

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

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

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

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

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

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

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

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

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

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

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

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

1.2 Contents and Organization

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

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

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

Chapter 3, Responses to Comments. This chapter includes a list of public agencies and individuals who provided comments on the Draft EIR during the public review period. Appendix B includes the comments received on environmental issues raised during the public review process for the Draft EIR and the City's responses to these comments. Each comment letter is numbered and presented with brackets indicating how the letter has been divided into individual comments. Each comment is given a binomial with the number of the comment letter appearing first, followed by the comment number. For example, comments in Letter 1 are numbered 1-1, 1-2, 1-3, and so on. Responses to specific comments are included in Chapter 3.2 of this Final EIR, each with binomials that correspond to the bracketed comments.

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

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

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

1.3 California Environmental Quality Act Review

In accordance with Section 15082 of the CEQA Guidelines, the City released an Initial Study and Notice of Preparation on June 17, 2021, for the required 30-day review period to interested agencies, organizations, and individuals. The purpose of the Notice of Preparation is to provide notification that an EIR for the Project was being prepared, and to solicit

guidance on the scope and content of the document. The Notice of Preparation was sent to the State Clearinghouse at the California Governor's Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2021060397) to the Project. The Notice of Preparation was also posted at the County Clerk's office and on the City's website at <https://www.cityofhesperia.us/312/Planning>. Copies of the Notice of Preparation were distributed to all applicable agencies and tribes on the City's noticing list, as well as surrounding property owners within 900 feet of the Project site. Hard copies of the Initial Study and Notice of Preparation were made available for review at both the City's Planning Department, located at 9700 Seventh Avenue, Hesperia, California 92345, and at the Hesperia Branch Library, located at 9650 Seventh Avenue, Hesperia, California 92345. A public scoping meeting was held on July 8, 2021, at Hesperia City Hall to gather additional public input on the scope of the environmental document. During the scoping meeting, the City did not receive any substantive comments on the scope of the environmental analysis to be included in the Draft EIR.

The 30-day public scoping period ended on July 16, 2021. Comments received during the 30-day public scoping period were considered during preparation of the Draft EIR. Copies of the comment letters received in 2021 are provided in Appendix A of the Draft EIR, and included comments from the following:

- Native American Heritage Commission
- Mojave Desert Air Quality Management District
- California Department of Fish and Wildlife
- State Water Resources Control Board, Division of Drinking Water
- Department of Water Resources, Division of Operations and Maintenance
- Southwest Regional Council of Carpenters
- Center for Biological Diversity
- Center for Community Action and Environmental Justice

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

A Notice of Availability of the Draft EIR was sent to agencies and interested parties on July 21, 2022, and the Draft EIR was circulated for a public review period from July 21, 2022, through October 14, 2022¹. The Notice of Availability was also posted at the County Clerk's office and both the Notice of Availability and Draft EIR were posted on the City's website. Copies of the Notice of Availability were distributed to all applicable agencies and tribes on the City's noticing list, as well as surrounding property owners within 900 feet of the Project site. Hard copies of the Draft EIR were made available for review at both the City's Planning Department, located at 9700 Seventh Avenue, Hesperia, California 92345, and at the Hesperia Branch Library, located at 9650 Seventh Avenue, Hesperia, California 92345.

The City received 3 comment letters during the 2022 Draft EIR public review period. A list of the comments received, copies of the comment letters received, and responses to comments are included in Chapter 2 of this Final EIR.

¹ The public review period of the Draft EIR was extended through October 14, 2022 at the discretion of the City. The original public review end date was set to be September 6, 2022.

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

INTENTIONALLY LEFT BLANK

2 Changes to the Draft Environmental Impact Report

2.1 Introduction

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

2.2 Changes to the Draft Environmental Impact Report

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

Air Quality and Greenhouse Gas Emissions Mitigation Measures

Location: Section 4.2.5, Mitigation Measures and Level of Significance (pp. 4.3-35 through 4.3-36) and Section 4.6.5, Mitigation Measures and Level of Significance (pp. 4.6-35)

Explanation for Change and Discussion:

Since circulation of the Draft EIR, consideration was given to ways in which mitigation measures could be strengthened and/or improved. In particular, additional measures to reduce the Project's air pollutant and greenhouse gas emissions (GHG) were considered. These measures are aimed at reducing both construction and operational emissions. It should be noted that while the Draft EIR determined that the Project's construction emissions were below the applied thresholds of significance and mitigation is not required, the developer has requested that the suggested measures nonetheless be included within the Draft EIR as mitigation measures and tracked within the Mitigation Monitoring and Reporting Program. As such, MM-AQ-1 through MM-AQ-3 have been modified below. New mitigation measures are included as MM-AQ-4 through MM-AQ-6.

In addition, the Draft EIR included two Project Design Features (PDFs) that would reduce GHG emissions. These PDFs were inadvertently listed as mitigation measures in the Draft EIR's Executive Summary Chapter. While these PDFs would assuredly be implemented and tracked in the same manner that they would be if they were labeled mitigation measures, for simplicity, these PDFs have been relabeled as mitigation measures. This change is implemented globally throughout the Draft EIR wherever PDF-GHG-1 and PDF-GHG-2 are mentioned. Additional measures to reduce GHG measures have also been included within a new mitigation measure, MM-GHG-3.

Changes:

- MM-AQ-1 The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible:
- Only haul trucks meeting California Air Resources Board (CARB) model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site.
 - Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to “neutral” or “park,” and the parking brake is engaged; ~~and~~ (3) telephone numbers of the building facilities manager and CARB to report violations; and (4) that penalties apply for violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place.
 - Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.
 - Ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board-approved courses (such as the free, one-day Course #512).
 - The facility operator shall be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. The building manager or their designee shall be responsible for enforcing these requirements
 - Prior to certificate of occupancy, install conduit and infrastructure for Level 2 (or faster) electric vehicle charging stations on-site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional charging stations equal to 5% of the total employee parking spaces in the building permit, whichever is greater. By 2030 install Level 2 (or faster) electric vehicle charging stations for 25% of the employee parking spaces required. The minimum number of automobile electric vehicle (EV) charging stations required by the California Code of Regulations Title 24 shall be provided. In addition, the buildings Buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future.
 - In anticipation of a transition to zero emission truck fleets during the lifetime of the Project, the Project Applicant or successor in interest shall install at least four heavy-duty truck vehicle charging stations on-site by 2030. In addition, conduit Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available.

MM-AQ-2 The Project shall implement the following measure in order to reduce operational energy source air pollutant emissions to the extent feasible:

- The Project shall include rooftop solar panels that generate sufficient power to meet at least 75% of the Project's total operational energy requirements from within the Project's building envelopes, for each proposed warehouse to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.
- Install Energy Star-rated heating, cooling, lighting, and appliances.
- Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project.
- Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.

MM-AQ-3 The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible:

- Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as forklifts, handheld landscaping equipment, yard trucks, office appliances, etc.
- All outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and landscaping equipment) shall be zero-emission vehicles. Each building shall include the necessary charging stations or other necessary infrastructure for cargo handling equipment. The building manager or their designee shall be responsible for enforcing these requirements.
- Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible.
- Tenants shall be in, and monitor compliance with, all current air quality regulations for on-road trucks including the California Air Resources Board's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.
- Cold storage operations shall be prohibited unless additional environmental review, including a Health Risk Assessment, is conducted and certified pursuant to the California Environmental Quality Act.

MM-AQ-4 The Project shall implement the following measures in order to reduce construction air pollutant emissions to the extent feasible:

- Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. After either (1) the completion of grading or, (2) the completion of an electrical hookup at the site, whichever is first, require all generators and all diesel-fueled off-road construction equipment, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of

Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the City in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment.¹ Before an exemption may be considered by the City, the applicant shall be required to demonstrate that at least two construction fleet owners/operators in the San Bernadino Region were contacted and that those owners/operators confirmed Tier 4 Final or better equipment could not be located within the San Bernardino Region. To ensure that Tier 4 Final construction equipment or better would be used during the proposed Project's construction, the applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities..

- Provide infrastructure for zero-emission off-road construction equipment if the contractors selected to construct the Project plan to use zero-emission off-road construction equipment.
- Provide electrical hook ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills and compressors. In applicable bid documents and contracts with contractors selected to construct the Project, include language requiring all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers, etc.) used during Project construction to be electric.
- Require construction equipment to be turned off when not in use
- Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1 of the California Green Building Standards Code Part 11.
- On days when the hourly average wind speed for the City of Hesperia exceeds 20 miles per hour, additional dust control measures shall be implemented, such as increased surface watering. Grading and excavation shall be prohibited when sustained wind speed exceeds 30 miles per hour.
- Use paints, architectural coatings, and industrial maintenance coatings for all interior painting that have volatile organic compound levels of less than 10 grams per liter (g/L).

MM-AQ-5 Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that the occupants of the Project site have been provided documentation that:

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

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

- For occupants with more than 250 employees, require the establishment of a transportation demand management program to reduce employee commute vehicle emissions.

MM-AQ-6 The Project shall be designed to:

- Be able to achieve Leadership in Energy and Environmental Design (LEED) certification and meet or exceed CalGreen Tier 2 standards in effect at the time of building permit application. Documentation shall be provided to the City of Hesperia demonstrating that the Project meets this requirement prior to the issuance of building permits.
- Include the application of surface treatments (such as PURETi Coat or PlusTi) on impervious ground surfaces that lessen impervious surface-related radiative forcing.
- Include HEPA air filtration systems within in all warehouse facilities.

PDFMM-GHG-1 Water Conservation. To reduce water demands and associated energy use, subsequent development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). To implement this PDF mitigation measure, prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following water conservation measures:

- Install low-water use appliances and fixtures
- Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces
- Implement water-sensitive urban design practices in new construction
- Install rainwater collection systems where feasible.

PDFMM-GHG-2 Solid Waste Reduction. In order to reduce the amount of waste disposed at landfills, the Project would implement a 75% waste diversion program. To implement this PDF mitigation measure, prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following solid waste reduction measures:

- Provide storage areas for recyclables and green waste in new construction, and food waste storage, if a pick-up service is available.
- Evaluate the potential for onsite composting.

MM-GHG-3 GHG Mitigation Grants Program. Provided the City approves the Project, the Project Applicant shall pay a total of \$300,000 ("GHG Mitigation Grants Payment") to a 501(c)(3) nonprofit, to be used for grant funding for local GHG reduction projects (such as rooftop solar on public buildings) within the community of Hesperia.

2.2.2 Section 4.3, Biological Resources

Burrowing Owl Mitigation Measure

Location: Section 4.4.5, Mitigation Measures and Level of Significance (pp. 4.3-32 through 4.3-33)

Explanation for Change and Discussion:

Since circulation of the Draft EIR, consideration was given to ways in which mitigation measures could be strengthened and/or improved. MM-BIO-10, which includes requirements for pre-construction burrowing owl surveys and procedures to avoid burrowing owl if present, was identified as a mitigation measure that could be improved. The Project site is fragmented from larger contiguous undeveloped areas, and passive owl relocation techniques would push owls into undeveloped areas that would provide poor habitat for owls. Moreover, these areas are primarily small pockets of undeveloped land surrounded by industrial and commercial development. U.S. Highway 395 and Interstate 15 would also be barriers for owls to reach adjacent larger blocks of undeveloped areas. As such, it was suggested that active owl relocation be considered should owls be present on site, in consultation with the California Department of Fish and Wildlife (CDFW). As such, MM-BIO-10 has been modified below to account for the possibility of using active owl relocation techniques, if approved by CDFW.

Change:

MM-BIO-10 Pre-Construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife] in 2012) or current version.

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

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

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

Updates to Mohave Ground Squirrel Surveys

Location: Globally where protocol surveys for Mohave ground squirrel are discussed.

Explanation for Change and Discussion:

Since circulation of the Draft EIR, additional focused protocol surveys for Mohave ground squirrel were conducted to supplement the focused protocol surveys that were conducted in Summer 2021. Surveys included live trapping surveys and camera trapping surveys during three sessions, each lasting five days: March 23-27, 2022; May 2-6, 2022, and July 10-14, 2022. Consistent with the findings of the August 2021 Mohave Ground Squirrel Report that was included in the Draft EIR, no signs of Mohave ground squirrels were detected. A new additional Mohave Ground Squirrel Report was prepared documenting survey efforts and results. This report has been attached to this Final EIR as Appendix A.

Change:

Inclusion of Appendix A, 2022 Mohave Ground Squirrel Protocol Survey Results Report, within this Final EIR.

INTENTIONALLY LEFT BLANK

3 Response to Comments

This chapter of the Final Environmental Impact Report (EIR) for the I-15 Industrial Park Project (Project) includes a copy of all comment letters that were submitted during the public review period for the Draft EIR, along with responses to comments in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15088. The 75-day review period for the Draft EIR began on July 21, 2022 and ended on October 14, 2022¹.

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

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

All written comments on the Draft EIR are listed in Table 3-1. All comment letters received on the Draft EIR have been coded with a number to facilitate identification and tracking (see Table 2-1). The comment letters were reviewed and divided into individual comments, with each comment containing a single theme, issue, or concern. Individual comments and the responses to them were assigned corresponding numbers (e.g., A-1, B-2, C-3). To aid readers and commenters, electronically bracketed comment letters have been reproduced in this document and are included as Appendix B, with the corresponding responses provided immediately following each comment letter. The interested parties listed in Table 3-1 submitted letters during the public review period for the Draft EIR.

Table 3-1. Comments Received on the Draft EIR

Comment Letter	Commenter	Date
1	Advocates for the Environment	August 14, 2022
2A	Golden State Environmental Justice Alliance	September 9, 2022
2B	Golden State Environmental Justice Alliance	October 6, 2022

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

¹ The public review period of the Draft EIR was extended through October 14, 2022 at the discretion of the City. The original public review end date was set to be September 6, 2022.

Response to Comment Letter 1

Advocates for the Environment
Dean Wallraff, Executive Director
August 17, 2022

Preface: This Comment Letter primarily discusses the Project's impacts with regard to air quality and greenhouse gas (GHG) emissions. Importantly, since circulation of the Draft Environmental Impact Report (EIR), consideration was given to ways in which the Draft EIR's mitigation measures could be strengthened and/or improved, as well as to ways in which new mitigation measures could be included. As a result of this process, several modifications to the Draft EIR's mitigation measures were made and new mitigation measures were also included. Please refer to Chapter 2, Changes to the Draft EIR, for details regarding these modifications.

In addition, it is important to note that the Draft EIR did not quantify the effect of mitigation on the Project's air quality and GHG emissions. This was done because a quantified reduction is not required under CEQA when an impact is determined to be significant and unavoidable. Rather, the only requirement is that all feasible mitigation be applied. While the quantified effect of mitigation measures is commonly presented in CEQA analyses, efforts to quantify the effect of mitigation measures is typically done to provide substantial evidence that a Project's impact is indeed reduced to below a level of significance. In this case, because the Draft EIR did not conclude that mitigation would reduce the Project's emissions below levels of significance, no quantification was undertaken. Moreover, for many of the Draft EIR's mitigation measures, it is difficult or impossible to quantify the effect of certain mitigation measures on the Project's emissions. For example, the effect of installing solar panels on the building's rooftops (per MM-AQ-2) was not quantified because the precise quantity of solar infrastructure that would be installed was unknown, given that it is dependent on the capacity of distributed solar connections to the grid and coordination with Southern California Edison (SCE). Notwithstanding, these mitigation measures would undoubtedly have an effect on the Project's emissions, and the analysis presented in the Draft EIR should be considered a conservative, "worst-case" scenario. Nonetheless, efforts were taken within this Final EIR to estimate the effect of certain mitigation measures, including new mitigation measures that are included within this Final EIR. Some mitigation measures have also been modified to be more specific, so some quantification is now possible. While these mitigation measures do not reduce the Project's significant impacts to below a level of significance, they do provide useful information regarding their effectiveness.

It should also be noted that Draft EIR is conservative in its portrayal of the Project's impacts in several other cases. For example, given that tenants of the Project have yet to be identified, conservative trip generation rates were used. For the Project's traffic analysis, and by extension, its air quality and GHG analyses, a blend of high-cube warehouse and general light industrial uses² were assumed to account for the possibility of a tenant with trip generation characteristics that are higher than a traditional high-cube warehouse, resulting in a conservative analysis that may be more severe than what will actually occur. Additionally, and importantly, the Draft EIR's analysis did not take credit for the reduction in total vehicle miles traveled (VMT) that would be realized by the development of an employment-generating use in an area that currently experiences a jobs-to-housing imbalance (see "Purpose and Need" in Chapter 3, Project Description, of the Draft EIR). The High Desert/Victor Valley region has long been identified as an area having a low jobs-housing ratio (i.e., an area that has more potential workers living in a community than there are jobs for them),³ resulting in high numbers of residents commuting out of the region for

² The General Industrial use has a trip generation rate of 4.8 trips per thousand square feet, while the high-cube warehouse use has a trip generation rate of 2.1 trips per thousand square feet.

³ A jobs-housing ratio is a commonly used economic metric used to determine whether or not a community or region provides a sufficient number of jobs for its residents. The metric is calculated by finding the relationship between where people work ("jobs")

work. The City of Hesperia has estimated that approximately 73% of workers residing in Hesperia commute out of the area to the southern Inland Empire cities and the broader Los Angeles region (City of Hesperia 2016). Although these conditions can be attributed to a number of factors, the most notable variable in the jobs-to-housing ratio is the lack of jobs growth in the region. A low jobs-to-housing ratio can result in adverse environmental and economic effects on local communities. For example, long-distance commutes result in increased traffic and air quality and greenhouse gas emissions. Given that it cannot be determined with certainty what percentage of the Project's jobs would be fulfilled by persons that currently reside in the High Desert region and commute "down the hill" (i.e., south on Interstate [I] 15) to southern Inland Empire cities, no reduction in VMT, air pollutant emissions, or GHG emissions was assumed. In short, while the Draft EIR quantifies the Project's air pollutant and GHG emissions, it is anticipated that the Project's emissions will be lower than what is conservatively presented in the Draft EIR.

- 1-1** This comment is an introduction by Advocates for the Environment indicating that they received the Draft EIR and provides a summary of the Project as described in the Draft EIR.

The City acknowledges the comment as an introduction to comments that follow. No further response is required or necessary.

- 1-2** This comment summarizes the Draft EIR's greenhouse gas emissions (GHG) emissions analysis, stating that the calculated Project-related emissions amount to 28,264.95 metric tons of carbon dioxide equivalent (MT CO₂e) per year, which was concluded to result in a significant and unavoidable GHG impact despite implementation of MM-GHG-1 and MM-GHG-2. The comment repeats the Draft EIR's finding that "no other feasible mitigation is available to further reduce GHG emissions from the Project." The comment expresses a concern that this statement was not supported by substantial evidence and that there are other readily available mitigation measures that could reduce the Project's GHG emissions. Additionally, the comment expresses a concern that the Draft EIR's mitigation measures are vague, unenforceable, and improperly deferred.

This comment provides factual background information regarding the Draft EIR's analysis and serves as an introduction to comments that follow. Please refer to Responses to Comments 1-3 through 1-4, 1-6 through 1-9, and 1-11 through 1-12, in which the Draft EIR's mitigation measures are discussed.

- 1-3** This comment is in regard to MM-AQ-1, which states that trucks moving materials to and from the Project site must adhere to 2010 engine standards. The comment expresses a concern that the mitigation measures is improperly deferred because the reference to "emission standards" is a vague reference and it is impossible to determine the effectiveness or enforceability of the measures without specifying which standards those are.

"Emissions standards" in this case is referring to the emissions standards set by the California Air Resources Board (CARB) Truck and Bus Regulations. CARB actively enforces this regulation in and requires vehicles be in compliance with these standards at the time of vehicle registration. Given that this may not be readily apparent, MM-AQ-1 has been revised to clarify that emissions standards are CARB emissions standards. This change has is reflected within Chapter 2, Changes to the Draft EIR, of this Final EIR.

and where they live ("housing"). As of 2016, the City had a jobs/housing ratio of 0.44, well off of regional targets ranging from 1.25–1.50 (City of Hesperia 2016).

- 1-4** This comment is in regard to another aspect of MM-AQ-1, which includes the potential installation of additional auto and truck EV charging stations in the future. The comment expresses a concern that the measures is improperly deferred because it asserts future installation without a plan to ensure that any electric vehicle charging specifications will be achieved. The comment states that the lead agency should identify the number of electric vehicle charging stations and the types of infrastructure to be constructed, as well as implement a monitoring program to ensure that it actually occurs.

The City acknowledges this comment and notes that MM-AQ-1 has now been revised. MM-AQ-1 now requires that the developer install conduit and infrastructure for Level 2 (or faster) electric vehicle charging stations on-site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional charging stations equal to 5% of the total employee parking spaces in the building permit, whichever is greater. By 2030, the developer shall be required to install Level 2 (or faster) electric vehicle charging stations for 25% of the employee parking spaces required. The Project will also be required to be developed at the onset with electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future.

In addition, MM-AQ-1 requires that in anticipation of a transition to zero emission truck fleets during the lifetime of the Project, the developer shall install at least four heavy-duty truck vehicle charging stations on-site by 2030. Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of additional EV truck charging stations.

Implementation of this mitigation measure will be tracked within the Project's Mitigation Monitoring and Reporting Program and the addition of specific, discrete quantities of charging stations addresses concerns that future installation would not be achieved.

- 1-5** This comment is a summary comment that reiterates previous concerns about the Draft EIR's GHG mitigation measures. Please refer to Response to Comment 1-3 and 1-4.

- 1-6** This comment expresses a concern regarding the effectiveness of the Draft EIR's GHG mitigation measures, stating that the grouping of several specific requirements in one mitigation measures in a list format makes the mitigation measure ineffective. The comment states that the comment letter will then provide three examples of mitigation measures that are ineffective.

It should be noted that the grouping of specific requirements into one mitigation measure was done in with the intention of addressing specific sources of emissions. For example, MM-AQ-1 is intended to reduce emissions from operational mobile sources, while MM-AQ-2 is intended to reduce emissions from operational energy sources. The comment also states that each aspect of the mitigation measures should be separated into its own mitigation measure because they would require different funding mechanisms, monitoring strategies, and implementation. While the statement that certain aspects of the mitigation measures would require different mechanisms, monitoring strategies, and implementation is true, it is the City's intention to use the Mitigation Monitoring and Reporting Program (MMRP) to track and verify each aspect of each mitigation measure. The MMRP for the Project is included within this Final EIR, within Chapter 4. As presented, monitoring strategies and verification methods are identified for each aspect of each mitigation measure. The City, as lead agency, will be responsible for ensuring each aspect, or bulleted list item in the mitigation measures, is completed by

the developer. The City would not simply be able to state that the mitigation measure has been completed if there are still remaining measures that have not yet been completed. As such, the MMRP will ensure that mitigation measures are fully implemented. Thus, revisions to the Draft EIR's mitigation measures are not warranted in this case.

With regard to the three examples of mitigation measures that are ineffective, please refer to Response to Comments 1-7 through 1-9.

- 1-7** This comment expresses a concern with the second aspect of MM-AQ-1, which requires the use of signs to discourage idling. The comment states that this is duplicative of the state's Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling regulation. The comment states that the measure could be made more effective by publishing the violation penalty of \$300, so that violators are aware of the consequences.

While the City maintains that this aspect of MM-AQ-1 is effective because truck operators would be aware of anti-idling penalties by way of their training and requirements for obtaining a commercial driver's license, it also recognizes that the measure could be made more effective by indicating that financial penalties would apply. However, given that the California Air Resources Board raises fine amounts on a periodic basis, the City recognizes that it would be prudent to state that penalties apply on anti-idling signs rather than specify the current fine. As such, MM-AQ-1 will be modified to read the following (additions and deletions shown in underline and ~~striketrough~~ format):

Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; ~~and~~ (3) telephone numbers of the building facilities manager and CARB to report violations; and (4) that penalties apply for violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place.

This change has been documented within Chapter 2, Changes to the Draft EIR, within this Final EIR.

- 1-8** This comment expresses a concern with the third part of MM-AQ-1, which states that the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, which provide incentives for using cleaner-than-required engines and equipment. The comment expresses a concern that this measure is vague, unenforceable, and ineffective because merely providing materials, without any other enforcement condition to take advantage of those opportunities is not likely to contribute to actual changes in tenant behavior.

The City recognizes the validity of this concern. However, the City is limited in its ability require that the future tenants of the Project upgrade engines to be cleaner-than-required (see Response to Comment 1-11). Recognizing this constraint, this aspect of MM-AQ-1 was included as a requirement of the Project in an effort to have some effect on emissions, even if there is a possibility that the effect of measure

could be minimal. Given that it is not feasible to require that trucks accessing the Project site be cleaner-than-required, it is not feasible to place any further requirements on tenants other than providing materials informing them of incentive programs and encouraging their participation. As such, this aspect of MM-AQ-1 is retained as-is within the EIR, it is nonetheless anticipated that regulations from the state and federal governments are anticipated to result in the use of cleaner-than-required engines over time. Please refer to Response to Comment 1-11 for further discussion regarding the City's and Project Applicant's abilities to regulate trucks that access the Project.

1-9 This comment expresses a concern similar to the concern raised in Comment 1-8, except that is with regard to providing information on energy efficiency. The comment's concern is that merely providing information on energy efficiency does not ensure that energy-efficient systems and fixtures used in the Project is actually energy efficient. In this case, the provision of information on energy efficiency to future tenants of the Project is not the sole mechanism by which energy efficiency would be implemented. Rather, the Project would be outfitted with energy-efficient fixtures and control systems consistent with Title 24 (CalGreen) of the California Building Code. The provision of information relating to the use of energy-efficient lighting information is intended to further inform tenants about existing requirements and encourage the use of more advanced systems as those systems become available. Moreover, as discussed in Chapter 2, Changes to the Draft EIR, within this Final EIR, a new mitigation measure, MM-AQ-6, has been added to require that the Project Applicant provide documentation to the City demonstrating that the Project, as designed, could achieve Leadership in Energy and Environmental Design (LEED) certification and meet or exceed CalGreen Tier 2 standards in effect at the time of building permit application. Implementation of this measure would further reduce air pollutant and GHG emissions associated with operational energy source emissions and provide specific parameters under which energy-efficient systems would be implemented.

1-10 This comment expresses a concern that there are additional mitigation measures beyond those identified in the Draft EIR that could further reduce Project emissions. The comment states that the City carries the burden for identifying reasons for the infeasibility of mitigation measures, and the failure to do is a violation of CEQA.

This comment is an introduction to comments that follow. Please refer to Responses to Comments 1-11 through 1-14. Additionally, it should be noted that as discussed in the preface to these Responses to Comments, existing mitigation measures have been modified and new mitigation measures have been added to further reduce air pollutant and GHG emissions. Several of these mitigation measures address specific concerns raised in the following comments.

1-11 This comment provides several mitigation measures that the Commenter believes are feasible and that would reduce the Project's mobile-source emissions. These suggested mitigation measures include: requiring operational vehicles to adhere to the best available control technology; minimizing diesel-powered machinery and vehicles; emphasizing or requiring the use of Zero-Emission Vehicles; requiring prospective tenants to agree to maintain a hybrid or fully electrified fleet that powers itself through solar panels on the warehouse buildings; requiring non-diesel fuel types such as gasoline, ethanol, or biofuels; and including provisions in lease agreements to limit the use of heavy-duty diesel trucks.

Generally, these suggestions are oriented at reducing mobile source emissions from heavy-duty trucks that would access the Project site. Several mitigation measures were included within the Draft EIR to address this source of emissions, and modifications and new measures have been added as well. For

example, MM-AQ-3 requires that the tenant lease agreements include language that requires tenants to use the cleanest technologies available and to exclusively use zero-emission light and medium-duty delivery vehicles when economically feasible. All outdoor cargo handling vehicles would be required to be zero-emission and the Project will be outfitted with the necessary charging stations and infrastructure to support them. MM-AQ-1 requires that trucks accessing the Project site be in compliance with CARB 2010 engine standards, and materials will be provided to facility operators informing them of incentives for using cleaner-than-required engines and equipment. MM-AQ-3 requires that tenants be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation. The EIR also now includes modifications to MM-AQ-1, which requires the installation of at least four heavy-duty truck vehicle charging stations on-site by 2030 in anticipation of a transition to zero-emission truck fleets. Electrical infrastructure is also required to be in place to accommodate the installation of additional charging stations in the future. MM-AQ-2 also requires that the Project include rooftop solar panels, these charging stations could be powered in part by rooftop solar power. In addition, tenant lease agreements will also require that facility operators be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks and enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies.

While mitigation measures are included to reduce mobile source emissions from heavy-duty trucks to the extent feasible, it is important to note that both the Project Applicant, future tenants, and the City are limited in their ability to regulate and enforce the types of vehicles that would access the Project site, and current industry practices and technological constraints preclude the inclusion of a mitigation measure that places in broad strokes restrictions on the types of trucks that would access the Project.

First, the vast majority of trucks traveling throughout the state and nation are diesel-fueled, as currently permitted by state and federal laws and regulations. CARB and the U.S. Environmental Protection Agency are the only two agencies empowered to regulate mobile sources (i.e., automobiles and trucks). These agencies have consistently set more stringent regulations to reduce mobile source emissions and are expected to continue to do so; however, current regulations do allow for the use of diesel-fueled trucks, and the City nor Project Applicant do not have the jurisdictional authority to regulate the types of vehicles that would access the Project site. If CARB's desire is to require cleaner-than-presently-required engines, it is within CARB's ability to do so. At present, CARB's Truck and Bus Regulation is in place, which would require the Project's future building tenants to comply with the applicable phase-in timelines required by state regulation to ensure that any heavy trucks serving the Project would meet engine requirements. Additionally, in June 2020, CARB adopted the Advanced Clean Trucks Regulation that requires truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California will be required to be zero-emission. When commercial availability of electric-powered long-haul trucks is more readily available in the future, it is expected that such trucks will be part of the Project's operation, and mitigation measures are in place to require that the Project is accommodating of these vehicles in the future vis-à-vis electric charging infrastructure.

Additionally, the regional and nation-wide goods movement sector inherently relies on a combination of various truck fleets composed of primarily diesel-powered trucks to deliver goods to their

destinations. Warehouse tenants typically rely on a mix of both corporate fleets and independent owner-operator trucks⁴ to deliver goods to their destinations. While some tenants of industrial facilities have their own fleets, many tenants rely on a mix of both corporate fleets and independent owner-operators, and they can thus not control the types of trucks that are accessing their facilities.

Current technologies further preclude the inclusion of mitigation measures that place exclusions on the types of vehicles that would access the Project site, beyond those regulations currently enacted by the State. The City acknowledges that the transportation sector is making strides in developing technologies that will reduce air pollutant and GHG emissions over time, and the City will promote and advance their use as they are developed and implemented on a wide scale; however, many of these advancements, such as electric trucks that would eliminate and/or substantially reduce the Project's air pollutant and GHG emissions, are in their nascent stages and not yet commercially available or viable in mass. By way of example, Performance Team, a leading national third-party logistics company, currently owns only 38 electric heavy-duty trucks only just recently opened two electric charging stations for heavy-duty trucks in the Los Angeles area (Prologis 2022). While certainly well intentioned, the suggestion to require prospective tenants to maintain a fully electrified fleet that powers itself through solar panels on warehouse roofs is not yet feasible given the lack of availability of electric heavy-duty trucks. Moreover, many of the trucks that would access the Project site would be driving out of the region, and there is not yet a sufficient network of electric vehicle charging stations to support long-distance haul tips. While the market share of electric heavy-duty trucks is anticipated to increase significantly in the coming years, placing a restriction on vehicles accessing the Project site would not be feasible.

Nonetheless, it is anticipated that the current mitigation measures that would be required of the Project will lead to discrete reductions in mobile-source emissions in the short-term, as well as lay a foundation for substantial reductions in air pollutant and GHG emissions in the future by providing the necessary infrastructure for the electrification of the goods movement sector. However, the City at this time cannot exclude diesel heavy-duty trucks, which are currently legal to operate in California, from accessing the Project.

1-12 Similar to Comment 1-11, this comment provides several mitigation measures that the Commenter believes are feasible and that would reduce the Project's non-mobile source emissions. These suggested mitigation measures include: including renewable energy systems and batteries to power the warehouse during non-peak hours, solar water heaters, automatic light switches, entering into an agreement to buy clean power to offset electricity usage, and other project design features.

Many of these suggested mitigation measures are already included as mitigation measures or have been addressed by new or modified mitigation measures. The following includes a collective list of mitigation measures that will reduce non-mobile source emissions.

- The Project would include rooftop solar panels that generate sufficient power to meet at least 75% of the Project's total operational energy requirements from within the Project's building envelopes. Additional coordination will be undertaken with the Project's electrical provider, SCE, to evaluate

⁴ An independent owner-operator is typically a self-employed trucker that has their own operating authority, insurance, permits, and arranges their own loads and solicits customers. They essentially conduct business independently and also own their own trailer. This contrasts with truckers that work for corporate fleets, where an enterprise would own the trailers and arrange for freight, insurance, and permits.

whether the distribution grid can accommodate further infrastructure. For the Project's remaining electrical need (25%), at least 35% would be derived from renewable energy sources, according to the 2019 SCE Power Content Label. At this time, SCE does not currently offer the ability to exclusively purchase power from renewable sources and the suggestion to purchase clean power is not feasible at this time.

- The Project will be designed to be able to achieve Leadership in Energy and Environmental Design (LEED) certification and meet or exceed CalGreen Tier 2 standards in effect at the time of building permit application. Documentation shall be provided to the City of Hesperia demonstrating that the Project meets this requirement prior to the issuance of building permits. Consistent with these requirements, buildings will be equipped with automatic light switches and energy-efficient water heaters. While water heaters would not necessarily be solar, given that the Project would be powered in part by solar power, the water heaters would in effect be solar powered.
- Project buildings will be outfitted exclusively with Energy Star-rated heating, cooling, lighting, and appliances.
- Structures will be equipped with outdoor electric outlets in the front and rear of the structures to facilitate the use of electrical lawn and garden equipment.
- Impervious ground surfaces within the project would be coated with surface treatments (such as PURETi Coat or PlusTi) that would lessen impervious surface-related radiative forcing.

As demonstrated above, many of these reduction strategies are already in place, are addressed by other equally effective strategies, or not feasible at this time. As such, after revisions accounted for in Chapter 2, Changes to the Draft EIR, of this Final EIR, the required mitigation measures adequately address non-mobile emissions reductions strategies.

This comment also suggests that the Project Applicant purchase GHG offsets after on-site mitigation. Please refer to Response to Comment 1-16 in which this topic is addressed.

1-13 This comment expresses a concern that additional mitigation measures be required of the Project to reduce its GHG impacts. Please refer to Responses to Comments 1-3 through 1-4, 1-6 through 1-9, and 1-11 through 1-12. where these concerns are addressed.

1-14 This comment restates the Draft EIR's GHG analysis and multiplies the Project's annual emissions by 50 to 60 years to estimate the Project's total emissions. This comment provides introductory information for subsequent comments. Please refer to Response to Comment 1-16.

1-15 This comment expresses a concern with the Draft EIR's numeric GHG significance threshold, suggesting that the City should apply a net-zero threshold. The comment references two large housing projects in which net-zero thresholds were applied.

The City has not yet adopted a numeric significance threshold for determining significant impacts associated with GHG emissions. Air districts typically act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA. This may include recommendations regarding significance thresholds, analytical tools to estimate emissions and assess impacts, and mitigations for potentially significant impacts. Although air districts will also address some of these issues on a project-specific basis as responsible agencies, they may provide general guidance to local governments on these issues (SCAQMD 2008). While the Project is located

within the jurisdiction of the MDAQMD, both MDAQMD and the South Coast Air Quality Management District (SCAQMD) have recommend thresholds and they are discussed below. Because SCAQMD's thresholds are more stringent and are backed by substantial evidence from an expert agency, the City utilized SCAQMD's recommended thresholds in the Draft EIR.

On May 13, 2010 EPA finalized the GHG Tailoring Rule (75 FR 31514, June 3, 2010). The Tailoring Rule sets major source emissions thresholds that define when federal operating permits under Prevention Significant Deterioration (PSD) or Title V are required. The Tailoring Rule establishes a threshold of 100,000 tons per year or 90,719 MT per year of GHGs from new sources above which sources are considered major sources requiring a federal operating permit. As such, the MDAQMD has adopted a significance threshold for GHGs of 100,000 tons per year. More specifically, 100,000 tons per year of GHG emissions from a single facility constitutes major sources that require a federal operating permit. Similarly, the MDAQMDs NO_x significance threshold of 25 tons per year is equal to the major source threshold applicable to areas designated severe non-attainment for ozone. As such, use of the EPAs determination of whether a project is a major source and consequently establishing a threshold based on that is supported by substantial evidence.

The SCAQMD, which oversees the adjacent South Coast Air Basin, has recommended more stringent numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects; however, these thresholds were not adopted. The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal, issued in September 2010, uses a tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010), which includes a single numerical screening threshold of 3,000 MT CO₂e per year for all non-industrial projects. Based on the supporting analysis outlined in SCAQMD's draft GHG guidance and meeting notes, this 3,000 MT CO₂e per year level would capture 90 percent of GHG emissions from new residential or commercial projects in the region (SCAQMD 2008). This type of market capture analysis captures a substantial fraction of the GHG emissions from future development to accommodate for future population and job growth and excludes small development projects that would contribute a relatively small fraction of the cumulative statewide GHG emissions.

The City thus relies on use of the 3,000 MT CO₂e per year threshold to evaluate the potential for the Project to result in a significant GHG emissions impact under CEQA because it has been recommended by SCAQMD and SCAQMD is an expert agency in the Southern California region. Further, the SCAQMD provides substantial evidence that the thresholds are consistent with policy goals and 2050 GHG emissions reduction targets set by the State. Specifically, the thresholds were set at levels that capture 90 percent of the GHG emissions form the above-described uses, consistent with EO S-3-05 target of reducing GHGs to 80 percent below 1990 levels by 2050.

The City rejects the comment's suggestion to apply a net-zero threshold for this Project because it finds that its use of SCAQMD's threshold is appropriate and supported by substantial evidence.

Moreover, the City finds that application of a net-zero threshold is unprecedented for warehouse projects and would effectively result in a moratorium on such facilities within the City. While application of a net-zero threshold may be appropriate for residential projects, it is not appropriate to apply such a threshold to warehouse projects where the vast majority of operational GHG emissions result from mobile-source emissions. As discussed in Response to Comment 1-11, it is not currently feasible to entirely mitigate the Project's mobile-source emissions due to current jurisdictional and technological constraints. Nonetheless, the City is still requiring all feasible mitigation measures to reduce the Project's GHG emissions to the maximum extent practicable and anticipates that the Project's GHG emissions will reduce over time as more stringent regulations come into effect and technology improves and becomes more widespread.

1-16 This comment states that the City should require the Project Applicant to purchase carbon offsets to mitigate the Project's GHG emissions to zero. The commenter further asserts, without elaboration, that "[t]here are numerous offsets available for purchase that could negate the Project's significant GHG emissions."

Although it is true that it is possible to purchase carbon offsets, recent Court of Appeal decisions have cast considerable doubt on the use of such offsets to mitigate GHG impacts from land use development projects. In *Golden Door Properties, LLC v. County of San Diego* (2020) 50 Cal.App.5th 467, the Court of Appeal invalidated a mitigation measure that required the purchase of offsets from a "CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard." (Id. at 510.) Although the court insisted its decision "should not be construed as blanket prohibition on using carbon offsets" to mitigate GHG emissions under CEQA, it found numerous flaws with the measure at issue and failed to provide a clear roadmap for how to craft a similar valid measure. The court also declined to express an opinion on a number of issues, including whether offsets could potentially be used to mitigate more than 8 percent of a project's emissions and the extent to which out-of-county offsets could be used. (Id. at 503, 513, n. 27.) Subsequent to *Golden Door* (and within the last year), another measure requiring the purchase of offsets was similarly found to be invalid in an unpublished Court of Appeal decision, with the court finding the measure's inclusion of additional standards for offsets did "not cure the defects found in *Golden Door*." (*Sierra Club v. County of San Diego* (Dec. 21, 2021, No. D077548) 2021 WL 6050624, at *11.) In light of such uncertainty, the City finds that carbon offsets are not a feasible method for mitigating the Project's GHG emissions.

In addition, it should be noted that the vast majority of emissions that will be generated by the Project, including mobile emissions and energy emissions, are subject to the California Cap and Trade program, which places an economy-wide "cap" on major sources of greenhouse gas emissions, such as refineries, power plants, industrial facilities and transportation fuels. For example, "'Fuel suppliers' are responsible for the carbon pollution from fuels under the Cap-and-Trade Program" and thus must acquire "allowances" to cover all carbon pollution from such fuels⁵. They may also purchase certain approved offsets to fulfill up to 8 percent of their compliance obligation. (See *Golden Door* at 485.) Given that more than 95 percent of the emissions that will be generated by the Project are covered by Cap and Trade and thus are already subject to a regulatory program that includes offsets, the City finds

⁵ FAQ for Fuel Purchasers: https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/guidance/faq_fuel_purchasers.pdf

it would be inappropriate and infeasible to use offsets to mitigate such emissions. Rather, mitigation measures should focus on reducing emissions from the Project.

Indeed, *Golden Door* and other cases make clear that the purchase of offsets is not a substitute for avoiding emissions and that measures that result in actual reductions in emissions from a development project are preferable to attempting to offset emissions via offsets. Thus, the DEIR requires the Project implement numerous mitigation measures designed to reduce the Project's GHG emissions. Further, the City has carefully considered comments suggesting additional mitigation measures, and, partly as a result of comments received on the Draft EIR, the City has modified and added additional mitigation measures. While a complete listing of these mitigation measures is included within Chapter 2, Changes to the Draft EIR, of this Final EIR, at a glance, additional new mitigation measures include:

- A requirement that the Project be able to achieve Leadership in Energy and Environmental Design (LEED) certification and meet or exceed CalGreen Tier 2 standards in effect at the time of building permit application
- A requirement that at least 75% of the Project's total operational energy be supplied by rooftop solar power.
- A requirement that the Project be equipped with sufficient conduit and infrastructure for Level 2 (or faster) electric vehicle charging stations on-site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional charging stations equal to 5% of the total employee parking spaces in the building permit, whichever is greater. By 2030, this requirement shall apply to 25% of the employee parking spaces required.
- A requirement to install at least four heavy-duty truck vehicle charging stations by 2030 and install conduit in trailer parking areas for the future installation of additional stations.
- A requirement that all outdoor cargo handling requirements that all yard trucks, hostlers, yard goats, pallet jacks, forklifts, and landscaping equipment be zero-emission .
- A requirement that all diesel-fueled off-road construction equipment greater than 75 horsepower be zero-emissions or equipped with CARB Tier IV-compliant engines; that electrical hookups be provided rather than diesel-fuel generators for contractors' electric construction tools, such as saws, drills and compressors; and that all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers, etc.) used during Project construction be electric.
- A requirement to provide a total of \$300,000 to a 501(c)(3) nonprofit, to be used for grant funding for local GHG reduction projects (such as rooftop solar on public buildings) within the community of Hesperia.

As discussed within the preface to this Response to Comments, for many of the Draft EIR's mitigation measures, it is difficult or impossible to quantify the effect of certain mitigation measures on the Project's emissions. However, now that mitigation certain measures have been revised to provide more specific requirements, some quantification is possible. For example, the effect of sourcing at least 75% of the building's energy demand is anticipated to result in an approximate decrease of 2,817 MT CO₂e. Additionally, MM-BIO-1 requires that mitigation for direct impacts to western Joshua tree be fulfilled through the permanent conservation of western Joshua trees which would provide for carbon sequestration opportunities. The Project Applicant is currently in the process of acquiring at least 120

acres of western Joshua tree lands for conservation, in anticipation of mitigation requirements for the Project's 2081 Incidental Take Permit. The Project Applicant is currently in the process of acquiring two sites in the Antelope Valley totaling 1,112 acres for mitigation purposes. Based on surveyed vegetation densities and the average sequestration potential of these vegetation communities, it is anticipated that approximately 11,533 MT CO₂e would be sequestered over a 30 year period, which is assumed to be the life of the Project. The Project Applicant intends to place a conservation easement on this land and use a portion of it fulfill its anticipated mitigation obligation under its 2081 Incidental Take Permit for Western Joshua tree. Assuming that 120 acres are applied to the proposed Project, approximately 96 MT CO₂e would be sequestered over 30 years, or the assumed life of the Project (see Appendix C for calculations).

While some quantification of the effect of mitigation is possible, many mitigation measures still remain difficult to quantify and the City finds it would not be appropriate to do so at this time, but notes that they would result in substantial reductions in emissions over the life of the Project.

With the addition of the new measures described above, the City has determined that all feasible mitigation measures have been incorporated into the Final EIR. Such additional measures will result in fewer emissions than disclosed in the Draft EIR, however, because the Project would still result in a net increase in GHG emissions as compared to existing conditions, the Project's contribution to cumulative GHG impacts is still considered to be significant and unavoidable. For the reasons discussed above, the City's experts disagree that the purchase of carbon offsets is a feasible or appropriate way to mitigate the Project's remaining GHG emissions.

1-17 This comment provides concluding remarks and reiterates comments made earlier in the Comment Letter. Please refer to Responses to Comments 1-1 through 1-16 in which these comments are addressed.

1-18 This comment requests that the City add the commenter to its noticing list for the Project. The City acknowledges this comment. The City has also added the commenter to its noticing list.

References Cited

City of Hesperia 2016. *High Desert Workforce Report*. April 4, 2016. Accessed December 17, 2019.

<https://www.cityofhesperia.us/DocumentCenter/View/13786/HD-Workforce-Report-April-2016?bidId=>.

Prologis. 2022. Prologis Announces Major EV Truck Installations in Southern California. November 2022.

<https://www.prologis.com/sites/corporate/files/documents/2022/11/2022-11-15-Prologis-Announces-Major-EV-Truck-Installations-in-Southern-California.pdf>

SCAQMD. 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*. October 2008.

SCAQMD. 2010. "Greenhouse Gases CEQA Significance Thresholds Working Group Meeting No. 15." September 28, 2010. Accessed August 2016. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2).

INTENTIONALLY LEFT BLANK

Response to Comment Letter 2A

**Golden State Environmental Justice Alliance
Joe Bourgeois, Executive Director
October 6, 2022**

- 2A-1** This comment introduces the Golden State Environmental Justice Alliance (GSEJA) and references its comment letter submitted on the Draft EIR, dated September 6, 2022 (Comment Letter 2B). The comment states that after further review, GSEJA is withdrawing its original comment letter in response to actions taken by the Project Applicant to address GSEJA's environmental concerns with the Project. The environmental concerns raised by GSEJA are included in Comment Letter 2B. While GSEJA's original letter was rescinded, responses to these concerns, as well as additional actions that will be undertaken by the Project Applicant to address these concerns (i.e., additional mitigation measures that have been added to the Final EIR), are provided in Response to Comment Letter 2B.

Response to Comment Letter 2B

Golden State Environmental Justice Alliance
Gary Ho, Attorney, Blum Collins, LLP
September 6, 2022

- 2B-1** The comment notes that the comment letter has been submitted by Blum Collins on behalf of the Golden State Environmental Justice Alliance. Additionally, the comment requested to be added to the public interest list for the Project. This comment serves as an introduction to comments that follow.
- 2B-2** This comment summarizes the proposed Project and does not identify specific areas where the EIR is inadequate; therefore, no further response is required
- 2B-3** The comment states that preparing a single, standalone EIR for the Project is piecemealing because the City of Hesperia (City) should prepare an EIR for the Project, Hesperia Commerce Center I and Hesperia Commerce Center II. The Hesperia Commerce Center project is an approximately 3.5-million-square-foot warehouse project located approximately 0.8 miles southwest of the Project. The Hesperia Commerce Center project was approved in 2013 (and a comprehensive EIR was certified) and is currently under construction. The Hesperia Commerce Center II project is an approximately 3.75-million-square-foot warehouse project located approximately 0.6 miles northwest of the Project. The Hesperia Commerce Center II project was approved in 2022 (and a comprehensive EIR was certified) and construction is planned to commence in early 2024, pending final engineering designs. According to *Banning Ranch Conservancy v. City of Newport Beach*, no piecemealing occurs when projects can be implemented independently. Here, the Hesperia Commerce Center project, the Hesperia Commerce Center II project, and the proposed Project are three separate disconnected projects that each have independent utility, meaning that neither project is dependent on the other. Additionally, the EIR accounted for the Hesperia Commerce Center project and Hesperia Commerce Center II project in its list of cumulative development projects. Because an EIR has already been certified for the Hesperia Commerce Center project and for the Hesperia Commerce Center II project, these two projects and the Project are separate, individual projects, and because the Project's EIR fully accounts for the cumulative impacts of the Hesperia Commerce Center project, Hesperia Commerce Center II project, and the proposed Project, preparation of a single, standalone EIR for the Project does not constitute piecemealing under CEQA.
- 2B-4** The comment states that the Draft EIR does not include any floorplans, detailed grading plan, or a detailed site plan for the Project. The comment also states that the site plan provided in Figure 3-12 does not provide any pertinent information such as earthwork quantity notes, parking requirements, or floor area ratio calculations. The comment claims that the Draft EIR has excluded these details from public review, "which does not comply with CEQA's requirements for adequate informational documents and meaningful disclosure," and states that the EIR must be revised to include these items.
- The Draft EIR includes a detailed, 58-page project description that provides the necessary information to adequately evaluate the Project's environmental impacts. This project description includes earthwork quantities (export of approximately 8,802 cubic yards [pp. 3-11]), parking spaces (335 loading dock positions, approximately 636 tractor-trailer stalls, and approximately 687 passenger vehicle parking spaces [pp. 3-7]), and floor area ratios (Building 1 would have a floor area ratio of .469 and Building 2 would have a floor area ratio of .417 [pp. 3-6]).

Additional specific floor plans are not available because, as stated in the Draft EIR, “an end user of the two buildings has not yet been identified”; therefore, the floor plans have not been finalized. The presentation of any floor plans also would not affect the analysis of potential project environmental impacts in the Draft EIR. However, the Draft EIR states that “for the purposes of CEQA and to ensure full disclosure on all potential allowable uses on the project site, this EIR assumes development of... a blend of “high-cube” warehouse and general light industrial uses” (pp. 3-10). Therefore, the analysis contained in the Draft EIR accurately reflects the potential worst-case impacts of the project as proposed, and no further analysis is required. Because no new environmental issues were identified, no further analysis is necessary.

2B-5 The comment refers to comments provided by SWAPE, which are included as an attachment to the comment letter. Refer to Responses to Comments 2B-18 through 2B-32 in which these comments are addressed.

2B-6 This comment expresses a concern regarding the EIR’s analysis of the Project’s air quality impacts on the surrounding community. The comment states this is particularly important due to the Project site’s location in an area that is burdened by pollution, as indicated by CalEnviroScreen. Neither the City, the MDAQMD, nor the State CEQA Guidelines include thresholds that consider environmental justice such as the CalEnviroScreen results, but rather account for the potential health effects of a project with project-level thresholds. As such, there is currently no air quality guidance or thresholds to analyze areas with higher pollution burden differently from areas with lower pollution burden. While CalEnviroScreen is a useful tool in assessing a community’s risk, it is not an appropriate tool for evaluating a project’s impact on the environment as required under CEQA. An air quality emissions impact analysis and construction and operation health risk assessments were prepared for the Project and incorporated into the EIR (as described in Section 4.2 of the Draft EIR). Within the MDAQMD jurisdiction, a Project’s localized impacts (i.e., impacts to nearby sensitive receptors) are also evaluated using Localized Significance Thresholds that were developed in response to environmental justice and health concerns raised by the general public regarding exposure of individuals to criteria pollutants in local communities. As discussed in the Draft EIR, the Project would result in exceedances of a criteria air pollutant (NO_x and PM₁₀) within a community that is identified as disadvantaged. However, as also discussed within the Draft EIR, the effects of this exceedance would occur on a regional scale, and CEQA does not currently treat this impact in a different manner depending on the socioeconomic characteristics of the community. Nonetheless, it is also important to note that the Project’s health risk impacts with regard to sensitive receptors in the community was determined to be less than significant with mitigation incorporated. Moreover, development of the Project at the Project site would provide quick and efficient access to Highway 395 and Interstate 15, thereby eliminating the need for truck traffic to take longer routes through residential or commercial/retail areas.

2B-7 The comment states that CBECC is the State of California’s only approved compliance modeling software for non-residential building, and that CalEEMod is not listed as approved software. The comment also states that the modeling does not comply with the 2022 Building Energy Efficiency Standards, and under-reports energy and greenhouse gas (GHG) impacts, but the comment does not provide evidence of this statement. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform to calculate construction and operational emissions from land use development projects. CalEEMod was developed for the California Air Pollution Control Officers Association in collaboration with the California Air Districts. The model is a comprehensive tool for quantifying air quality impacts from land use projects located throughout California. The model can be

used for a variety of situations where an air quality analysis is necessary or desirable, such as preparing CEQA or National Environmental Policy Act (NEPA) documents, conducting pre-project planning, and verifying compliance with local air quality rules and regulations. The commenter has not provided any substantial evidence to demonstrate that the use of CalEEMod to estimate GHG emissions is either inappropriate or inaccurate. Therefore, no revisions are required, and no further response is necessary.

2B-8

This comment expresses a concern that the EIR does not address consistency with Senate Bill 330 or the City's Housing Element. The Project is located on a site that is primarily zoned for industrial uses. A portion of the Project site requires a zone change General Plan Amendment to modify a portion of the Project site's General Plan Land Use designation from Regional Commercial to Commercial/Industrial Business Park and a Specific Plan Amendment to modify the Project site's Specific Plan and zoning designations from Regional Commercial to Commercial/Industrial Business Park. The portion of the Project site for which this applies is a parcel that currently has two zoning designations, despite being one parcel. The proposed land use changes would address this inconsistency and provide for uniform land use designations across the entire Project site. Given that the parcel that is partially zoned Regional Commercial, which does allow for multi-family development, is also zoned Commercial/Industrial Business Park, a change in land use designations would be necessary to allow for residential development; thus, this inconsistency currently precludes residential development, and no net loss of housing opportunities would occur. With regard to the City's Housing Element, while the City has identified the Project site in a list of sites that could be used to meet its Regional Housing Needs Allocation in its 5th Cycle Housing Element, this does not equate to a mandate to construct residential units on a site. Rather, this inventory is used to provide planners with a list of sites that could address housing demands in the future. Moreover, the City is currently in the process of updating its Housing Element for 2021-2029, and the draft Housing Element, revised August 2022, does not include the Project site on a list of housing opportunity sites. Additionally, the majority of the Project site is already designated for industrial purposes and the portion of the site involving a change in land use designations is designated for large-scale employment uses. As such, the Project is consistent with the intent of the Specific Plan and address existing inconsistencies within the City's General Plan and Specific Plan.

2B-9

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

2B-10 This comment expresses a concern that the EIR did not include a consistency analysis with the City's Specific Plan and lists several policies within the Specific Plan that are believed to be applicable to the Project. Please refer to Response to Comment 2B-9. While the Draft EIR did indeed include an analysis of the Project's consistency with the Specific Plan, it did not analyze consistency with each and every Specific Plan policy. Rather, the analysis focused on goals and policies that have been adopted by the City to avoid or mitigate environmental effects of new development projects. As such, the Draft EIR has evaluated the project's consistency with all applicable Specific Plan land use policies and no revisions are necessary. Because no new environmental issues were identified, no further analysis is necessary.

2B-11 This comment expresses a concern that the Project is inconsistent with the Specific Plan, General Plan, SCAQMD 2016 Air Quality Management Plan, SCAG 2020-2045 RTP/SCS, and SB 330. Please refer to Responses to Comments 2B-8 through 2B-10. Additionally, the Project site is not located within the jurisdiction of the SCAQMD and the SCAQMD 2016 Air Quality Management Plan is not applicable to the Project. Consistency with the SCAG 2020-2045 RTP/SCS was included within Table 4.9-3 of the Land Use and Planning chapter of the Draft EIR. The comment also expresses a concern regarding the EIR's air quality, GHG, and transportation analysis. Please refer to Responses to Comments 2B-12 through 2B-25 in which these concerns are addressed.

2B-12 This comment expresses a concern regarding the VMT methodology used to evaluate the Project's potential impact on VMT. The following response presents information supporting the methodology used to evaluate the Project's potential impact on VMT. The information includes guidance from the Governor's Office of Planning and Research (OPR), a summary of the City of Hesperia's VMT Significance Thresholds, a description of the nature of warehouse facilities and related travel; and a summary of the air quality analysis conducted for the Project. Senate Bill 743 (SB-743), which was codified in Public Resources Code section 21099, was signed by the Governor in 2013 and directed the Governor's Office of Planning and Research (OPR) to identify alternative metrics for evaluating transportation impacts under CEQA. Per Section 21099 of the Public Resource Code, the selection of the VMT criteria for determining the significance of transportation impacts was intended to promote reductions of greenhouse gas emissions (GHG); to develop multimodal transportation networks; and to diversify land uses. In addition, there are various legislative mandates and state policies that establish quantitative GHG emission reduction targets. Pursuant to Senate Bill 375, the California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) call for reductions in GHG emissions only from cars and light trucks. The changes to the CEQA Guidelines in response to Section 21099 include a new section (15064.3) that specifies that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. In addition, Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." As a result, the VMT criteria and thresholds in the CEQA Guidelines and this chapter related to employment generating uses do not apply to those components of proposed projects that involve commercial vehicles. However, the VMT criteria and thresholds would apply to those components that involve passenger vehicles.

A separate Technical Advisory (TA) issued by OPR provides additional technical details on calculating VMT and assessing transportation impacts for various types of projects. The OPR Technical Advisory states that "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. It does not include heavy-duty trucks, semi-trailers, construction equipment, or other commercial-type vehicles. While the OPR TA allows for heavy duty truck VMT to be included in modeling, it is important to note that

this allowance was provided for modeling convenience and ease of calculation. The TA also states that the analysis should be based on an apples-to-apples comparison, wherein the same VMT (e.g., with trucks or without trucks) should be reported for both the threshold and the project. This was also clarified and noted during an informational question and answer session conducted by OPR to provide information and guidance on conducting project-level VMT analysis (OPR 2020), that it is automobile VMT (i.e. cars and light duty trucks) that should to be quantified.

The following example from the County of Santa Barbara Environmental Thresholds Update summarizes the issue concisely: *For example, a proposed oil production or agricultural processing facility may involve significant numbers of commercial trucks and semitrailers that would haul supplies and products to and from the facility. The project may also involve employees and others who would travel to and from the facility in passenger vehicles. In this case, the VMT analysis would not address potential VMT generated by the commercial trucks and semi-trailers and, therefore, would not consider such VMT a significant transportation impact. Rather, the VMT analysis would focus on VMT generated by passenger vehicles traveling to and from the facility*⁶.

City of Hesperia Thresholds

The City of Hesperia has adopted VMT impact thresholds⁷ and has identified following recommended threshold:

A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

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

The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

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

The VMT metric used for measuring the Project's transportation impact is Home-based Work VMT/employee, an efficiency metric which does not include trucks or trucks equivalents. As such, trucks were not included for measuring against SB 743 VMT which is the threshold adopted by the City of Hesperia. In addition, to evaluate the Project's effect on VMT for the region, link based total VMT per

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

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

service population was also calculated for both San Bernardino County and Unincorporated San Bernardino County without and with the project.

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

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

2B-13

This comment expresses a concern regarding the Draft EIR's population and housing analysis. As discussed in the Draft EIR, a future tenant of the warehouse has not yet been identified, and thus, the number of jobs that the Project would generate cannot be precisely determined. Thus, the Draft EIR relied on employment estimates were based on Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition (ITE 2017) and the *Transportation Uniform Mitigation Fee (TUMF) High-Cube Warehouse Trip Generation Study* (WSP, January 29, 2019). Based off of these employment generation estimates, the Draft EIR concluded that the Project could generate approximately 2,309 employees, which is line with growth projections in the City's General Plan and SCAG 2020-2045 RTP/SCS. These growth projections were based on existing and planned land use patterns, which assumed that the Project site would be developed for industrial and employment generating uses. Moreover, as discussed within the Draft EIR and Response to Comment Letter 1, the High Desert/Victor Valley region has long been identified as an area having a low jobs-housing ratio (i.e., an area that has more potential workers living in a community than there are jobs for them),⁸ resulting in high numbers of residents commuting out of the region for work. The has estimated that approximately 73% of workers residing in Hesperia commute out of the area to the southern Inland Empire cities and the broader Los Angeles region (City of Hesperia 2016). Although these conditions can be attributed to a number of factors, the most notable variable in the jobs-to-housing ratio is the lack of jobs growth in the region. A low jobs-to-housing ratio can result in adverse environmental and economic effects on local communities. For example, long-distance commutes result in increased traffic and air quality and greenhouse gas emissions. By developing an employment-generating use, the Project would provide job opportunities for those living in the area that may commute out of the area for work. Moreover, the applicable threshold of significance with regard to population and housing raises the question of whether a project would result in substantial unplanned population growth such that new housing would be required and the construction of such housing would result in environmental effects. Given the substantial jobs-housing imbalance and given that the Project site is designated for employment-generating uses, the Project would not result in unplanned population growth and would not require

⁸ A jobs-housing ratio is a commonly used economic metric used to determine whether or not a community or region provides a sufficient number of jobs for its residents. The metric is calculated by finding the relationship between where people work ("jobs") and where they live ("housing"). As of 2016, the City had a jobs/housing ratio of 0.44, well off of regional targets ranging from 1.25-1.50 (City of Hesperia 2016).

the construction of new housing. While the City is planning for population growth, it will require that future residential projects undergo a complete environmental analysis, which would be completely independent of the Project.

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

- 2B-14** This comment expresses a concern regarding the EIR's findings of significance and cumulative impact analysis. The Draft EIR addressed findings of significance with regard to the proposed land use changes in the Land Use and Planning chapter of the Draft EIR and within the Mandatory Findings of Significance section of the Draft EIR. Cumulative impacts were discussed for each resource topic and a comprehensive list of cumulative projects was compiled. The Draft EIR made the appropriate findings regarding the Project's significant and unavoidable impact determinations and feasible mitigation measures were applied where available.
- 2B-15** This comment expresses a concern regarding the Draft EIR's conclusions regarding significant and irreversible changes, primarily in the context of the proposed land use change and the Project's significant and unavoidable impacts. Please refer to Responses to Comments 2B-8 through 2B-11 for a discussion of the Project's proposed land use changes. Significant and irreversible changes, including the proposed land use changes were discussed in the Other CEQA Considerations chapter of the Draft EIR. As discussed, the Project would overall be consistent with the intent and design goals of the Main Street/Interstate-15 District in the Main Street and Freeway Corridor Specific Plan and the City has already committed the site to industrial/warehouse (and similar) uses when the City adopted the Main Street and Freeway Corridor Specific Plan.
- 2B-16** This comment expresses a concern regarding the Draft EIR's alternatives analysis. The Draft EIR included a comprehensive alternatives analysis that included alternative land uses and alternative sites. For alternative uses, given that the majority of the Project site is zoned for commercial and industrial business park uses, uses that are either permitted by right or conditionally permitted were considered. Many of these uses would result in higher trip generation rates than the project, including but not limited to general office, building material and rental, automobile parts and service center, and car wash. Notably, residential uses were considered but rejected due to incompatibility issues with the existing industrial, transportation-related, and commercial land uses within the area. In addition, an alternative that would reduce all of the Project's significant and unavoidable impacts was considered; however, this would equate to a project 15% the size of the proposed Project, which would clearly not be feasible. The Draft EIR's alternatives analysis thus met CEQA's requirement to evaluate a reasonable range of alternatives and is therefore adequate as provided.

- 2B-17** The comment serves as a conclusion to the letter, and requests that the City add the commenter to the City's public interest list for the Project. The comment is noted and the City has added the commenter to its list of parties to be notified for the Project. The comment does not identify specific areas where the EIR is inadequate; therefore, no further response is required.
- 2B-18** The comment serves as an introduction to the attached SWAPE letter, introduces the Project, and summarizes the conclusion of the letter. The comment does not raise any specific issues concerning the adequacy of the EIR.
- 2B-19** The commenter suggests that additional feasible mitigation measures are available to reduce the Project's air quality impact. It is important to note, CEQA does not require adoption of every imaginable feasible mitigation measure. CEQA's requirement applies only to feasible mitigation that will "substantially lessen" a project's significant effects. (Public Resources Code, § 21002.) As explained by one court: A lead agency's "duty to condition project approval on incorporation of feasible mitigation measures only exists when such measures would [avoid or] 'substantially lessen' a significant environmental effect." (San Franciscans for Reasonable Growth v. City and County of San Francisco (1989) 209 Cal.App.3d 1502, 1519.) "Thus, the agency need not, under CEQA, adopt every nickel and dime mitigation scheme brought to its attention or proposed in the project EIR." (Ibid.) Rather, an EIR should focus on mitigation measures that are feasible, practical, and effective. (Napa Citizens for Honest Government v. Napa County Board of Supervisors (2001) 91 Cal.App.4th 342, 365.). Notwithstanding, please refer to Chapter 2, Changes to the Draft EIR, and Response to Comment 1-11 and 1-12 where mitigation measures are discussed. As discussed, several mitigation measures have been modified or added that would further reduce the Project's impacts. .
- 2B-20** Comments were received regarding the modeling inputs in the California Emissions Estimator Model (CalEEMod) that questioned changes to model default parameters. However, as specifically identified in the CalEEMod User's Tips documentation, "Users are encouraged to understand the defaults and provide site specific data (e.g., construction schedule, construction equipment type, results of traffic study, predicted water usage, etc.), if available, for a more accurate analysis"(CAPCOA 2021). As such, the changes to the default CalEEMod assumptions for the project emissions modeling were appropriate based on applicant input and project-specific information. CalEEMod provides default values for input parameters such as for warehouse building square footage. After the minimum project characteristic and land use information is inputted, CalEEMod provides default values so that the model may still be used to evaluate emissions from a land use development project in the event that such detailed information is not yet known (for instance, for a project in the planning stage). Similarly, CalEEMod provides a host of default values for the construction emissions analysis. Construction default values were utilized where proposed project information was not readily available. Default inputs that were updated according to information provided by the Project Applicant include construction schedule phase dates for major activities (e.g., demolition, grading, building construction, paving, and architectural coating), construction truck and vehicle worker trips, and grading/excavation quantities.
- Furthermore, the Project Applicant and their contractor(s) represent 'experts' in estimating construction activities for the project based on their experience with similar projects and their need to estimate construction activities, such as duration of construction and equipment needed, for budgeting. Substantial evidence is defined in the CEQA statute to mean "facts, reasonable assumptions predicated on facts, and expert opinion supported by facts" (14 CCR 15384(b)). Because assumptions provided the Project Applicant and their team represent an expert opinion supported by facts, these

assumptions constitute substantial evidence under CEQA that can be used to more accurately estimate project-generated emissions.

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

- 2B-21** The commenter speculates that the Project will use architectural coatings with volatile organic compound (VOC) limits higher than 50 grams per liter and that the model may have underestimated VOC emissions. Like typical construction projects, the Project would use flat and non-flat coatings. Per MDAQMD's Rule 111, flat and non-flat coatings, which would be used for interior and exterior paint for the project, have a VOC limit of 50 grams per liter, which the Project would be required to comply with. Therefore, the EIR's analysis is adequate as presented.
- 2B-22** As discussed in Response to Comment 2B-20 and 2B-21, the EIR's analysis and modification of CalEEMod default values is appropriate and substantiated. Therefore, the EIR's analysis is adequate as presented.
- 2B-23** As discussed in Responses to Comments 2B-20 and 2B-21, the non-default CalEEMod values for vehicle trips and VOC content during construction are substantiated and accurate. Therefore, the commenters cursory re-modeling of VOC emissions is based on inaccurate assumptions and the EIR's analysis is adequate as presented.
- 2B-24** The comment uses a screening model, known as AERSCREEN, to evaluate health risk impacts from diesel emissions during construction of the proposed project. While the AERSCREEN model is an acceptable model by the EPA and MDAQMD, it is a screening model. As a screening model, it overestimates impacts with the general understanding that if AERSCREEN does not show impacts, then impacts would also not occur if a more detailed analysis is conducted using a more refined model. AERSCREEN is a simplified model in that it does not consider meteorological data or topographical data. AERSCREEN assumes calm wind conditions at all times and a stable atmosphere (i.e., no atmospheric mixing). AERSCREEN also has simplified emissions input fields such that it typically overestimates emission impacts from varying construction activities. Construction health risks were evaluated in the Draft EIR using the EPA and SCAQMD refined model, known as AERMOD. This model takes into account meteorological data and topographical data. It also accounts for the geography of a project site, locations of emissions sources, the time of day emissions would occur, locations of sensitive receptors, and other factors to a much greater degree than AERSCREEN, which better represents the real world environment. Based on the construction HRA using this refined model, AERMOD, using AERMOD methodologies from the MDAQMD, and using the age sensitivity factors and other health risk evaluation parameters recommended by the MDAQMD and the Office of Environmental Health Hazard Assessment (OEHHA), health risk impacts were determined to be less than the MDAQMD significance thresholds for cancer risk and non-cancer chronic risk for diesel particulate matter. Therefore, the EIR's analysis is adequate as presented.
- 2B-25** The commenter incorrectly calculates a cumulative cancer risk by adding construction and operational risks together and comparing them to the MDAQMD's 10 in one million threshold. SCAQMD has provided clear guidance on preparation of construction and operational HRAs and explicitly requests

that construction and operational health risks be evaluated separately and not combined (Krause, pers. comm. 2019). Therefore, the EIR's analysis is adequate as presented.

- 2B-26** The comment reiterates previous concerns regarding including the Draft EIR's quantitative analysis of emissions and states that additional feasible mitigation measures should have been implemented. As discussed in Response to Comment 2B-20 and 2B-21, the EIR's analysis and modification of CalEEMod default values is appropriate and substantiated. Additionally, as discussed in Response to Comment 2B-19, several modifications and new mitigation measures have been included.
- 2B-27** The comment reiterates previous concerns regarding including the Draft EIR's quantitative analysis of emissions. As discussed in Response to Comments 2B-20 and 2B-21, the EIR's analysis and modification of CalEEMod default values is appropriate and substantiated.
- 2B-28** This comment expresses a concern regarding the Draft EIR's mitigation measures to reduce the Project's GHG emissions. Please refer to Response to Comment 2B-19.
- 2B-29** This comment provides a list of mitigation measures that are suggested to be included within the EIR. Please refer to Chapter 2, Changes to the Draft EIR, and Response to Comment Letter 1.
- 2B-30** This comment states the Project should not be approved without incorporating on-site renewable energy production such as solar or wind based on the States targets for renewable energy production for 2045. Please refer to Responses to Comments 1-11 and 1-12.
- 2B-31** The comment provides a disclaimer regarding limited knowledge of the Project and the limits of SWAPE's analysis. The comment does not address any inadequacies of the EIR and no further response is required.
- 2B-32** This comment includes technical modeling outputs and the commenter's qualifications and experience. The comment does not raise any specific issues concerning the adequacy of the EIR, and no further response is required.

References Cited

CAPCOA (California Air Pollution Control Officers Association). 2021. *California Emissions Estimator Model (CalEEMod) User's Guide Version 2020.4.0*. Prepared by BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts. May 2021. <http://www.caleemod.com>.

ITE (Institute of Transportation Engineers). 2017. *The Trip Generation Manual*, 10th ed. Washington DC: ITE.

Krause, M. 2019. "AQMD HRA Thresholds." Email between M. Krause (SCAQMD) and A. Poll (Dudek). February 27, 2019.

OPR (California Governor's Office of Planning and Research). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018. Accessed May 2020. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

INTENTIONALLY LEFT BLANK

4 Mitigation Monitoring and Reporting Program

4.1 Introduction

California Public Resources Code Section 21081.6 requires that, upon certification of an EIR, “the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.” (PRC Section 21000–21177)

This Mitigation Monitoring and Reporting Program was developed in compliance with Section 21081.6 of the California Public Resources Code and Section 15097 of the CEQA Guidelines (14 CCR 15000–15387 and Appendices A–L), and includes the following information:

- A list of mitigation measures
- The timing for implementation of the mitigation measures
- The party responsible for implementing or monitoring the mitigation measures
- The date of completion of monitoring

The City of Hesperia must adopt this Mitigation Monitoring and Reporting Program, or an equally effective program, if it approves the proposed Project with the mitigation measures that were adopted or made conditions of Project approval.

INTENTIONALLY LEFT BLANK

4.2 Mitigation Monitoring and Reporting Program Table

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
Air Quality				
MM-AQ-1. The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible: - Only haul trucks meeting California Air Resources Board (CARB) model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site. - Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to “neutral” or “park,” and the parking brake is engaged; (3) telephone numbers of the building facilities manager and CARB to report violations; and (4) that penalties apply for violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place. - Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment. - Ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board-approved courses (such as the free, one-day Course #512).	Haul Trucks During Project Operation and subject to periodic City inspection Anti-Idling Signs Prior to the issuance of an occupancy permit Carl Moyer Program Funding Opportunities Prior to tenant occupancy Daily Monitoring Logs During Project Operation and subject to periodic City inspection Load Management Training During Project Operation Conduit/EV Charging Infrastructure Prior to certificate of occupancy and by 2030 Four heavy-duty truck vehicle charging stations By 2030	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
- The facility operator shall be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. The building manager or their designee shall be responsible for enforcing these requirements - Prior to certificate of occupancy, install conduit and infrastructure for Level 2 (or faster) electric vehicle charging stations on-site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional charging stations equal to 5% of the total employee parking spaces in the building permit, whichever is greater. By 2030 install Level 2 (or faster) electric vehicle charging stations for 25% of the employee parking spaces required. Buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future. - In anticipation of a transition to zero emission truck fleets during the lifetime of the Project, the Project Applicant or successor in interest shall install at least four heavy-duty truck vehicle charging stations on-site by 2030. In addition, conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations.				
MM-AQ-2. The Project shall implement the following measure in order to reduce operational energy source air pollutant emissions to the extent feasible: - The Project shall include rooftop solar panels that generate sufficient power to meet at least 75% of the Project's total operational energy requirements from within the Project's building envelopes. - Install Energy Star-rated heating, cooling, lighting, and appliances.	Solar Panels Prior to the issuance of an occupancy permit Energy-start rated equipment Prior to the issuance of an occupancy permit Provision of Information	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
- Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project. - Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.	Prior to tenant occupancy Outdoor Electric Outlets Prior to the issuance of an occupancy permit			
MM-AQ-3. The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible: - Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as forklifts, handheld landscaping equipment, yard trucks, office appliances, etc. - All outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and landscaping equipment) shall be zero-emission vehicles. Each building shall include the necessary charging stations or other necessary infrastructure for cargo handling equipment. The building manager or their designee shall be responsible for enforcing these requirements. - Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible. - Tenants shall be in, and monitor compliance with, all current air quality regulations for on-road trucks including the California Air Resources Board's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation. - Cold storage operations shall be prohibited unless additional environmental review, including a Health Risk Assessment, is conducted and certified pursuant to the California Environmental Quality Act.	Use of Cleanest Available Technologies During Project Operation and subject to periodic City inspection Zero-Emission Outdoor Cargo Equipment During Project Operation and subject to periodic City inspection Zero-Emission Light and Medium-Duty Delivery Trucks and Vans During Project Operation and subject to periodic City inspection Cold Storage Prohibition During Project Operation	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
MM-AQ-4. The Project shall implement the following measures in order to reduce construction air pollutant emissions to the extent feasible:	During Project construction and submittal of construction logs on quarterly basis or as determined necessary by the City of Hesperia	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. After either (1) the completion of grading or, (2) the completion of an electrical hookup at the site, whichever is first, require all generators and all diesel-fueled off-road construction equipment, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the City in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment.¹ Before an exemption may be considered by the City, the applicant shall be required to demonstrate that at least two construction fleet owners/operators in the San Bernadino Region were contacted and that those owners/operators confirmed Tier 4 Final or better equipment could not be located within the San Bernardino Region. To ensure that Tier 4 Final construction equipment or better would be used during the proposed Project's construction, the applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.				

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
- Provide infrastructure for zero-emission off-road construction equipment if the contractors selected to construct the Project plan to use zero-emission off-road construction equipment. - Provide electrical hook ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills and compressors. In applicable bid documents and contracts with contractors selected to construct the Project, include language requiring all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers, etc.) used during Project construction to be electric. - Require construction equipment to be turned off when not in use - Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1 of the California Green Building Standards Code Part 11. - On days when the hourly average wind speed for the City of Hesperia exceeds 20 miles per hour, additional dust control measures shall be implemented, such as increased surface watering. Grading and excavation shall be prohibited when sustained wind speed exceeds 30 miles per hour. - Use paints, architectural coatings, and industrial maintenance coatings for all interior painting that have volatile organic compound levels of less than 10 grams per liter (g/L).				
MM-AQ-5. Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that the occupants of the Project site have been provided documentation that: Recommends the use of electric or alternatively fueled sweepers with high efficiency particulate air (HEPA) filters;	Prior to tenant occupancy	City of Hesperia		

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

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
▪ Recommends the use of water-based or low-VOC cleaning; and ▪ For occupants with more than 250 employees, require the establishment of a transportation demand management program to reduce employee commute vehicle emissions.				
MM-AQ-6. The Project shall be designed to: ▪ Be able to achieve Leadership in Energy and Environmental Design (LEED) certification and meet or exceed CalGreen Tier 2 standards in effect at the time of building permit application. Documentation shall be provided to the City of Hesperia demonstrating that the Project meets this requirement prior to the issuance of building permits. ▪ Include the application of surface treatments (such as PURETi Coat or PlusTi) on impervious ground surfaces that lessen impervious surface-related radiative forcing. ▪ Include HEPA air filtration systems within in all warehouse facilities.	Prior to issuance of building permit; verification prior to issuance of occupancy permit	City of Hesperia		
Biological Resources				
MM-BIO-1. Western Joshua Tree Lands. Mitigation for direct impacts to western Joshua trees shall be fulfilled through conservation of western Joshua trees at a 1:1 habitat replacement of equal or better functions and values to those impacted by the Project. Mitigation can be through purchases of credits at a California Department of Fish and Wildlife (CDFW)-approved mitigation bank for western Joshua tree or through conservation lands that meet the functions and values criteria. If mitigation is not purchased through a mitigation bank and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs, and ongoing annual costs, of management activities for the management of the conservation easement(s) area in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a project-specific Property Analysis Record (PAR) to calculate the costs of in perpetuity land	Prior to issuance of grading permits	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
management. The PAR will take into account all of the management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development. Additionally, no take of western Joshua tree will occur without authorization from CDFW in the form of an Incidental Take Permit pursuant to Fish and Game Code 2081. The Project Applicant will adhere to measures and conditions set forth within the Incidental Take Permit.				
MM-BIO-2. Relocation of Desert Native Plants. Prior to the issuance of grading permits, the Project Applicant shall submit an application and applicable fee paid to the City of Hesperia for removal or relocation of protected native desert plants under Hesperia Municipal Code Chapter 16.24 as required and schedule a pre-construction site inspection with the Planning Division and the Building Division. The application shall include certification from a qualified Joshua tree and native desert plant expert(s) to determine that proposed removal or relocation of protected native desert plants are appropriate, supportive of a healthy environment, and in compliance with the City of Hesperia Municipal Code. Protected plants subject to Hesperia Municipal Code Chapter 16.24 may be relocated on-site, or within an area designated as an area for species to be adopted later. The application shall include a detailed plan for removal of all protected plants on the Project site. The plan shall be prepared by a qualified Joshua tree and native desert plant expert(s). The plan shall include, but not be limited to, the following measures: Salvaged plants shall be transplanted expeditiously to either their final on-site location, or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s).	Prior to issuance of grading permits and during ground clearing activities	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
- Western Joshua trees shall be marked on their north facing side prior to excavation. Transplanted western Joshua trees shall be planted in the same orientation as they currently occur on the Project site, with the marking on the north side of the trees facing north at the relocation site(s). - Transplanted plants shall be watered prior to and at the time of transplantation. The schedule of watering shall be determined by the qualified tree expert and desert native plant expert(s) to maintain plant health. Watering of the transplanted plants shall continue under the guidance of qualified tree expert and desert native plant expert(s) until it has been determined that the transplants have become established in the permanent relocation site(s) and no longer require supplemental watering.				
MM-BIO-3: Designated Biologist Authority. The Designated Biologist shall have authority to immediately stop any activity that does not comply with the biological resources mitigation measures and/or to order any reasonable measure to avoid the unauthorized take of an individual western Joshua tree.	During construction	City of Hesperia		
MM-BIO-4: Compliance Monitoring. The Designated Biologist shall be on site daily when impacts occur. The Designated Biologist shall conduct compliance inspections to minimize incidental take of western Joshua trees and impacts to other sensitive biological resources; prevent unlawful take of western Joshua trees; and ensure that signs, stakes, and fencing are intact, and that impacts are only occurring within the permitted impact footprint. Weekly written observation and inspection records that summarize oversight activities and compliance inspections and monitoring activities required by the Incidental Take Permit shall be prepared.	During construction	City of Hesperia		
MM-BIO-5: Education Program. An education program (Worker Environmental Awareness Program [WEAP]) for all persons employed or otherwise working in the Project area shall be administered before performing impacts. The WEAP shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and status of western Joshua tree, burrowing owl, and	During construction	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
loggerhead shrike; and other biological resources mitigation measures described in the CEQA document. Interpretation for non-English-speaking workers will be provided, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project area. Upon completion of the WEAP, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees who will be conducting work in the Project area.				
MM-BIO-6: Construction Monitoring Notebook. The Designated Biologist shall maintain a construction-monitoring notebook on site throughout the construction period, which shall include a copy of the biological resources mitigation measures with attachments and a list of signatures of all personnel who have successfully completed the education program. The permittee shall ensure that a copy of the construction monitoring notebook is available for review at the Project site upon request by the California Department of Fish and Wildlife.	During construction	City of Hesperia		
MM-BIO-7: Delineation of Property Boundaries. Before beginning activities that would cause impacts, the contractor shall, in consultation with the Designated Biologist, clearly delineate the boundaries, consistent with the grading plan, within which the impacts will take place with fencing, stakes, or flags. All impacts within the fenced, staked, or flagged areas shall be avoided and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area.	Prior to commencement of ground disturbing activities	City of Hesperia		
MM-BIO-8: Hazardous Waste. The Applicant shall immediately stop work and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so.	During construction	City of Hesperia		
MM-BIO-9: Herbicides. The Applicant shall limit herbicide use for invasive plant species and shall use herbicides only if it has been determined that hand or mechanical efforts are infeasible. To prevent drift, the Applicant shall apply herbicides only when wind	During construction	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
speeds are less than 7 miles per hour. All herbicide application shall be performed by a licensed applicator and in accordance with all applicable federal, state, and local laws and regulations.				
MM-BIO-10. Pre-Construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife] in 2012) or current version. If burrowing owls are detected, the Burrowing Owl Relocation Plan shall be implemented in consultation with the California Department of Fish and Wildlife (CDFW). The Burrowing Owl Relocation Plan shall identify procedures for both active and passive owl relocation. CDFW shall be consulted to approve any relocation activities and identify the appropriate method of relocation (i.e., active or passive relocation). As required by the Burrowing Owl Relocation Plan disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers will be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation or current version. No Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.	First survey No more than 14 days before initiation of site preparation or grading activities Second Survey Within 24 hours of the start of site preparation or grading activities	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
- Outside of the nesting season, owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The Project area shall be monitored daily for one week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the Staff Report on Burrowing Owl Mitigation or current version. - Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.				
MM-BIO-11: Lighting. Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife will be directed away from natural areas.	During construction	City of Hesperia		
MM-BIO-12: Trash and Debris. The following avoidance and minimization measures shall be implemented during Project construction. - Fully covered trash receptacles that are animal-proof will be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles will be removed at least once a week from the Project site. - Construction work areas shall be kept clean of debris, such as cable, trash, and construction materials. All construction/contractor personnel shall collect all litter, vehicle fluids, and food waste from the Project site on a daily basis.	During construction			
MM-BIO-13: Pre-Construction Nesting Bird Surveys and Avoidance. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential	If ground disturbing activities commence between February 1 through August 31, within 72	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
significant impact to birds that may be nesting on the survey area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the MBTA (16 USC 703–712) and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate buffer established around the nest, which will be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when construction occurs in close proximity to an active nest buffer. No Project activities may encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined the nestlings have fledged and the nest is no longer considered active.	hours prior to the start of ground disturbing activities			
Cultural and Tribal Cultural Resources				
MM-CUL-1. Workers Environmental Awareness Program (WEAP) Training. All construction personnel and monitors conducting ground disturbing activities who are not trained archaeologists shall be briefed regarding unanticipated discoveries prior to the start of construction activities. A basic presentation should be prepared and presented by a qualified archaeologist to inform all personnel working on the Project about the archaeological sensitivity of the area. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during construction of the Project and explain the importance of and legal basis for the protection of significant archaeological resources. Each worker shall also learn the proper procedures to follow in the	Prior to commencement of ground disturbing activities	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
event that cultural resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection, and the immediate contact of the on-call archaeologist and if appropriate, tribal representative. Necessity of training attendance shall be stated on all construction plans.				
MM-CUL-2. On-Call Archaeological Construction Monitoring. In consideration of the general sensitivity of the Project site for cultural resources, a qualified archaeologist shall be retained to conduct spot monitoring as well as on-call response in the case of an inadvertent discovery of archaeological resources. A qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, shall oversee and adjust monitoring efforts as needed (increase, decrease, or discontinue monitoring frequency) based on the observed potential for construction activities to encounter cultural deposits. The archaeologist shall be responsible for maintaining monitoring logs. Following the completion of construction, the qualified archaeologist shall provide an archaeological monitoring report to the lead agency and the South-Central Coastal Information Center with the results of the archaeological monitoring program.	During grading phases	City of Hesperia		
MM-CUL-3. Inadvertent Discovery of Archaeological Resources. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (CEQA; 14 CCR 15064.5(f); California PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, the qualified archaeologist shall determine whether additional work shall be necessary, which may include but may not be limited to preparation of an archaeological treatment plan, testing, or data recovery. If the	During construction	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
discovery is Native American in nature, consultation with and/or monitoring by a tribal representative may be necessary, as determined by the City of Hesperia and the qualified archaeologist.				
MM-CUL-4. Inadvertent Discovery of Human Remains. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the Coroner shall notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the MLD from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The MLD would then determine, in consultation with the property owner, the disposition of the human remains.	During construction	City of Hesperia		
Greenhouse Gas Emissions				
MM-GHG-1. Water Conservation. To reduce water demands and associated energy use, subsequent development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). To implement this mitigation measure, prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following water conservation measures: ▪ Install low-water use appliances and fixtures ▪ Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces	Prior to the issuance of building permits	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
- Implement water-sensitive urban design practices in new construction - Install rainwater collection systems where feasible.				
MM-GHG-2. Solid Waste Reduction. In order to reduce the amount of waste disposed at landfills, the Project would implement a 75% waste diversion program. To implement this mitigation measure, prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following solid waste reduction measures: - Provide storage areas for recyclables and green waste in new construction, and food waste storage, if a pick-up service is available. - Evaluate the potential for onsite composting.	Prior to the issuance of building permits	City of Hesperia		
MM-GHG-3. GHG Mitigation Grants Program. Provided the City approves the Project, the Project Applicant shall pay a total of \$300,000 ("GHG Mitigation Grants Payment") to a 501(c)(3) nonprofit, to be used for grant funding for local GHG reduction projects (such as rooftop solar on public buildings) within the community of Hesperia.	Prior to the issuance of first occupancy permit	City of Hesperia		
Hazards and Hazardous Materials				
MM-HAZ-1. Prior to issuance of a grading permit, the Project Applicant shall retain a qualified environmental specialist to remove and dispose of all refuse located on the Project site, included but not limited to, the illegally-dumped tires and automotive fluid containers currently found on site. The removal transport, and disposal of refuse shall be done in accordance with all applicable local, state, and federal guidelines related to hazardous materials handling. Prior to the removal of refuse deposits from the site, the environmental specialist shall inspect each refuse pile for indications that the refuse may contain – or may have once contained – hazardous materials, including but not limited to, motor oil, solvents, paints, and/or other petroleum products. In addition, the environmental specialist shall inspect the soils surrounding each	Prior to issuance of a grading permit and during construction	City of Hesperia		

Mitigation Measure	Implementation Timing	Agency Responsible for Monitoring	Initials	Date
refuse deposit for evidence of any contamination (staining) or volatilization of contaminants (odors). If contamination indicators are identified, work shall stop in the immediate proximity of the potential contamination. The qualified environmental specialist shall prepare a Soil Management Plan (SMP) which will outline characterization, screening, handling, and disposal procedures for contaminated soils. The SMP shall include health and safety and training procedures for workers who may come in contact with contaminated soils. The health and safety procedures shall also include periodic breathing zone monitoring and monitoring for VOCs using a handheld organic vapor analyzer and include required actions to be taken if concentrations of VOCs exceed applicable screening levels for health and safety of onsite workers. Should contaminated soil be determined hazardous, it shall be removed by personnel who have been trained through the Occupational Safety and Health Administration–recommended 40-hour safety program with an approved plan for soil excavation, control of contaminant releases to the air, and off-site transport or on-site treatment. All contaminated soils will be removed and disposed of in accordance with applicable federal, state, and local regulations.				

INTENTIONALLY LEFT BLANK

Appendix A

2022 Mohave Ground Squirrel Protocol Survey Results Report

July 31, 2022

Patrick Cruz
Dudek
27372 Calle Arroyo
San Juan Capistrano, CA 92675
Via email: pcruz@dudek.com

Subject: Results of Mohave Ground Squirrel Protocol Surveys for the I-15 Industrial Park Project, City of Hesperia, San Bernardino County, California

Dear Mr. Cruz:

The purpose of this report is to document the results of a California Department of Fish and Wildlife (CDFW) protocol survey for Mohave ground squirrel (*Xerospermophilus mohavensis*; MGS) conducted by Dipodomys Ecological Consulting LLC (DEC) for the I-15 Industrial Park Project (project). Presented in this report are a description of the project, project location, the biological setting of the site, MGS natural history, survey methodology, results of trapping efforts for MGS, and conclusions.

Project Description and Location

Covington Group, Inc., proposes to develop two speculative industrial distribution warehouses and their associated utility tie-in alignments. The development will occur on two disjunct parcels: a western 35-acre parcel and an eastern 60-acre parcel. Together, the parcels encompass a total area of 96.07 acres and have a total study area of 137.64 acres including utility tie-ins and areas for potential impacts.

The project site is located within the City of Hesperia in San Bernardino County, California. Both the east and west parcels are located along Mesa Linda Street between Main Street and Poplar Street. The west parcel is bordered by Highway 395 on the west and the east parcel is bordered by Interstate 15 on the east (**Figures 1 and 2**). The eastern parcel is surrounded by an undeveloped lot to the west, commercial development to the north and east and by Interstate 15 to the southeast. The western parcel is surrounded by undeveloped land to the east, west and north, and light industrial development to the south. The primary sources of disturbance on the site are past and current off-highway vehicle (OHV) activity, illegal dumping, and debris associated with transient encampments. The project site can be found on U.S. Geological Survey (USGS) 7.5-minute Baldy Mesa topographic quadrangle map within Section 22, Township 4 North, and Range 5 West, as shown in **Figure 1**, Project Location.

Biological Setting

The project site is primarily comprised of disturbed California Juniper Woodland Alliance (89.100.00). Although sparse, dominant trees include California Juniper (*Juniperus californica*) and Joshua tree

(*Yucca brevifolia*). These trees are surrounded by a sparse shrub layer consisting of scattered stands of rubber rabbitbrush (*Ericameria nauseosa*), Cooper's goldenbush (*Ericameria cooperi*), Mexican bladder sage (*Scutellaria mexicana*), Nevada joint-fir (*Ephedra nevadensis*), and California buckwheat (*Eriogonum fasciculatum*). A dense herbaceous layer consisting of mostly non-native grasses and forbs such as red-stemmed filaree (*Erodium cicutarium*), rattlesnake sandmat (*Euphorbia albomarginata*), Russian thistle (*Salsola tragus*), short-podded mustard (*Hirschfeldia incana*), London rocket (*Sisymbrium irio*), fiddleneck (*Amsinckia* sp.) and ripgut brome (*Bromus diandrus*) dominates most of the project site. A disturbed wash is present along Sultana Street, between the east and west parcels, and within the utility tie-in footprint.

Soils consist of Hesperia loamy fine sand (WebSoil 2022). The project site is located at an elevation of approximately 3,557 feet above mean sea level (amsl).

Mohave Ground Squirrel Natural History

Mohave ground squirrels (*Xerospermophilus mohavensis*) are medium-sized (210-230mm, 85-130g), diurnal squirrels. Their dorsal pelage is light gray to cinnamon-brown, while their ventral side is creamy. Unlike round-tailed ground squirrels, which occur sympatrically in the southeast portion of their range, MGS have a short, flat tail that is light-colored on its underside, and have brown cheeks instead of white.

MGS inhabit a small geographic area in the western Mojave Desert. This species ranges from Palmdale in the southwest, the Lucerne Valley in the southeast, Olancho in the northwest, and the Avawatz Mountains in the northeast (Gustafson 1993). Although occurrences in the southern portion of their range are rare, occurrences have been documented on the California Natural Diversity Database (CNDDB) as recently as 2011 (Figure 3). Vegetation communities (as classified by the California Native Plant Society) typically associated with MGS include Mojave Creosote Scrub, Shadscale Scrub, Desert Saltbush Scrub, Desert Sink Scrub, and Joshua Tree Woodland. MGS feed primarily on the leaves and seeds of forbs and shrubs. In the northern portion of their range, MGS have been found to feed on spiny hopsage (*Grayia spinosa*), winterfat (*Krascheninnikovia lanata*) and saltbush (*Atriplex* sp.), especially in early spring when forbs are unavailable, during summer when forbs have dried out, and during drought conditions (Leitner and Leitner 1998). Recent studies have also indicated that MGS feed on the following forbs and shrubs: freckled milkvetch (*Astragalus lentiginosus*), Mojave lupine (*Lupinus odoratus*), buckwheat (*Eriogonum* sp.), white mallow (*Eremalche exilis*), fiddleneck, Russian thistle, desert pincushion (*Chaenactis* sp.), Cryptantha (*Cryptantha pterocarya*), Coreopsis (*Leptosyne bigelovii*), Valley lessingia (*Lessingia glandulifera*), desert dandelion (*Malacothrix glabrata*), Phacelia (*Phacelia* sp.), wire lettuce (*Stephanomeria* sp.) Anderson's desert thorn (*Lycium andersonii*), spiny horsebrush (*Tetradimya spinosa*), and Joshua tree (Leitner and Leitner 2017).

MGS have adapted to live in hot desert environments by limiting their activity aboveground through estivation and hibernation. The timing of emergence from hibernation varies by location: in the northern portion of their range male MGS emerge mid-March (Leitner and Leitner 1998); however, in the southern portion of their range, MGS may emerge as early as mid-January (Recht 1977). Throughout their active period, MGS store fat in preparation for estivation, which typically occurs between July and September, but may occur as early as April or May during drought conditions (Leitner et al. 1995). MGS

reproduction is dependent on fall and winter rains and individuals may forgo breeding entirely if low rainfall (<80mm) results in reduced herbaceous plants (Leitner and Leitner 2017).

Throughout the range of MGS, they may co-occur with antelope ground squirrels, round-tailed ground squirrels, and California ground squirrels. MGS may be misidentified with round-tailed ground squirrels, but this is unlikely to occur with antelope ground squirrels, because the latter species has white dorsal stripes that makes them resemble a chipmunk more than an MGS. California ground squirrels are notably larger and are not typically confused with MGS.

MGS are classified as threatened and are protected under the California Endangered Species Act. Primary threats to MGS include limited distribution, low abundance, and habitat loss from by converting suitable habitat to urban, suburban, agricultural, and military land uses (Gustafson 1993, Leitner and Leitner 2017).

Methods

Mohave ground squirrel (MGS) Protocol surveys for the I-15 Industrial Park Project Protocol utilized a modified version of the existing 2010 CDFW MGS Survey Guidelines to adequately survey the two disjunct parcels connected by utility tie-in alignments that comprise the project site. The modified survey approach was developed in consultation and coordination with the Region 6 office of the California Department of Fish and Wildlife (CDFW). The modified survey strategy employed the use of 150 live - traps and seven camera trapping stations, which is described in detail below.

Visual Survey

Surveyors conducted an initial review of the California Natural Diversity Database (CNDDDB) prior to the visual assessment to determine the historical recorded occurrences of MGS near the project site (**Figure 3**). The visual survey was conducted by Principal Investigator Karla Flores (MOU and Scientific Collection Permit SC-10572) and Independent Researcher Karl Fairchild (SCP S-182820007-18333-001) on March 22, 2022. The visual survey consisted of driving and walking throughout the project site to identify suitable habitat for MGS. This included identifying plants known to provide forage material for MGS such as spiny hopsage, winterfat, Cooper's boxthorn, Anderson's desert thorn, fiddleneck, red-stemmed filaree, and Joshua tree (Leitner 2022). Areas supporting suitable habitat for MGS where these plants are concentrated were recorded on an aerial map. Suitable soil types for burrowing and burrow densities were also noted.

Live Trapping

Live trapping surveys were conducted by Karl Fairchild and Karla Flores utilizing two live trapping grids. The east parcel was surveyed by establishing a standard 10x10 (315x140meters) 100-trap survey grid. The west parcel was surveyed utilizing a smaller 10x5 (315x140meter) 50-trap survey grid. CDFW was notified of all protocol modifications. Coordinate locations for the eastern and western grids are listed in **Table 1**. Traps in each grid were spaced 35 meters apart and utilized XLK Sherman live traps (3x3.75x12") with accompanying A-frame cardboard shade covers staked to the ground with metal tent stakes. All traps were baited with 4-way livestock feed and peanut butter powder and were opened within

one hour of sunrise and were checked no more than every four hours. All traps were closed within hour of sunset. Trapping was conducted when temperatures were between 50 degrees Fahrenheit and 90 degrees Fahrenheit, and inclement conditions (rain, thunderstorms) were not present. All animals captured were released at their capture location, and the following information recorded for each capture: species, weight, age, sex, and reproductive condition. Live trapping surveys were conducted for a period of five days in each of the three survey windows established by the MGS survey guidelines (1st: March 15-April 3; 2nd May 1-31; 3rd June 15-July 15). Details for each survey period are presented in **Table 2**. MGS Survey and Trapping Forms, including weather details, are presented in **Attachment A** and **Attachment B**.

TABLE 1
UTM COORDINATES FOR CORNERS OF NORTH AND SOUTH LIVE TRAPPING GRIDS

Grid	Corner	Zone	Easting	Northing
East	SW	11	464160	3808765
East	NW	11	464160	3809080
East	SE	11	464475	3808765
East	NE	11	464475	3809080
West	SW	11	463365	3808565
West	NW	11	463365	3808705
West	SE	11	463680	3808565
West	NE	11	463680	3808705

*Datum: WGS 1984

TABLE 2
MOHAVE GROUND SQUIRREL SURVEY DATE AND TYPE

Session	Date	Survey Type	Surveyor
1	March 23-27, 2022	LT/CT	Karl Fairchild, Karla Flores
2	May 2-6, 2022	LT/CT	Karl Fairchild, Karla Flores
3	July 10-14, 2022	LT/CT	Karl Fairchild, Karla Flores

LT: Live Trapping CT: Camera Trapping

Camera Trapping

Camera trapping surveys were used to supplement live trapping efforts and consisted of setting up seven camera trapping stations throughout the project site (**Figure 2**). Each camera trap station consisted of a Bushnell Core Low Glow Trail Camera (Model 1199932CB) secured to a 36-inch U-post facing a bait station. The bait station consisted of a feeding tube filled with 4-way livestock feed staked to the ground with a 12-inch railroad spike. Cameras operated 24 hours a day, concurrent with live trapping surveys,

and followed the setup specifications described in Delaney et al. (2017). Coordinate locations for each camera trap station are listed below in **Table 3**.

Photos from the camera trap stations were downloaded and reviewed by the Principal Investigator after every five-day trapping session. A list of species detected at the camera trap stations is included in **Table 5**.

TABLE 3
COORDINATE LOCATIONS FOR CAMERA TRAP STATIONS

Camera	Grid	Zone	Easting	Northing
1	West	11	463426	3808645
2	West	11	463632	3808601
3	East	11	464196	3809272
4	East	11	464183	3809053
5	East	11	464411	3808801
6	East	11	464379	3808661
7	East	11	464231	3808513

*Datum: WGS 1984

Results

Visual Survey

Based on the habitat data collected during the visual survey, disturbed low-quality MGS habitat is present on site. Primary MGS food plants such as winterfat and spiny hopsage are not present on site. However, other plants identified as providing MGS forage, as identified in recent microhistology and metabarcoding studies (Leitner 2022), are present onsite. These species include Cooper's boxthorn, Joshua tree, fiddleneck, and red-stemmed filaree. Visual observations of burrows and burrow complexes showed that soil onsite is suitable for burrowing.

Live Trapping

No Mohave ground squirrels were captured during the three live trapping survey periods. Live trapping captures consisted entirely of non-target species including white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), California ground squirrel (*Otospermophilus beecheyi*), Panamint kangaroo rat (*Dipodomys panamintinus*), deer mouse (*Peromyscus maniculatus*), cactus wren (*Campylorhynchus brunneicapillus*), side-blotched lizard (*Uta stansburiana*), Great Basin whiptail (*Aspidoscelis tigris*) and yellow-backed spiny lizard (*Sceloporus uniformis*) (**Table 4; Figure 4**).

TABLE 4
RESULTS OF MOHAVE GROUND SQUIRREL PROTOCOL SURVEYS

Common name	Scientific name	East Grid			West Grid		
		S1	S2	S3	S1	S2	S3
White-tailed antelope ground squirrel	<i>Ammospermophilus leucurus</i>	0	0	1	4	5	9
California ground squirrel	<i>Otospermophilus beecheyi</i>	5	37	13	4	36	8
Panamint kangaroo rat	<i>Dipodomys panamintinus</i>	1	0	0	1	0	0
Deer mouse	<i>Peromyscus maniculatus</i>	0	0	0	0	0	1
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	0	0	0	0	0	2
Side-blotched lizard	<i>Uta stansburiana</i>	1	0	0	0	0	0
Great basin Whiptail	<i>Aspidoscelis tigris</i>	0	10	0	0	9	0
Yellow-backed spiny lizard	<i>Sceloporus uniformis</i>	0	0	0	0	1	0
Total		7	47	14	9	51	20

Camera Trapping

No Mohave ground squirrels were detected in the images collected during the camera trapping surveys. Species observed utilizing the camera trap stations included: white-tailed antelope ground squirrel, California ground squirrel, Panamint kangaroo rat, coyote (*Canis latrans*), and common raven (*Corvus corax*).

TABLE 5
RESULTS OF MOHAVE GROUND SQUIRREL CAMERA TRAPPING

Grid	Common Name	Scientific Name
East	Panamint kangaroo rat	<i>Dipodomys panamintinus</i>
East	California ground squirrel	<i>Otospermophilus beecheyi</i>
East	Common raven	<i>Corvus corax</i>
East	Coyote	<i>Canis latrans</i>
West	Panamint kangaroo rat	<i>Dipodomys panamintinus</i>
West	White-tailed antelope ground squirrel	<i>Ammospermophilus leucurus</i>
West	Common raven	<i>Corvus corax</i>

Conclusions

The I-15 Industrial Park Project is located within the southern portion of the mapped MGS range, where MGS occurrences are rare, and population densities have historically been low. A review of the California Natural Diversity Database (CNDDDB) for the Baldy Mesa and eight surrounding quadrangles showed that the most recent MGS occurrence recorded in the vicinity of the project occurred in 2011 approximately 9.2 miles northwest of the project site (recent aerial photos show that this area has been developed into a

solar farm). The closest MGS occurrence recorded was documented in 2005 approximately 1.8 miles northwest of the project site (recent aerials show intact habitat). Both the 2005 and 2011 MGS occurrences were recorded north of the California Aqueduct, which likely presents a significant barrier to MGS dispersal (no MGS occurrences are recorded in CNDDDB south of the California Aqueduct and east of Pinon Hills since the aqueduct was constructed). Additionally, the project site is located outside of MGS core population areas, peripheral population areas and linkage areas described in the 2019 CDFW MGS Conservation Strategy.

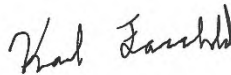
Although some suitable habitat was detected during the visual survey, including the presence of some MGS food plants: Joshua tree, Cooper's boxthorn, fiddleneck and red-stemmed filaree (Leitner 2022), no MGS were captured during the live trapping or camera trapping surveys. Furthermore, the distance from core population areas and significant barriers to dispersal between the project site and documented recent occurrences make it unlikely that colonization from core MGS populations will occur within the near future. Based on the results of this survey, the CDFW survey guidelines indicate that the department will stipulate that no MGS occur on the project site. This stipulation will expire one year from the last day of trapping, July 14, 2022.

I hereby certify that the information in this report is true, and that it conforms to accepted biological standards. Please feel free to contact Karl Fairchild by phone at (541) 609-1038 or by email at kfairchild@dipodomys ecological.com with any questions regarding this report.

Sincerely,



Karla L. Flores
Principal Investigator



Karl Fairchild
Independent Researcher

Figures and Attachments

Figure 1-Project Location

Figure 2-Survey Area

Figure 3- Historical MGS Occurrences

Figure 4- Results

Attachment A-CDFW Mohave Ground Squirrel Survey and Trapping Form(s)

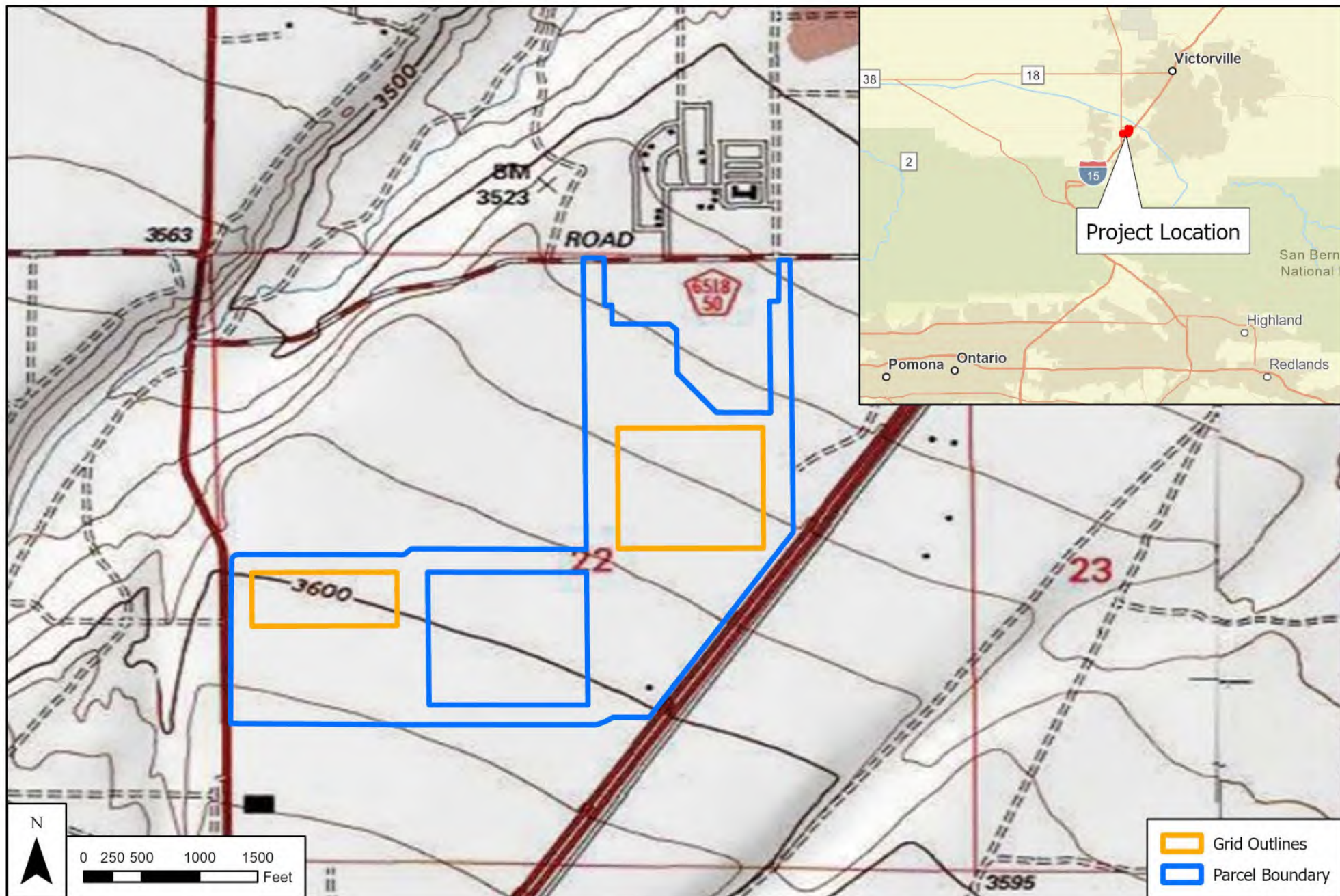
Attachment B-Weather Details

Attachment C-Species Compendium

Attachment D-Representative Photographs

References

- California Department of Fish and Game. Mohave Ground Squirrel Survey Guidelines. July 2010.
- California Department of Fish and Wildlife. California Natural Diversity Database Rarefind. March 14, 2022.
- Delaney D.K., Leitner, P. and D. Hacker. 2017. Use of Cameras in Mohave ground Squirrel Studies.
- Gustafson, J.R. 1993. A Status Review of the Mohave Ground Squirrel (*Spermophilus mohavensis*). Department of Fish and Game. Nongame Bird and Mammal Report 93-9.
- Leitner, P. and B.M. Leitner. 1998. Coso grazing exclosure monitoring study, Mohave ground squirrel study Coso Known Geothermal Resource Area, Major Findings 1988-1996. Final Report.
- Leitner, P. and B.M. Leitner. 2017. Diet of the Mohave ground squirrel (*Xerospermophilus mohavensis*) in relation to season and rainfall. *Western North American Naturalist*, 77(1), 1-13.
- Leitner, B. 2022. Primary Food Items Consumed by Mohave Ground Squirrels based on visual observations of MGS and microhistology and metabarcoding of fecal pellets from 1988-2021.
- Recht, M.A. 1977. The biology of the Mohave ground squirrel, *Spermophilus mohavensis*. Ph.D. Dissertation, University of California, Los Angeles. 117 pp.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: <http://websoilsurvey.sc.egov.usda.gov/>. Accessed [07/11/2022].

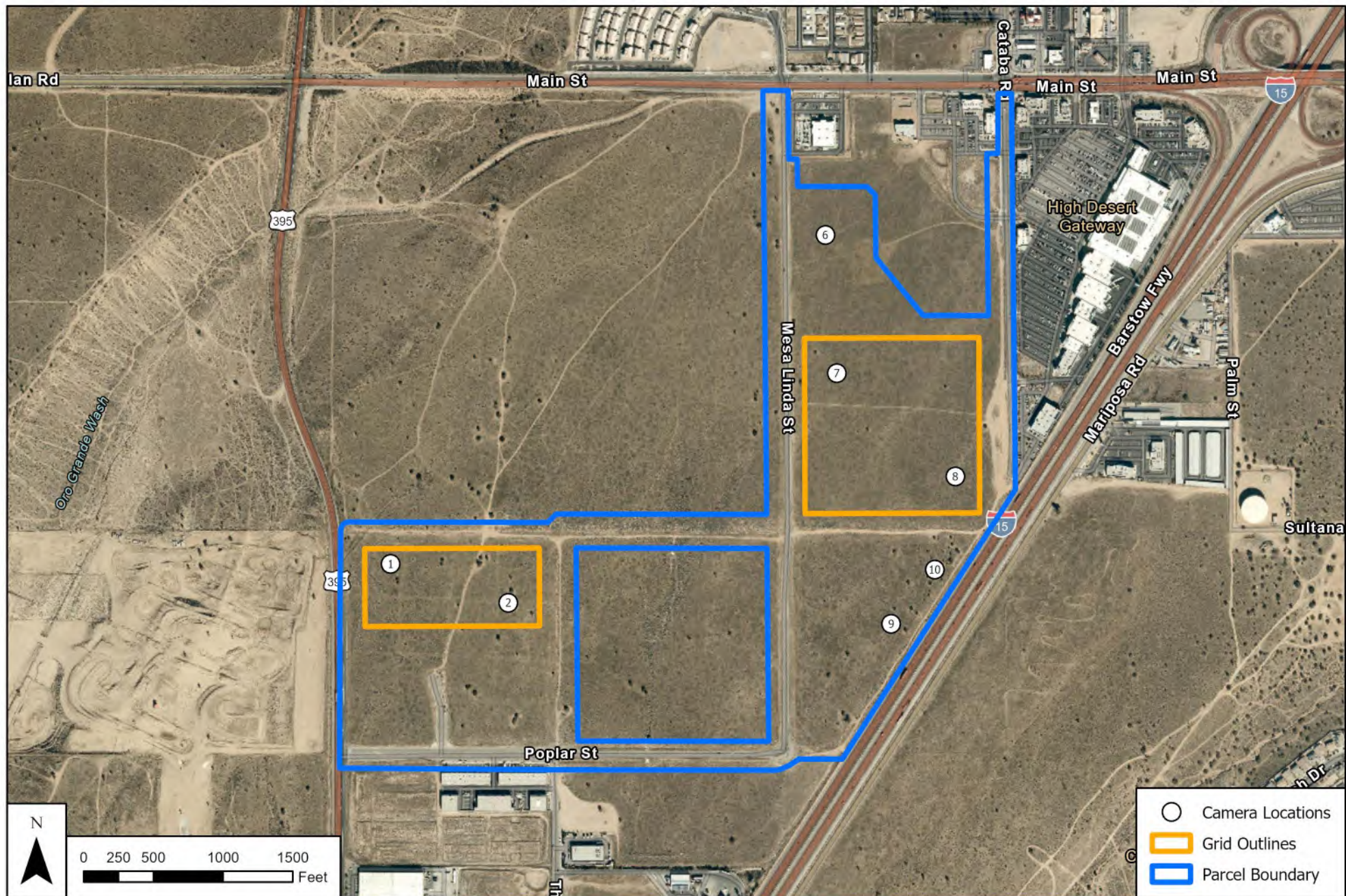


SOURCE: ESRI

I-15 Industrial Park

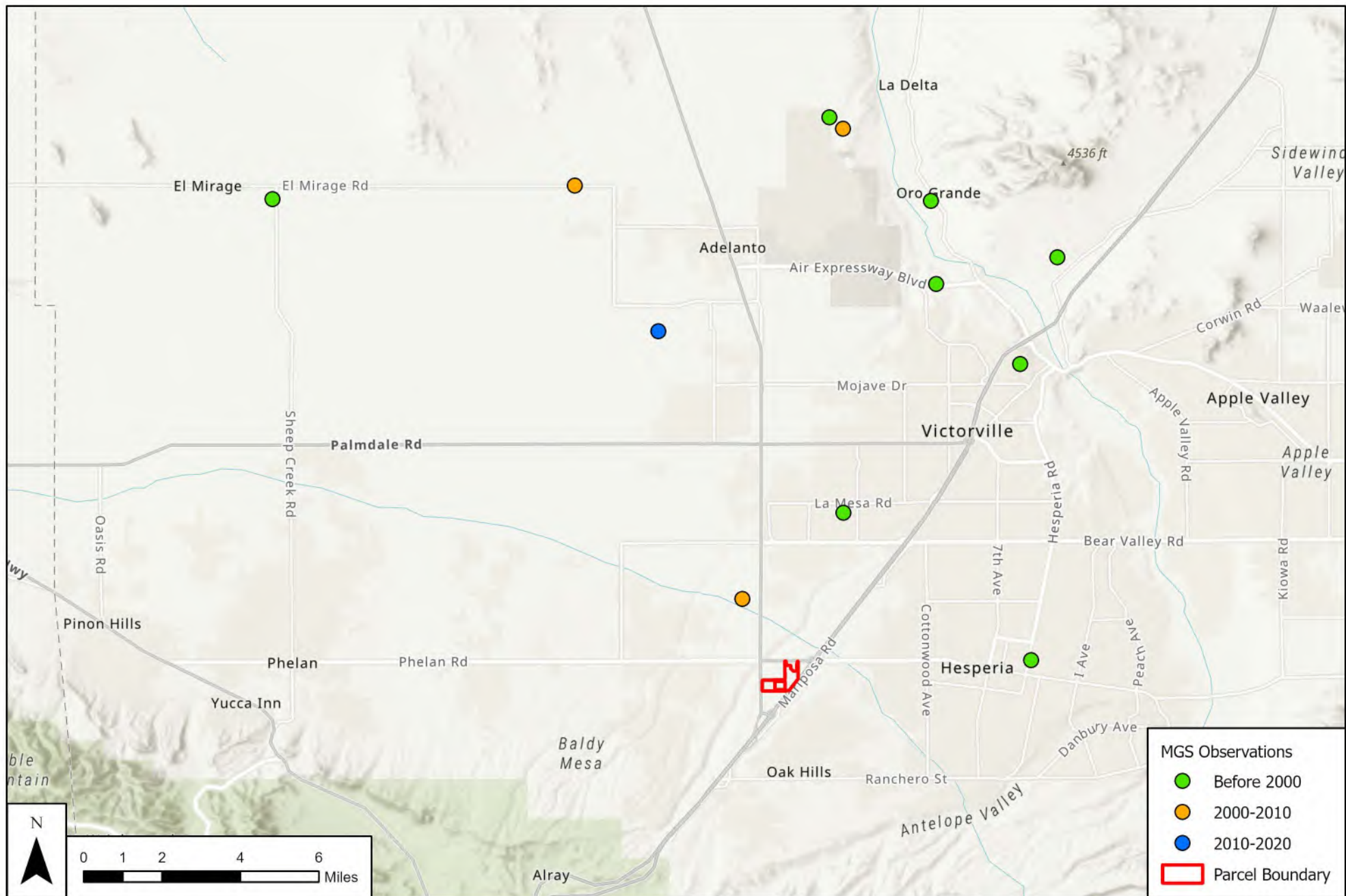
Figure 1

Project Location



SOURCE: ESRI

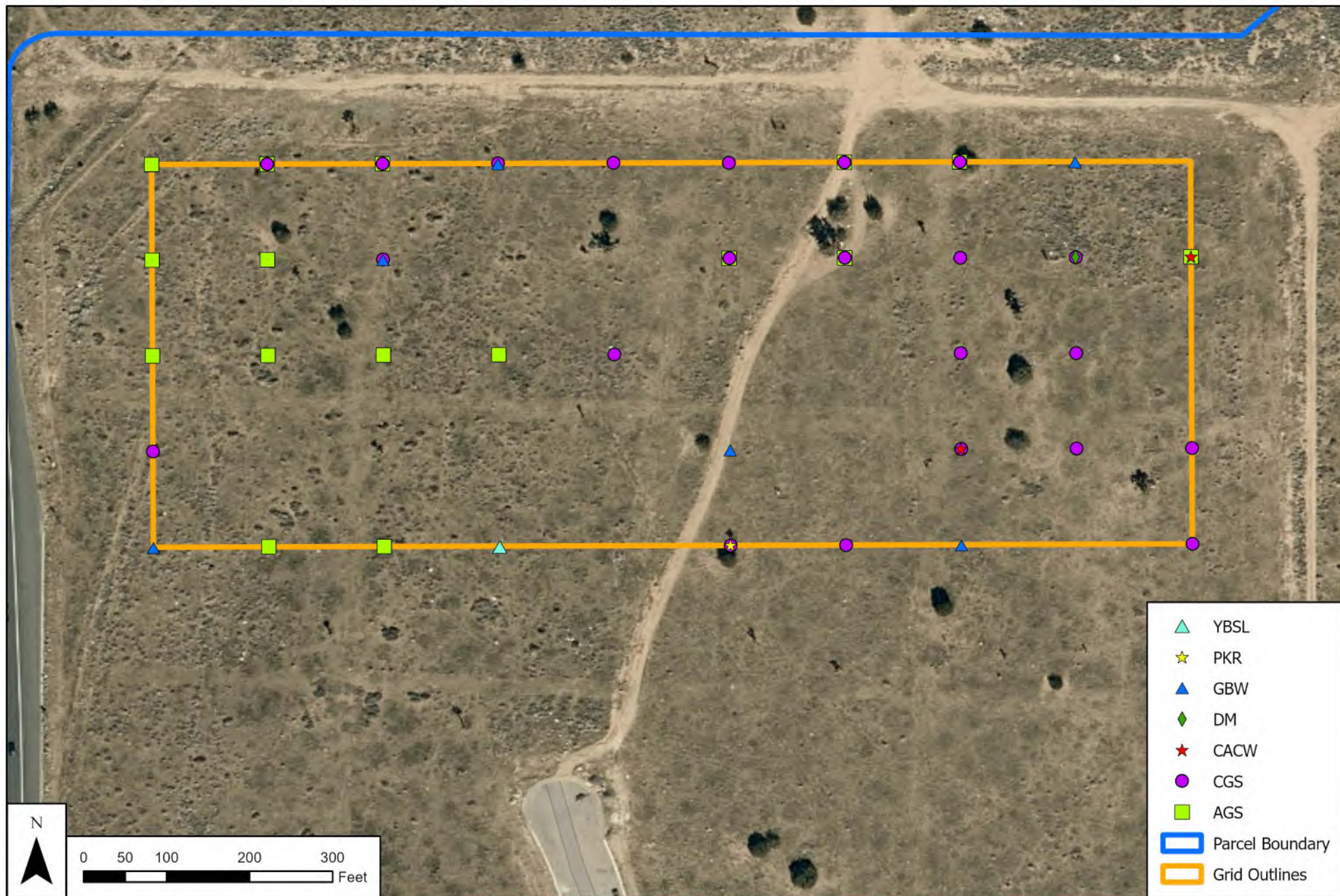
I-15 Industrial Park



SOURCE: ESRI

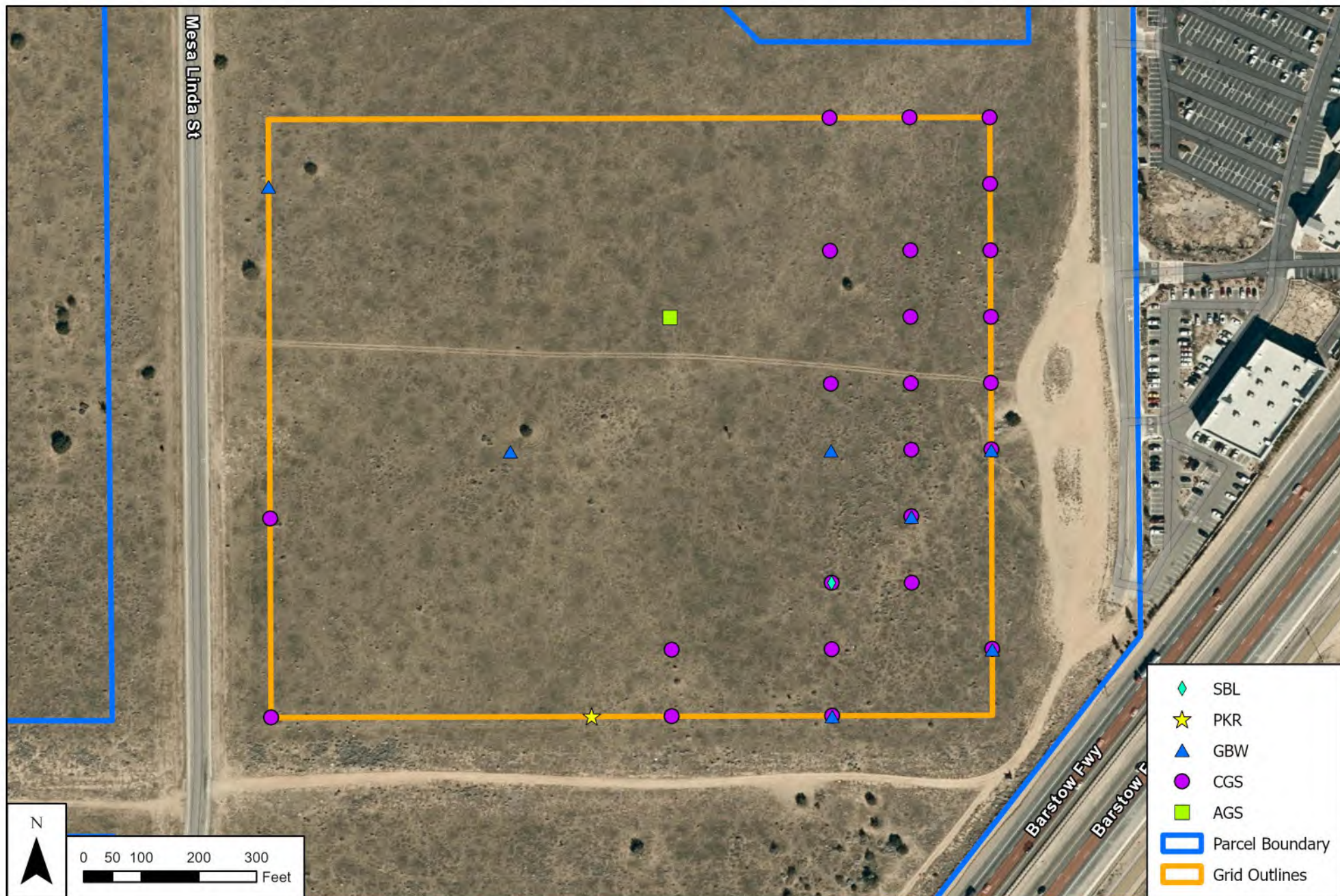
I-15 Industrial Park

Figure 3
Historical MGS Occurrences



SOURCE: ESRI

I-15 Industrial Park



SOURCE: ESRI

I-15 Industrial Park

Attachment A

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: I-15 Industrial Park Project-East Grid Property owner: Covington Group, Inc.

Location: Township 04N; Range 05W; Section 22; ¼ Section _____

Quad map/series: Baldy Mesa UTM coordinates: SW: 463380 3808565 NW: 463380 3808880
SE: 463695 3808565 NE: 463695 3808880
GPS coordinates of trapping-grid corners

Acreage of Project Site: ^{96.07 acres}
137.64 acres (study area) Acreage of potential MGS habitat on site: 0 acres

Total acreage visually surveyed on project site: 60 acres Date(s): March 22, 2022
visual surveys

Visual surveys conducted by: Karla Flores and Karl Fairchild
names of all persons by date (use back of form, if needed)

Total acres trapped: 60 acres Number of sampling grids: 2

Trapping conducted by: Karl Fairchild
names of all persons by sampling term and sampling grid (use back of form, if needed)

Dates of sampling term(s): FIRST March 23-27, 2022 SECOND May 2-6, 2022 THIRD July 10-14, 2022
if required if required

PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)

Vegetation: dominant perennials: Juniperus californica, Yucca brevifolia, Larrea tridentata, Ephedra nevadensis, Ericameria nauseosa

other perennials: Scutellaria mexicana, Eriogonum fasciculatum, Ambrosia salsola, Tetradymia stenolepis, Lycium cooperi

dominant annuals: Amsinckia tessellata, Erodium cicutarium, Euphorbia albomarginata

other annuals: Hirschfeldia incana, Salsola tragus, Bromus madritensis

Land forms (mesa, bajada, wash): mesa, desert plain

Soils description: Hesperia Loamy Fine Sand

Elevation: 3,557 feet Slope: 2-5%

PART III - WEATHER (report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made; use a separate blank sheet for each day)

Temperature: AIR minimum and maximum; SOIL minimum and maximum; Cloud Cover: % in AM and % in PM; Wind Speed: in AM and in PM

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: I-15 Industrial Park Project-West Grid Property owner: Covington Group, Inc.

Location: Township 04N; Range 05W; Section 22; ¼ Section _____

Quad map/series: Baldy Mesa UTM coordinates: SW: 463365 3808565 NW: 463365 3808705
SE: 463680 3808565 NE: 463680 3808705
GPS coordinates of trapping-grid corners

96.07
Acreage of Project Site: 137.64 (study area) Acreage of potential MGS habitat on site: 0

Total acreage visually surveyed on project site: 137.64 acres Date(s): March 22, 2022
visual surveys

Visual surveys conducted by: Karla Flores and Karl Fairchild
names of all persons by date (use back of form, if
needed)

Total acres trapped: 35 acres Number of sampling grids: 2

Trapping conducted by: Karla Flores and Karl Fairchild
names of all persons by sampling term and sampling grid (use back of form, if needed)

Dates of sampling term(s): FIRST March 23-27, 2022 SECOND May 2-6, 2022 THIRD July 10-14, 2022
if required if required

PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)

Vegetation: dominant perennials: Juniperus californica, Yucca brevifolia

other perennials: Scutellaria mexicana, Lycium cooperi, Ephedra nevadensis, Eriogonum fasciculatum

dominant annuals: Amsinckia tessellata, Erodium cicutarium, Euphorbia albomatginata, Lasthenia californica, Dipterostemon capitatus
Ericameria nauseosa

other annuals: Bromus madritensis, Hirschfeldia incana, Salsola tragus, Sisymbrium irio, Bromus tectorum

Land forms (mesa, bajada, wash): mesa, desert plain

Soils description: Hesperia Loamy Fine Sand

Elevation: 3,609 feet Slope: 2-5%

PART III - WEATHER (report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made; use a separate blank sheet for each day)

Temperature: AIR minimum and maximum; SOIL minimum and maximum; Cloud Cover: % in AM and % in PM; Wind Speed: in AM and in PM

Attachment B

Attachment B: Weather details for California Department of Fish and Wildlife (CDFW) Mohave ground squirrel (*Xerospermophilus mohavensis*) protocol surveys. Details include date, survey (1-3), air temperature (min-max ° Fahrenheit), soil temperature (min-max ° Fahrenheit), wind speed (mph) and percent cloud cover (%).

Date		Air Temperature (°F)		Soil temperature (°F)		Wind (mph)		Cloud Cover (%)	
		Min	Max	Min	Max	Start	End	Start	End
3/23/2022	1	61	82	56.3	88.2	7.5	2	0	0
3/24/2022	1	65	77	59.6	83.4	0.9	4.5	0	0
3/25/2022	1	68.7	80.3	60.3	71.1	1.1	8.8	0	20
3/26/2022	1	65	74	58.7	77.9	5.8	14.8	0	15
3/27/2022	1	59	71.3	52.8	63	9.4	18.8	25	10
5/2/2022	2	64	85.3	58.5	74.7	1.6	13.5	0	10
5/3/2022	2	62	82.1	60.5	88.6	7.1	6.3	0	0
5/4/2022	2	64.6	88.1	59.2	72.1	1.6	8.2	0	1
5/5/2022	2	70.3	90	65.1	71.3	0.9	12.3	0	10
5/6/2022	2	70.2	81.9	64.4	81.3	4.1	16.2	10	5
7/10/2022	3	72.8	90	74.4	76.4	2.7	3.1	0	0
7/11/2022	3	78.3	90	77	78.3	3.1	2.7	0	0
7/12/2022	3	79.2	90	78.8	80.2	5.3	13	0	0
7/13/2022	3	79.9	90	76.9	79.4	4.7	6.2	0	2
7/14/2022	3	84.9	90	81.6	82.2	4.3	10.7	10	5

Attachment C

Common name	Scientific name	SSC
Plants		
blue dicks	<i>Dipterostemon capitatum</i>	
California buckwheat	<i>Eriogonum fasciculatum</i>	
California juniper	<i>Juniperus californica</i>	
Cooper's boxthorn	<i>Lycium cooperi</i>	
cottonthorn	<i>Tetradymia stenolepis</i>	
fiddleneck	<i>Amnsinckia tessellata</i>	
foxtail brome	<i>Bromus madritensis</i>	
goldfields	<i>Lasthenia californica</i>	
Joshua tree	<i>Yucca brevifolia</i>	
London rocket	<i>Sisymbrium irio</i>	
Mexican bladdersage	<i>Scutellaria mexicana</i>	
Nevada joint-fir	<i>Ephedra nevadensis</i>	
red-stemmed filaree	<i>Erodium cicutarium</i>	
rubber rabbitbrush	<i>Ericameria nauseosa</i>	
rattlesnake sandmat	<i>Euphorbia albomarginata</i>	
Russian thistle	<i>Salsola tragus</i>	
short-podded mustard	<i>Hirschfeldia incana</i>	
Birds		
Bell's sparrow	<i>Artemisiospiza belli</i>	
cactus wren	<i>Campylorhynchus brunneicapillus</i>	
California gull	<i>Larus californicus</i>	
common raven	<i>Corvus corax</i>	
greater roadrunner	<i>Geococcyx californianus</i>	
horned lark	<i>Eremophila alpestris</i>	
house finch	<i>Haemorhous mexicanus</i>	
house sparrow	<i>Passer domesticus</i>	
Lawrence's goldfinch	<i>Spinus lawrencei</i>	
loggerhead shrike	<i>Lanius ludovicianus</i>	Y
mourning dove	<i>Zenaida macroura</i>	
northern mockingbird	<i>Mimus polyglottos</i>	
prairie falcon	<i>Falco mexicanus</i>	
red-tailed hawk	<i>Buteo jamaicensis</i>	
rock pigeon	<i>Columba livia</i>	
savannah sparrow	<i>Passerculus sandwichensis</i>	
turkey vulture	<i>Cathartes aura</i>	
western kingbird	<i>Tyrannus verticalis</i>	
western meadowlark	<i>Sturnella neglecta</i>	
white-crowned sparrow	<i>Zonotrichia leucophrys</i>	
Mammals		
black-tailed jackrabbit	<i>Lepus californicus</i>	
California ground squirrel	<i>Otospermophilus leucurus</i>	

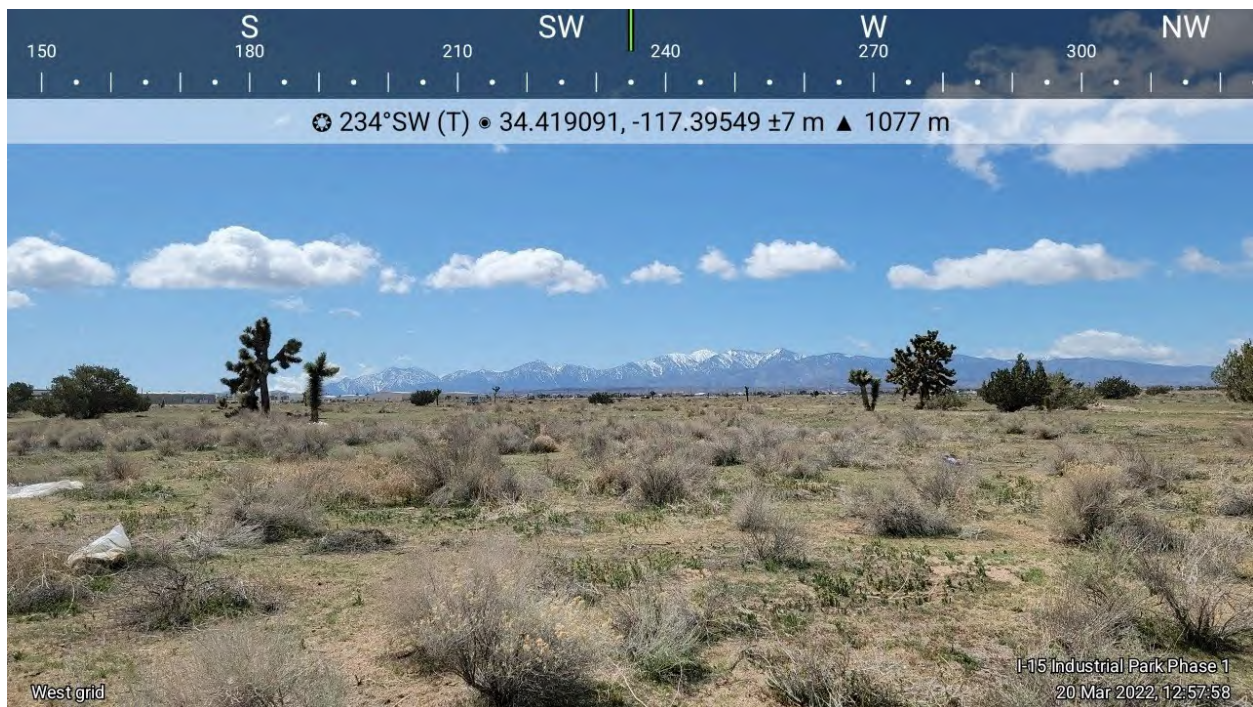
Common name	Scientific name	SSC
coyote	<i>Canis latrans</i>	
desert cottontail	<i>Sylvilagus audubonii</i>	
Panamint kangaroo rat	<i>Dipodomys panamintinus</i>	
white-tailed antelope ground squirrel	<i>Ammospermophilus leucurus</i>	
Reptiles		
Great Basin gopher snake	<i>Pituophis catenifer deserticola</i>	
Great Basin whiptail	<i>Aspidoscelis tigris tigris</i>	

SSC: Species of special concern

Attachment D



Photograph 1: Representative vegetation on the east grid, facing southwest.



Photograph 2: Representative vegetation on the west grid, facing southwest.



Photograph 3: Trap station set-up on west grid consisting of a XLK Sherman trap and cardboard A-frame to provide artificial shade.



Photograph 4: Camera trap station on east grid consisting of a Bushnell camera secured to a 36-inch u post facing a bait station.



Photograph 5: White-tailed antelope gound squirrel (*Ammospermophilus leucurus*) captured on west grid.



Photograph 6: Panamint kangaroo rat (*Dipodomys panamintinus*) captured on east grid.



Photograph 7: Cactus wren (*Campylorhynchus brunneicapillus*) captured on west grid.



Photograph 8: Coyote (*Canis latrans*) visiting camera trap station.

Appendix B

Draft EIR Comment Letters

August 14, 2022

Advocates for the Environment

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



Ryan Leonard
Senior Planner
City of Hesperia
9700 Seventh Ave.,
Hesperia CA, 92345

Via U.S. Mail and email to planning@cityofhesperia.us

re: Comments on the Draft Environmental Impact Report for I-15 Industrial Park
Project, SCH No. 2021060397

Dear Mr. Leonard:

Advocates for the Environment submits the comments in this letter regarding the Draft Environmental Impact Report (**DEIR**) for the I-15 Industrial Park Project (**Project**). The Project Site is located near Interstate 15 and Main Street in the City of Hesperia (**City**), County of San Bernadino, and is on 96 acres of land. The Project includes the construction and operation of an approximately 1,850,000-square foot warehouse facility. We have reviewed the DEIR released in July 2022 and submit comments regarding the sufficiency of the DEIR's Greenhouse-Gas (**GHG**) analysis under the California Environmental Quality Act (**CEQA**).

1-1

GHG Mitigation is Insufficient under CEQA

The calculated project-related emissions amount to 28,264.95 metric tons of carbon dioxide equivalent (**MTCO_{2e}**) per year. Based on this quantification, City concluded the Project would have significant and unavoidable GHG emissions. GHG impact is inherently cumulative, and CEQA requires fair-share mitigation for significant cumulative impacts. (See *Ctr. for Biological Diversity v. Dep't of Fish & Wildlife* (2015) 62 Cal.4th 204, 219.) The DEIR referred to Air Quality Mitigation Measures (**MM-AQ**) 1-3 and Greenhouse Gas Mitigation Measure (**MM-GHG**) 1-2 to reduce the significant GHG impact. Notably, despite the availability of other GHG mitigation and Project alternatives, the DEIR declared that the Project's quantified emissions were unavoidable, stating: "No other feasible mitigation is available to further reduce GHG emissions from the Project." Yet, this statement was not supported by substantial evidence; there are other readily available mitigation measures, so the DEIR should include more mitigation to reduce the Project's GHG emissions to the fair share extent.

1-2

The EIR Identifies Unenforceable Mitigation Measures

Vague and unenforceable mitigation measures violate CEQA (*California Clean Energy Comm. v. City of Woodland* (2014) 225 Cal. App. 4th 173, 180.) There is no showing that certain mitigation measures would be enforceable, which constitutes improper deferral.

↑
1-2 Cont.

MM-AQ-1 states that trucks moving materials to and from the Project site must adhere to “2010 engine emission standards.” However, this is an improperly deferred mitigation strategy because of the vague reference to “emissions standards.” It is impossible to determine the effectiveness or enforceability of this measure without specifying which standards those are.

1-3

Another aspect of MM-AQ-1 includes the “potential installation of additional auto and truck EV charging stations in the future.” This measure is improperly deferred because it asserts future installation without a plan to ensure that any electric vehicle charging specifications will be achieved. To correct this defect, the lead agency should identify the number of electric vehicle charging stations and the types of infrastructure to be constructed, as well as implement a monitoring program to ensure that it actually occurs.

1-4

Overall, these mitigation measures should be detailed in the DEIR so as not to violate CEQA’s requirement for specific and enforceable mitigation measures.

1-5

Ineffective Mitigation Measures

The lead agency should modify certain mitigation measures so that they are minimally effective. Here, certain mitigation measures are not likely to be effective and therefore will not reduce the Project’s GHG impact. CEQA requires each identified mitigation measure to be at least partially effective. But putting multiple mitigation measure into one measure should not escape this requirement. As it is written, MM-AQ-1 could be seen as “partially-effective” with all five of its aspects, however, each of these aspects should be separated into its own mitigation measure, because they are completely separate and unrelated mitigation features and would require completely different funding mechanisms, monitoring strategy, and implementation. Rather than arbitrarily combining certain ineffective mitigation measures with effective ones, the DEIR should properly separate each mitigation measure on its own. When each mitigation measure is analyzed according to that method, the lead agency would find that several mitigation measures within what is labeled as “MM-AQ-1” do not meet CEQA’s standard for effective mitigation. Below are three examples of mitigation that are not minimally effective.

1-6

The second aspect of MM-AQ-1 includes the use of signs to discourage idling. But this mitigation measure is duplicative and unlikely to have effect because California has an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

1-7
↓

regulation. This mitigation measure could be made more effective by publishing the violation penalty of \$300, so that violators are aware of the consequences.

↑ 1-7 Cont.

Additionally, the third part of MM-AQ-1 contemplates that the Applicant will “provide documentation” on opportunities to fund cleaner engines or equipment to the tenant. However, the knowledge of these opportunities is not sufficient to necessarily lead to actual emissions reductions. Thus, this part of the mitigation measure fails for vagueness, unenforceability, and lack of effect because merely “providing” materials, without any other enforcement condition to take advantage of those opportunities, is not likely to contribute to actual changes in tenant behavior without some additional enforceable measure.

1-8

Similarly, MM-AQ-2 entails providing tenants with “information” on energy efficient lighting, without ensuring that they take any steps to implement energy efficient lighting for the Project. Ultimately, all of these mitigation measures should be revised to require the level of effectiveness required by CEQA, which is to the extent feasible to achieve fair share mitigation.

1-9

Infeasibility Finding Lacks Substantial Evidence

The conclusion that the Project will not be able to achieve any mitigation beyond which was identified in MM-AQ 1-3 and MM-GHG 1-2 is not supported with substantial evidence. Overall, as discussed in the next section of this letter, there are abundant options available to mitigate emissions to the full extent of project emissions. The lead agency carries the burden of including an adequate discussion of feasible mitigation measures, including identifying the reasons for infeasibility, and the failure to do so here is a violation of CEQA and insufficient to meet the City’s burden.

1-10

First, the Applicant can enter into an agreement with the Applicant so that the operational vehicles adhere to the best available emissions control technology. To reduce GHGs, diesel powered machinery and vehicles could be minimized, and Zero Emission Vehicle (ZEV) use on site could be emphasized or required. Primarily, the City can make prospective tenants agree to maintain a hybrid, or even fully electrified vehicle fleet which powers itself through solar panels on the warehouse site. Requiring non-diesel fuel types such as gasoline, ethanol, or biofuels would effectively emit less GHGs. For instance, if lease agreements included provisions to limit the use of heavy-duty diesel trucks, the mitigation would have at least some effects on GHGs. The existing mitigation measure MM-AQ-3 already provides for the use of the “cleanest technology available” but there is no mechanism for monitoring or otherwise ensuring that this actually occurs. Agreements signed concurrently with the tenant’s lease agreement could be an effective and binding way for the Applicant to ensure that the tenants use zero-emission vehicles to the maximum extent feasible.

1-11

Additionally non-mobile emissions reductions are also feasible. There are several measures, including renewable energy systems and batteries to power the warehouse during non-peak hours, solar water heaters, automatic light switches, among many other mitigation strategies that can be incorporated in the project as design features or as mitigation measures. The City could also require the Applicant to purchase offsets for the GHG emissions remaining after on-site mitigation measures, or require the Applicant to enter into an agreement to buy clean power to offset the electricity usage of the warehouse operations.

1-12

The Project's GHG Impacts Must be Fully Mitigated

Since the Project's GHG emissions would be significant, CEQA requires that the Project include fair-share mitigation (*Napa Citizens for Honest Gov't v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342, 364.) Here, this means mitigation of the full extent of the Project's GHG impacts. The DEIR claims that no mitigation measures are feasible, beyond those described in the EIR. But that conclusion is incorrect, and not supported by substantial evidence.

1-13

The amount of GHG emissions that comprises the Project's fair share is clear. The Project's annual emissions was estimated at 28,264.95 MTCO₂e according to CalEEMod, and the reasonable lifespan of a warehouse project is beyond that of a residential building is 50 to 60 years.¹ Therefore, by multiplying the annual estimate by the average lifespan, the Project's total emissions are 750,141.15 MTCO₂e.² This would be a good starting point from which to subtract the effect of non-offset mitigation measures, before implementing offset purchases.

1-14

The lead agency adopted a numeric GHG significance threshold of below 3,000 MTCO₂e. While the Project's emissions greatly exceed this level already, the lead agency should consider setting a threshold of net zero, because many applicable plans, policies, and regulations in effect set net-zero emission goals for the year 2050 or earlier. Construction for the Project is expected to end and the warehouse will start operations in 2024, allowing for only 26 years before the goal for net zero needs to be met. At the very least, this Project should include a strategy for how to reach net zero goals, if not plan for and implement enough project features and mitigation measures to reach net zero in its first operating year.

1-15

Accordingly, we recommend that the City adopt a net-zero threshold for this project, and that the Project be constructed as a net-zero project, where its GHG emissions are fully

¹ <https://bciconstruction.us/which-factors-determine-the-lifespan-of-a-building/#:~:text=A%20warehouse%20used%20to%20produce,for%20major%20repairs%20or%20renovations.>

² (28,264.95 MTCO₂e) x (55 years average) = 15,545,72.25 MTCO₂e

mitigated, resulting in no net increase. Two of California's largest housing projects, Tejon's Centennial, and Five Points' Newhall Ranch, were built as net-zero projects, after the courts found their EIRs inadequate on GHG emissions.

↑
1-15 Cont.

Offsets Are Feasible

The DEIR did not mention offsets as an available mitigation measure when it concluded that further mitigation is not feasible. And offsets are acceptable mitigation measures under CEQA (CEQA Guidelines § 15126.4 (c).) Here, offsets are feasible because there are several available offset projects that lead to quantifiable emissions reductions. For example, certain carbon registry programs undertake protocols which ensure that the offsets are being achieved, regardless of where they originate, and make lists publicly available for purchase. There are several GHG sequestration projects available to purchase and/or fund for offset credit, including but not limited to the California Deltaic and Coastal Wetland Restoration by the Nature Conservancy (Project ID ACR581), as well as five in-state Forest Carbon projects.³ Further, some applicable plans for reducing GHG emissions emphasize a preference for on-site and local offsets, given the community co-benefits.⁴ The Project can create its own local or on-site measures to sequester GHG emissions or offset the Project emissions, such as a conservation easement or restoration to preserve and restore habitat and promote healthy soils, potentially sequestering carbon emissions (See *Save the Hill Grp. v. City of Livermore* (2022) 76 Cal. App. 5th 1092, 1117.)⁵

1-16

Since there is no reason why CEQA-compliant offsets are infeasible, the EIR's conclusion that it is not feasible to fully mitigate the Project's GHG emissions is not supported by substantial evidence. At a minimum, the City should require the Applicant to purchase offsets to the extent necessary to mitigate the Project's fair share of emissions.

Conclusion

The DEIR fails to require fair-share mitigation, despite concluding that the significant GHG impact will be unavoidable. The lead agency has not met its burden of showing that

↓
1-17

³ National Forest Foundation (Project ID ACR168), L.D O'Rourke Foundation (Project ID ACR672), and Ecotrust Forest Management, Inc. (Project IDs ACR732, ACR734 and ACR734).

⁴ A generally recognized hierarchy in mitigating GHG impacts is: 1) project design features/on-site mitigation, 2) local offsets, 3) State offsets, 4) US offsets, 5) International offsets. (See, e.g., *Sierra Club v. Cnty. of San Diego*, No. D077548, 2021 WL 6050624, at *11 (Cal. Ct. App. Dec. 21, 2021.)

⁵ Nahlik, A., Fennessy, M. Carbon storage in US wetlands. *Nat Commun* 7, 13835 at 2 (2016).

<https://doi.org/10.1038/ncomms13835>. <https://rdcu.be/cOjBW> ("[W]etlands can accumulate large carbon stores, making them an important sink for atmospheric carbon dioxide and holding up to or, in some cases, even more than 40% soil carbon, which is substantially greater than the 0.5–2% carbon commonly found in agricultural soils").

such measures are infeasible, and therefore the DEIR should be amended to reflect all feasible mitigation, including offsets. The City should adopt a net zero threshold and require that the Project's GHG emissions are fully mitigated.

↑
1-17 Cont.

Please put me on the interest list to receive updates about the progress of this project.

| 1-18

Sincerely,



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



October 6, 2022

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

Re: I-15 Industrial Park Project (SCH Number 2021060397)

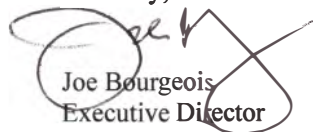
Dear Mr. Leonard:

On behalf of the Golden State Environmental Justice Alliance (“GSEJA”), I am writing to you regarding the I-15 Industrial Park Project (SCH Number 2021060397) (“Project”).

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

2A-1

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

September 6, 2022

VIA EMAIL

Ryan Leonard, Senior Planner
 Planning Department, City of Hesperia
 9700 Seventh Avenue
 Hesperia, California 92345
rleonard@cityofhesperia.us

SUBJECT: COMMENTS ON I-15 INDUSTRIAL PARK EIR (SCH NO. 2021060397)

To Mr. Leonard:

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the proposed I-15 Industrial Park 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.

2B-1

1.0 Summary

The project proposes the construction and operation of two industrial/warehouse buildings totaling 1,850,000 square feet across 96.1 disjointed acres. Building 1, the eastern building, would be 1,108,000 square feet and Building 2, the western building, would be 742,000 square feet. Office space in each building would total up to 20,000 square feet. The Building 1 site requires a General Plan Amendment to modify the General Plan land use designation from Regional Commercial to Commercial/Industrial Business Park, Specific Plan Amendment to change the Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial to Commercial/Industrial Business Park, and a Zone Change to change the zoning from Regional Commercial to Commercial/Industrial Business Park.

2B-2

1.2 Project Piecemealing

The EIR does not accurately or adequately describe the project, meaning “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (CEQA § 15378). The project proposed by I-15 Industrial Park is a piecemealed portion of a larger overall project to be developed within the City by the project applicant. The proposed project is preceded by at least two other industrial projects known as Hesperia Commerce Center I and II. Hesperia Commerce Center I (3.5 million square foot warehouse/distribution center) was approved by the Planning Commission on November 14, 2013¹ and the City Council on December 17, 2013². Hesperia Commerce Center II (3,745,429 square foot warehouse/distribution center) was approved on May 17, 2022³. Including the proposed project, these three piecemealed development projects will construct and operate approximately 9,095,429 sf of industrial warehousing.

CEQA § 15165 - Multiple and Phased Projects requires that “Where individual projects are, or a phased project is, to be undertaken and where the total undertaking comprises a project with significant environmental effect, the Lead Agency shall prepare a single program EIR for the ultimate project as described in Section 15168.” The EIR misleads the public and decision makers by circumventing adequate and accurate environmental analysis for the whole of the action - construction and operation of all Covington industrial buildings as a whole, including at minimum Hesperia Commerce Center and Hesperia Commerce Center II. A program EIR must be prepared which accurately represents the whole of the action without piecemealing the project into separate, smaller development projects to present unduly low environmental impacts. This is vital as Hesperia Commerce Center’s 2013 EIR found that the project will result in significant and unavoidable Air Quality and Greenhouse Gas Emissions impacts and Hesperia Commerce Center II will result in significant and unavoidable Air Quality, Noise, and Transportation impacts. The EIR for the proposed project determined it will result in significant and unavoidable Air Quality, Greenhouse Gas Emissions, and Transportation impacts. The EIR must be revised to comply with CEQA § 15165 by preparing a Program EIR pursuant to CEQA § 15168.

2B-3

3.0 Project Description

The EIR does not include a floor plan, detailed grading plan, or detailed site plan for the proposed project. The basic components of a Planning Application include a detailed site plan, floor plan, grading plan, elevations, and written narrative. The site plan provided in Figure 3-12: Detailed Site Plan does not provide any pertinent information such as the earthwork quantity notes, parking

2B-4

¹ November 14, 2013 PC Agenda <http://www.cityofhesperia.us/ArchiveCenter/ViewFile/Item/1106>

² December 17, 2013 CC Agenda <http://www.cityofhesperia.us/ArchiveCenter/ViewFile/Item/1118>

³ Hesperia Commerce Center II Notice of Determination <https://ceqanet.opr.ca.gov/2019110418/6>

requirements, or floor area ratio calculations. This figure has been edited for public review and excludes pertinent information required for consistency analysis with applicable requirements. Additionally, a grading plan and floor plans have not been provided for public review. The EIR has excluded these required application items from public review and edited them into forms that do not represent them meaningfully, which does not comply with CEQA's requirements for adequate informational documents and meaningful disclosure (CEQA § 15121 and 21003(b)). Incorporation by reference (CEQA § 15150 (f)) is not appropriate as these documents contribute directly to analysis of the problem at hand. Providing this information is vital as the limited information provided by Figure 3-12 indicates that several retaining walls will be constructed onsite, but details regarding the amount of earthwork retained is excluded. Grading haul truck trips have the potential to add significant quantities of truck trips during project construction and therefore increase emissions. The EIR must be revised to include all application items for review, analysis, and comment by the public and decision makers.

2B-4
Cont.

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

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

2B-5

The EIR does not include for analysis relevant environmental justice issues in reviewing potential impacts, including cumulative impacts from the proposed project. According to CalEnviroScreen 4.0⁴, CalEPA's screening tool that ranks each census tract in the state for pollution and socioeconomic vulnerability, the proposed project's census tract (6071010017) experiences high rates of pollution burden. The surrounding community, including residences to the east and south, bears the impact of multiple sources of pollution and is more polluted than average on several pollution indicators measured by CalEnviroScreen. For example, the project census tract ranks in the 97th percentile for ozone burden, the 63rd percentile for traffic impacts, and the 46th percentile for PM 2.5 burden; all of these environmental factors are typically attributed to heavy truck activity in the area. Traffic impacts represent the vehicles in a specified area, resulting in human exposures to chemicals that are released into the air by vehicle exhaust, as well as other effects related to large concentrations of motor vehicles⁵.

2B-6

Further, the census tract is a diverse community including 72% Hispanic, 4% African-American, and 4% Asian-American residents that are especially vulnerable to the impacts of pollution. The community has a high rate of low educational attainment, meaning 59% of the census tract over age 25 has not attained a high school diploma, which is an indication that they may lack health

⁴ CalEnviroScreen 4.0 <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

⁵ OEHHA CalEnviroScreen Report
<https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf>

insurance or access to medical care. Medical care is vital for this census tract as it ranks in the 80th percentile for incidence of cardiovascular disease and 45th percentile for incidence of asthma. ↑ 2B-6 Cont.

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 24⁶. CalEEMod is not listed as an approved software. The CalEEMod-based modeling in Appendix B does not comply with the 2022 Building Energy Efficiency Standards and under-reports the project's significant Energy impacts and fuel consumption to the public and decision makers. Since the EIR did not accurately or adequately model the energy impacts in compliance with Title 24, a finding of significance must be made. A revised EIR with modeling using the approved software (CBECC) must be circulated for public review in order to adequately analyze the project's significant environmental impacts. This is vital as the EIR utilizes CalEEMod as a source in its methodology and analysis, which is clearly not the approved software. 2B-7

4.9 Land Use and Planning

The project site's existing General Plan designation of Regional Commercial on the Building 1 site permits residential development at a density of 25 dwelling units per acre. The EIR does not discuss or analyze that the Regional Commercial designation permits residential development. The Building 1 site (61.34 acres) has a residential capacity 1,533 dwelling units. The EIR is inadequate as an informational document and must be revised to include this information for analysis.

The City's HCD Certified Housing Element⁷ includes APN 306-462-101 within its list of adequate sites identified to accommodate its 5th Cycle Regional Housing Needs Assessment (RHNA). The parcel is listed as Site #207 in the inventory of adequate sites to meet RHNA. Site #198 identifies APN 306-460-103, which appears to have been parceled off and is inclusive of the Building 1 site APN 306-460-107. Therefore, the entire Building 1 site is identified in the City's Housing Element as part of its adequate sites inventory to accommodate its RHNA. The RC density within the Main Street and Freeway Corridor Specific Plan would therefore permit the construction of 1,533 dwelling units, which the City has identified to achieve its RHNA. ↓ 2B-8

⁶ 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>

⁷ City of Hesperia 2013-2021 Housing Element
<https://www.cityofhesperia.us/DocumentCenter/View/15728/General-Plan-Update-August-2019>

The EIR does not adequately address the Housing Crisis Act (HCA) of 2019/Senate Bill (SB) 330⁸. The HCA of 2019 and SB 330 require replacement housing sites when land designated for housing development is changed to a non-housing use to ensure no net loss of housing capacity. Government Code Section 66300(b)(1)(A) requires that agencies shall not “change the general plan land use designation, specific plan land use designation, or zoning to a less intensive use below what was allowed under the land use designation and zoning ordinances in effect on January 1, 2018.” Under Government Code Section 66300(b)(1)(A), a “less intensive use” includes, but is not limited to, reductions to height, density, or floor area ratio, new or increased open space or lot size requirements, or new or increased setback requirements, minimum frontage requirements, or maximum lot coverage limitations, or anything that would lessen the intensity of housing. Pursuant to SB 330, replacement capacity for any displaced residential units must be provided at the time of project approval.

This is applicable because the proposed project would change the General Plan land use designation, Zoning classification, and Main Street/Freeway Corridor Specific Plan designation from Regional Commercial (permits residential development) to Commercial/Industrial Business Park (does not permit residential development) on the 61.34-acre Building 1 site. The existing General Plan and Zoning designations permit the development of 1,533 dwelling units. The proposed project will change the existing General Plan, Zoning, and Specific Plan designations to classifications that do not permit residential development and construct an industrial project that does not include residential dwelling units.

The project faces two significant inconsistencies with statutory requirements. The first is inconsistency with State Housing Element Law. Pursuant to Government Code Section 65863⁹, a jurisdiction shall ensure that its housing element sites inventory “can accommodate, at all times throughout the planning period, its remaining unmet share of the regional housing need allocated pursuant to Section 65584” and “at no time...shall a city, county, or city and county by administrative, quasi-judicial, legislative, or other action permit or cause its inventory of sites identified in the housing element to be insufficient to meet its remaining unmet share of the regional housing need for lower and moderate-income households.” Further, this Section states the following:

“No city, county, or city and county shall, by administrative, quasi-judicial, legislative, or other action, reduce, or require or permit the reduction of, the residential density for any parcel to, or allow development of any parcel at, a lower residential density, as defined in paragraphs (1) and (2) of subdivision (g), unless the city, county, or

⁸ Housing Crisis Act of 2019/SB 330

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB330

⁹ Government Code Section 65863

https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV§ionNum=65863

city and county
both of the following:

makes written findings supported by substantial evidence of

(A) The reduction is consistent with the adopted general plan, including the housing element.

(B) The remaining sites identified in the housing element are adequate to meet the requirements of Section 65583.2 and to accommodate the jurisdiction's share of the regional housing need pursuant to Section 65584. The finding shall include a quantification of the remaining unmet need for the jurisdiction's share of the regional housing need at each income level and the remaining capacity of sites identified in the housing element to accommodate that need by income level."

The EIR has not provided any analysis to demonstrate that the remaining sites identified in the housing element are adequate to meet the requirements of Section 65583.2 and to accommodate the jurisdiction's share of the regional housing need pursuant to Section 65584. The EIR has not demonstrated that the City's Housing Element can accommodate at all times throughout the planning period its remaining unmet share of the regional housing need, especially considering that the City's 6th Cycle Housing Element has not been certified by HCD. Further, the EIR has not discussed or analyzed that implementation of the proposed project will reduce the permitted residential density for the project site and allow development of the project site parcel at a lower residential density than identified in the Housing Element sites inventory. The EIR must be revised to include a finding of significance because it has not demonstrated that the City can continue to accommodate its RHNA following the potential approval of the proposed project.

2B-8
Cont.

The project's second significant inconsistency with statutory requirements involves major conflicts with the HCA/SB 330. Due to the land use changes required for project implementation and proposed industrial development, the site would not be used for the development of residential dwelling units and replacement sites must be proposed and analyzed as part of the project. The EIR does not act in conformance with these laws and has not identified replacement sites for housing. Approval of the EIR and the proposed project will result in a net loss of housing capacity. Specifically, the existing designations permit the development of up to 1,533 residential dwelling units. The lost capacity of 1,533 dwelling units is a significant environmental impact in violation of the HCA/SB 330 and State Housing Element Law. The EIR must be revised to include a finding of significance due to this inconsistency.

The EIR does not include a consistency analysis with the City's General Plan. A revised EIR must be prepared which includes an analysis of the project in conjunction with all applicable General Plan goals and policies, including the following:

2B-9

1. Goal LU-4 Promote industrial development within the City which will expand its tax base and provide a range of employment activities, while not adversely impacting the community or environment.
2. Goal LU-1 Regulate development so that the density of residential development and the intensity of non-residential development are appropriate to the property, surrounding properties, and the general neighborhood.
3. Implementation Policy LU-1.1 Require that new construction, additions, renovations, and infill developments be sensitive to neighborhood context and building form and scale.
4. Implementation Policy LU-1.3 Require that new construction, additions, renovations, and infill developments be sensitive to the intent of the land use designations, incorporating neighborhood context as well as building form and scale.
5. Implementation Policy LU-1.4 Encourage architecture which breaks massive buildings into smaller parts. Focus on maintaining a human scale when creating common spaces or amenities.
6. Implementation Policy LU-2.2 Provide opportunities for a wide range of quality residential developments that accommodate the City's economic and demographic population.
7. Implementation Policy LU-2.3 Provide opportunities for a variety of residential densities to accommodate rural and suburban lifestyles, and housing types for all economic and demographic segments of the City's population, with convenient access to public facilities, employment and shopping.
8. Implementation Policy LU-2.4 Utilize mixed-use development to create unique and varied housing.
9. Goal LU-3 Promote balanced, efficient commercial development that is functional, safe, attractive and convenient to users, and which will strengthen the local economy.
10. Implementation Policy LU-3.1 Encourage a diverse mix of commercial and service businesses that support the local tax base, are beneficial to residents, and support the economic need of the community.
11. Implementation Policy LU-3.2 Sufficient lands should be designated to provide a full range of commercial services to the community and surrounding areas to serve the residential properties at build-out.
12. Implementation Policy LU-3.5 Require the separation or buffering of residential areas from businesses which produce noise, odors, high traffic volumes, light or glare, and parking through the use of landscaping, setbacks, and other techniques.
13. Goal LU-4 Promote industrial development within the City which will expand its tax base and provide a range of employment activities, while not adversely impacting the community or environment.
14. Implementation Policy LU-4.1 Require landscaped buffers and other techniques to protect residentially designated property directly adjacent to industrial land uses

2B-9
Cont.

15. Implementation Policy LU-4.6 Incorporate varied planes and textures and variety in building materials on industrial buildings to achieve high quality architectural design.
16. Implementation Policy LU-4.9 Include full architectural treatment on all sides of buildings facing streets.
17. Goal LU-7 Facilitate a self-contained community with a well designed and maintained community with a full range of densities and uses within the capacity of infrastructure and services.
18. Implementation Policy LU-7.2 Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code, and encourage energy-efficient design elements, consistent with Policy LU-6.1.
19. Implementation Policy CI-1.10 Ensure that new development provides for adequate road improvements to serve internal circulation needs, as well as to mitigate impacts of increased traffic on the existing road system.
20. Implementation Policy CI-2.1 Strive to achieve and maintain a LOS D or better on all roadways and intersections: LOS E during peak hours shall be considered acceptable through freeway interchanges and major corridors (Bear Valley Road, Main Street/Phelan Road, Highway 395).
21. Implementation Policy CI-2.2 Work with regional agencies which have authority over roadways within the City to ensure a minimum Level of Service D for roadways and a minimum Level of Service E for intersections.
22. Housing Element Goal: 3.0 Provide suitable sites for housing development which can accommodate a range of housing by type, size, location, price, and tenure.
23. Housing Element Policy: 3.1 Implement land use policies that allow for a range of residential densities and products, including low-density single-family uses, moderate-density town homes, and higher-density apartments, condominiums, and units in mixed-use developments.
24. Goal: CN-7 Develop, promote and implement policies to reduce and limit Greenhouse Gas Emissions
25. Goal: CN- 8 Implement policies and measures to reduce air pollution and emissions of pollutants.

2B-9
Cont.

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

1. Goal LU-1a: Respond to market trends and development pressures by creating a forward looking and responsible development plan for the Specific Plan area.
2. Policy LU-1.3: Mix land uses to create a vibrant and more active environment and make the most efficient use of available land.

2B-10

3. Policy LU-2.3: Maximize the economic impact of available industrial land by careful use of industrial properties, giving priority to clean enterprises that yield large numbers of highly skilled high-paying jobs relative to site size.
4. Goal LU-3: Create a regional shopping draw of development at the intersection of Interstate-15 and Main Street.
5. Policy LU-3.1: Designate areas around the intersection of Interstate-15 and Main Street for commercial and retail development.
6. Policy LU-3.2: Attract high quality retail, office, hotel and mixed-use projects near the intersection of Interstate-15 and Main Street where freeway visibility and accessibility are highest.
7. Goal LU-5: Create a range of housing opportunities and choices. (Smart Growth principle)
8. Policy LU-5.1: Establish land use designations that permit densities and housing types suitable for rapidly urbanizing areas, and a variety of age groups and family types.
9. Policy LU-5.2: Encourage higher-density development to make more efficient use of land and offer housing choices not currently available.

2B-10
Cont.

The proposed project is directly inconsistent with several of the MSFCSP and General Plan goals and policies listed above. The consistency analysis (where present) does not include any meaningful discussion of the proposed General Plan Amendment, Zone Change, or Specific Plan Amendment that will result in the loss of capacity for 1,533 housing units and implement a project that will result in significant and unavoidable impacts to Air Quality, Greenhouse Gas Emissions, and Transportation. The project will conflict with multiple land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, including the SCAQMD 2016 Air Quality Management Plan, SCAG 2020-2045 RTP/SCS, Hesperia General Plan (inclusive of all Elements), Main Street and Freeway Corridor Specific Plan, SB 330/Housing Crisis Act of 2019, and State Housing Element Law (Article 10.6 of the Government Code). A finding of significance must be made as part of a revised EIR.

2B-11

Table 4.9-3. Consistency with 2020-2045 RTP/SCS Goals is erroneous and misleading to the public and decision makers. Due to errors in modeling/modeling without supporting evidence (as noted throughout this comment letter and attachments) and the EIR's findings that the proposed project will result in significant and unavoidable impacts to Air Quality, Greenhouse Gas Emissions, and Transportation, the project is directly inconsistent with Goal 5 to reduce greenhouse gas emissions and improve air quality, Goal 6 to support healthy and equitable communities, and Goal 7 to adapt to a changing climate. A revised EIR must be prepared to includes this information for analysis, a determination of inconsistency with these Goals, and a finding of significance.

4.11 Transportation

The EIR is internally inconsistent in its analysis of the proposed project, rendering it an inadequate informational document. The Transportation analysis concludes that VMT per worker will be 22.7 VMT in cumulative year 2040 conditions. Alternatively, the Population and Housing analysis relies upon the unemployment rate of San Bernardino County as a whole in order to conclude the project will have less than significant impacts. The Transportation analysis relies upon a workforce in close proximity to the project in order to artificially reduce impacts, yet the Population and Housing analysis relies on the entire available workforce/unemployment rates of San Bernardino County to demonstrate there will be no significant impacts. The VMT analysis only assumed a 22.7 mile trip for employees. The Transportation analysis must be revised to reflect longer trip distances that employees will realistically travel to work at the proposed project, including but not limited to 54 miles from Chino Hills, 54 miles from Yucaipa, 88 miles from Twentynine Palms, 103 miles from Baker, and 181 miles from Needles. The revised EIR must also include a construction worker employment trip analysis must also be included to adequately and accurately analyze all potentially significant environmental impacts.

Regarding VMT impacts, the EIR intertwines information from SB 375 and OP's 2018 Technical Advisory¹⁰ that states "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 and heavy-duty trucks and freight trips associated with the industrial nature of warehouse operations, are automobiles. The EIR must be revised to remove this misleading information and 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 regional distribution centers to smaller industrial parks and then to their final delivery destinations. The project's truck/trailer activity is unable to

¹⁰ 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

utilize public transit or active transportation and it is misleading to the public and decision makers to exclude this activity from VMT impact determination analysis. The EIR modeled the medium/heavy duty truck trips and concluded that the project generated VMT is 42.5 VMT per service population under year 2016 conditions and 41.6 VMT per service population under cumulative conditions. Both of these VMT rates exceed the applicable thresholds.

The EIR attempts to mislead the public and decision makers by only analyzing project VMT from passenger cars and light trucks instead of analyzing the whole project, including heavy truck trips. The EIR reasons that due to the “*intent* of Section 21099 of the Public Resource Code and Section 15064.3, subdivision (a) of the CEQA Guidelines (which specify that automobile VMT is the primary metric that should be evaluated), the extra step of removing heavy truck VMT from SBTAM was undertaken to provide for a project level analysis that *most appropriately* meets the intent of SB 743.” This statement is untrue. CEQA Guidelines Section 15064.3 (a) - Determining the Significance of Transportation Impacts states:

“This section describes specific considerations for evaluating a project’s transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, “vehicle miles traveled” refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project’s effect on automobile delay shall not constitute a significant environmental impact.”

As noted above, automobile travel includes medium and heavy duty truck travel because they are automobiles. Further, CEQA Guidelines Section 15064.3 (b)(3)- Qualitative Analysis states the following:

“If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project’s vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.”

Even though the EIR has utilized existing modeling technology to estimate the vehicle miles traveled for the proposed project, it has chosen to exclude this clearly significant impact from its determination. The CEQA statute is highly inclusive regarding the options available to lead agencies to adequately analyze a project’s VMT to the extent that it permits qualitative analysis. As stated above, a qualitative analysis of the project indicates that 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. The project’s truck/trailer activity is unable to utilize public transit or active transportation and it

2B-12
Cont.

is misleading to the public and decision makers to exclude this activity from VMT impact determination analysis. The EIR modeled the medium/heavy duty truck trips and concluded that the project generated VMT is 42.5 VMT per service population under year 2016 conditions and 41.6 VMT per service population under cumulative conditions. Both of these VMT rates exceed the applicable thresholds. A revised EIR must be prepared that includes this qualitative narrative of project operations in addition to the stated VMT including medium/heavy duty truck trips that exceed the applicable thresholds. At minimum, a qualitative analysis of construction traffic must be included. A finding of significance must be made due to the project's stated significant and unavoidable cumulatively considerable impact to VMT.

2B-12
Cont.

5.0 Effects Found Not to be Significant

5.7 Population and Housing

The EIR develops operational project employment estimates "based on Institute of Transportation Engineers and TUMF warehouse study employee generation rates." The EIR concludes the project will generate approximately 2,309 employees. However, the ITE/TUMF warehouse studies that provide the employee generation rates utilized in the EIR's methodology 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 these items contribute directly to analysis of the problem at hand. The EIR must be revised to ITE/TUMF warehouse studies that provide the employee generation rates utilized in the EIR's methodology for review, analysis, and comment by the public and decision makers.

The EIR has not provided any calculation of the construction jobs generated by the project. Additionally, the EIR has not presented any evidence that the City's workforce is qualified for or interested in work in the industrial sector. The EIR also utilizes uncertain language that the project's employment needs "could *likely* be met by the *City's* existing labor force without people needing to relocate into the Project region, and the Project would not stimulate population growth or a population concentration above what is assumed in local and regional land use plans. Therefore, impacts associated with population growth would be less than significant." The EIR concludes the *City's* workforce could *likely* meet the employment demands of the proposed project even though the EIR relies on the unemployment rate for San Bernardino County as a whole to demonstrate that an adequate labor pool is available.

2B-13

The EIR/IS do not include demographic information or other data supporting that the City or County workforce is qualified for or interested in work in the industrial sector. Relying on the entire labor force within San Bernardino County to fill the project's construction and operational jobs will increase VMT and emissions during all phases of construction and operations and the EIR must be revised to account for longer worker trip distances. For example, Hesperia is

approximately 54 miles from Chino Hills, 54 miles from Yucaipa, 88 miles from Twentynine Palms, 103 miles from Baker, and 181 miles from Needles while the VMT analysis determines that the project generated VMT is 22.7 VMT per service population (per employee) under cumulative conditions, which is below the cumulative threshold. The revised EIR must also include a construction worker employment analysis to adequately and accurately analyze all potentially significant environmental impacts.

SCAG's Connect SoCal Demographics and Growth Forecast¹¹ notes that the City will add 23,600 jobs between 2016 - 2045. Utilizing the EIR's calculation of 2,309 employees, the project represents 9.7% of the City's employment growth from 2016 - 2045. SCAG's Growth Forecast notes that the City's population will increase by 74,400 residents between 2016 - 2045. Utilizing the EIR's calculation of 2,309 employees, the project represents 3.1% of the City's population growth from 2016 - 2045. A single project accounting for these amounts of projected employment and population growth over 29 years represents a significant amount of growth. The EIR must be revised to includes this analysis, and also provide a cumulative analysis discussion of projects approved since 2016 and projects "in the pipeline" to determine if the project will exceed SCAG's employment growth forecast for the City. For example, other recent industrial projects such as US Cold Storage (913 employees), Hesperia Commerce Center I (2,928 employees), Hesperia Commerce Center II (3,959 employees), and Dara Industrial (628 employees) combined with the proposed project will cumulatively generate 10,737 employees, which is 45.5% of the City's employment growth forecast over 29 years.

2B-13
Cont.

6.0 Other CEQA Considerations

6.1 Growth Inducing Impacts

The EIR does not discuss or analyze the project's proposed General Plan Amendment, Specific Plan Amendment, or Zone Change anywhere in this section. This is misleading to the public and decision makers. The EIR must be revised to include the required GPA, SPA, and ZC for discussion and analysis and include a finding of significance as the project will contribute to growth that was not included as part of growth forecasts in Connect SoCal and/or the General Plan. The EIR must also include discussion for the precedence setting action that approval of the GPA, SPA, and ZC set for future land use changes in the area.

2B-14

The EIR must also include a cumulative analysis discussion here to demonstrate the impact of the proposed project in a cumulative setting. For example, other recent industrial projects such as US Cold Storage (913 employees), Hesperia Commerce Center I (2,928 employees), Hesperia Commerce Center II (3,959 employees), and Dara Industrial (628 employees) combined with the

¹¹ 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

proposed project will cumulatively generate 10,737 employees, which is 45.5% of the City's employment growth forecast over 29 years.

Further, the EIR must be revised to discuss and analyze that implementation of the project will result in significant and unavoidable environmental impacts to Air Quality (cumulatively considerable), Greenhouse Gas Emissions (cumulatively considerable), and Transportation (cumulatively considerable). Project implementation will result in growth that does not comply with the AQMP and will have additional environmental impacts that cannot be mitigated. These significant and irreversible environmental changes which caused by the project necessitate a finding of significance in this section.

2B-14
Cont.

6.2 Significant Irreversible Changes

The EIR states that "although the General Plan Amendment, Specific Plan Amendment, and Zone Change would facilitate the development of a use that would not be permitted under current land use plans, this change not represent a drastic change in the overall intended uses of the area within the Main Street and Freeway Corridor Specific Plan, given that half of the parcel is already designated as CIBP." This is misleading as the project is proposed on two physically separate, disjointed development sites that are not immediately adjacent to one another. The parcel for Building 1 is identified within the City's Housing Element to accommodate its 5th Cycle RHNA. Clearly, this parcel subject to a GPA, SPA and ZC will be a "drastic" change in the overall intended uses for this area. The mixed-use vision of the Building 1 site within the MSFCSP and GP was adopted with the intended goal to reduce VMT, GHG emissions, and improve air quality. The EIR does not discuss in this section that the project will result in significant and unavoidable cumulatively considerable impacts to Air Quality (cumulatively considerable), Greenhouse Gas Emissions (cumulatively considerable), and Transportation (cumulatively considerable) as a result of project implementation. This is a commitment of resources that is not consistent with regional and local growth forecasts, as stated above.

2B-15

7.0 Alternatives

The EIR is required to evaluate a reasonable range of alternatives to the proposed project which will avoid or substantially lessen any of the significant effects of the project (CEQA § 15126.6.) The alternatives chosen for analysis include the CEQA required "No Project" alternative and only two others (Other Development Project Alternative and Reduced Development Intensity Alternative). The EIR does not evaluate a reasonable range of alternatives as only two alternatives beyond the required No Project alternative are analyzed. The EIR does not include an alternative that meets the project objectives and also eliminates all of the project's significant and unavoidable impacts. The EIR must be revised to include analysis of a reasonable range of alternatives and foster informed decision making (CEQA § 15126.6). This could include alternatives such as

2B-16

development of the site with a project that reduces all of the proposed project's significant and unavoidable impacts to less than significant levels or a mixed-use project that provides affordable housing and local-serving commercial uses, which is permitted under the existing land use and zoning designations.

2B-16
Cont.

Conclusion

For the foregoing reasons, GSEJA believes the EIR is flawed and a revised EIR must be prepared for the proposed project and circulated for public review. Golden State Environmental Justice Alliance requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877.

2B-17

Sincerely,

A handwritten signature in black ink, appearing to be 'Gary Ho', with a stylized, overlapping loop structure.

Gary Ho
Blum Collins & Ho LLP



Technical Consultation, Data Analysis and
Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

Matt Hagemann, P.G, C.Hg.
(949) 887-9013
mhagemann@swape.com

Paul E. Rosenfeld, PhD
(310) 795-2335
prosenfeld@swape.com

September 1, 2022

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

Subject: Comments on the I-15 Industrial Park Project (SCH No. 2021060397)

Dear Mr. Ho,

We have reviewed the July 2022 Draft Environmental Impact Report (“DEIR”) for the I-15 Industrial Park Project (“Project”) located in the City of Hesperia (“City”). The Project proposes to construct 1,850,000-square-feet (“SF”) of industrial space, including up to 40,000-SF of office space, as well as 1,323 parking spaces on the 96.1-acre lot.

Our review concludes that the DEIR fails to adequately evaluate the Project’s air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. A revised EIR should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the environment.

2B-18

Air Quality

Failure to Implement All Feasible Mitigation to Reduce Emissions

The DEIR concludes that the Project’s operational emissions would be significant-and-unavoidable. Specifically, the DEIR estimates that the Project’s operational NO_x emissions would exceed the applicable Mojave Desert Air Quality Management District (“MDAQMD”) threshold of 137 pounds per day (“lbs/day”) (see excerpt below) (p. 4.2-26, Table 4.2-9).

2B-19

Table 4.2-9. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions

Emissions Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per Day					
Area	48.19	<0.01	0.42	<0.01	<0.01	<0.01
Energy	0.56	5.07	4.26	0.03	0.39	0.39
Mobile	16.11	180.56	242.06	1.53	114.47	32.68
Total	64.86	185.65	246.74	1.57	114.86	33.07
<i>MDAQMD Threshold</i>	<i>137</i>	<i>137</i>	<i>548</i>	<i>137</i>	<i>82</i>	<i>65</i>
Threshold Exceeded?	No	Yes	No	No	Yes	No

Source: See Appendix B-1 for complete results.

As a result, the DEIR concludes that the impacts associated with Project operation would be significant-and-unavoidable (p. 4.2-36). However, while we agree that the Project's criteria air pollutant emissions would result in a significant air quality impact, the DEIR's conclusion that these impacts are "significant and unavoidable" is incorrect. According to CEQA Guidelines § 15096(g)(2):

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

As stated above, an impact can only be labeled as significant and unavoidable after all available, feasible mitigation is considered. Here, while the DEIR includes Mitigation Measure ("MM") AQ-1 through AQ-3, the DEIR fails to implement *all* feasible mitigation (p. 1-5 – 1-7). Therefore, the DEIR's conclusion that the Project's air quality impacts are significant-and-unavoidable is unsubstantiated. To reduce the Project's air quality impacts to the maximum extent possible, additional feasible mitigation measures should be incorporated, such as those suggested in the section of this letter titled "Feasible Mitigation Measures Available to Reduce Emissions." Thus, the Project should not be approved until a revised EIR is prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with the California Emissions Estimator Model ("CalEEMod") Version 2020.4.0 (p. 4.2-18).¹ CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence. Once all 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.

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

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

2B-20
Cont.

Unsubstantiated Reductions to Architectural Coating Emission Factors

Review of the CalEEMod output files demonstrates that the "I-15 Industrial - Without Regulation and RPS" and "I-15 Industrial - With Regulation and RPS" models include two reductions to the default architectural coating emission factors (see excerpt below) (Appendix B-1, pp. 4, 44, 76, 109, 149, 181).

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00

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

"Project-specific values" (Appendix B-1, pp. 4, 44, 76, 109, 149, 181).

Furthermore, the DEIR states:

"The VOC emissions factor is based on the VOC content of the surface coatings, and MDAQMD Rule 1113, Architectural Coatings, governs the VOC content for interior and exterior coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (MDAQMD 2020). CalEEMod default values were assumed, including the surface area to be painted, the VOC content of architectural coatings, and the reapplication rate of 10% of area per year" (DEIR, p. 4.2-20).

2B-21

However, these changes remain unsupported for two reasons.

First, the DEIR fails to explicitly require VOC content limits of 50 g/L for architectural coatings used during Project construction in a formal mitigation measure. As such, the reductions remain unsubstantiated.

Second, we cannot verify the accuracy of the revised architectural coating emission factors based on MDAQMD Rule 1113 alone. The MDAQMD Rule 1113 Table of Standards provides the required VOC

² "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 1, 14.

limits (grams of VOC per liter of coating) for 45 different coating categories.³ The VOC limits for each coating varies from a minimum value of 50 g/L to a maximum value of 730 g/L. As such, we cannot verify that MDAQMD Rule 1113 substantiates reductions to the default coating values without more information regarding what category of coating will be used. As the DEIR and associated documents fail to explicitly require the use of a specific type of coating, we are unable to verify the revised emission factor assumed in the models.

2B-21
Cont.

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.⁴ Thus, by including unsubstantiated reductions to the default architectural coating emission factors, the models may underestimate the Project's construction-related ROG/VOC emissions and should not be relied upon to determine Project significance.

Unsubstantiated Changes to Worker and Vendor Trip Numbers

Review of the CalEEMod output files demonstrates that the "I-15 Industrial - Without Regulation and RPS" and "I-15 Industrial - With Regulation and RPS" models include several changes to the default vendor and worker trips numbers (see excerpts below) (Appendix B-1, pp. 8, 48, 80, 113, 153, 185).

Table Name	Column Name	Default Value	New Value
tblTripsAndVMT	VendorTripNumber	452.00	420.00
tblTripsAndVMT	WorkerTripNumber	1,159.00	1,074.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	232.00	216.00

2B-22

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

"Project-specific values" (Appendix B-1, pp. 3, 43, 75, 108, 148, 180).

Furthermore, the DEIR includes the following construction scenario assumptions (see excerpt below) (p. 4.2-19):

³ Rule 1113 Architectural Coatings." MDAQMD, October 2020, *available at*:

<https://www.mdaqmd.ca.gov/home/showpublisheddocument/8480/637393276806270000>, p. 28, 29, Table 1.

⁴ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/user's-guide>, p. 35, 40.

⁵ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at*: <https://www.aqmd.gov/caleemod/user's-guide>, p. 1, 14.

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Site Preparation	20	0	0	Rubber-tired dozers	3	8
				Other Construction Equipment	1	8
				Tractors/loaders/backhoes	4	8
Grading	20	0	29,450	Excavators	2	8
				Graders	1	8
				Rubber-tired dozers	1	8
				Scrapers	2	8
				Tractors/loaders/backhoes	2	8
Building Construction	1,074	420	0	Cranes	1	7
				Forklifts	3	8
				Generator sets	1	8
				Tractors/loaders/backhoes	3	7
				Welders	1	8
Paving	16	0	0	Pavers	2	8
				Paving equipment	2	8
				Rollers	2	8
Architectural Coating	216	0	0	Air compressors	1	6

However, these changes remain unsupported, as the DEIR fails to provide an adequate source or explanation justifying the specific worker and vendor trip numbers. This is incorrect, as according to the CalEEMod User's Guide:

"CalEEMod was also designed to allow the user to change the defaults to reflect site- or project-specific information, when available, provided that the information is supported by substantial evidence as required by CEQA."⁶

Here, as the DEIR fails to provide substantial evidence to support the revised worker and vendor trip numbers, we cannot verify the changes.

These unsubstantiated reductions present an issue, as CalEEMod uses the vendor and worker trip numbers to estimate the construction-related emissions associated with on-road vehicles.⁷ Thus, by including unsubstantiated changes to the default vendor and worker trip numbers, the models may

⁶ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 13, 14.

⁷ "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, available at: <https://www.aqmd.gov/caleemod/user's-guide>, p. 34.

underestimate the Project’s mobile-source construction-related emissions and should not be relied upon to determine Project significance.

2B-22
↑ Cont.

Updated Analysis Indicates a Potentially Significant Air Quality Impact

In an effort to more accurately estimate the Project’s construction-related and operational emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the DEIR. In our updated model, we excluded the unsubstantiated changes to the architectural coating emission factors and worker and vendor trip numbers.⁸

Our updated analysis estimates that the VOC emissions associated with Project construction exceed the applicable MDAQMD threshold of 137 pounds per day (“lbs/day”) (see table below).⁹

SWAPE Criteria Air Pollutant Emissions	
Construction	VOC (lbs/day)
DEIR	119.0
SWAPE	521.5
% Increase	338%
MDAQMD Threshold	137
<i>Exceeds?</i>	Yes

2B-23

As demonstrated in the excerpt above, construction-related VOC emissions, as estimated by SWAPE, increase by approximately 338% and exceed the applicable MDAQMD significance threshold. Thus, our updated modeling demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the DEIR. As a result, a revised EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the environment.

Diesel Particulate Matter Emissions Inadequately Evaluated

The DEIR concludes that the proposed Project would result in a less-than-significant health risk impact based on a quantified construction and operational health risk assessment (“HRA”). Specifically, the DEIR estimates that the maximum incremental cancer risk posed to nearby, existing residential sensitive receptors associated with exposure to diesel particulate matter (“DPM”) emissions during Project construction and operation would be 7.4- and 6.8-in one million, respectively, which would not exceed the MDAQMD significance threshold of 10 in one million (see excerpts below) (p. 4.2-32, Table 4.2-10, Table 4.2-11).

2B-24
↓

⁸ See Attachment A for updated air modeling.

⁹ “California Environmental Quality Act (CEQA) And Federal Conformity Guidelines.” MDAQMD, August 2016, available at: [6](https://www.mdaqmd.ca.gov/home/showdocument?id=192#:~:text=Significance%20Thresholds,-Any%20project%20is&text=Exposes%20sensitive%20receptors%20to%20substantial,than%20or%20equal%20to%201, p. 10.</p>
</div>
<div data-bbox=)

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

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	7.4	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.008	1.0	Less than Significant

Source: Appendix B-2.

Note: CEQA = California Environmental Quality Act.

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

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	6.8	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.002	1.0	Less than Significant

Source: Appendix B-2.

Notes: CEQA = California Environmental Quality Act

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

First, the DEIR's HRAs are unsubstantiated, as the DEIR fails to provide the input parameters and modeling assumptions. Specifically, upon review of the HRA, we found that the exposure parameters, such as the daily breathing rates ("BR/BW"), exposure duration ("ED"), age sensitivity factors ("ASF"), fraction of time at home ("FAH"), and exposure frequency ("EF") are not disclosed. As such, we cannot verify the calculation of the Project's cancer risk is accurate. As a result, the Project's cancer risk may be underestimated and should not be relied upon to determine Project significance.

Second, the DEIR fails to disclose the number of trucks accounted for in the Project's operational HRA. As such, the HRA may utilize an underestimated DPM concentration to calculate the health risk associated with Project construction. As such, the DEIR's operational HRA and resulting cancer risk should not be relied upon to determine Project significance.

Third, while the DEIR includes two HRAs evaluating the health risk impacts to nearby, existing receptors as a result of Project construction and operation, the DEIR fails to evaluate the combined lifetime cancer risk to nearby receptors as a result of Project construction and operation together. According to OEHHA guidance, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."¹⁰ However, the DEIR fails to sum the total cancer risks in order to evaluate the combined cancer risk over the course of the Project's total construction and operation. This is incorrect and, as such, an updated analysis should quantify and sum the Project's construction and operational cancer risks to compare to the MDAQMD threshold of 10 in one million, as referenced by the DEIR (p. 4.2-23).

¹⁰ "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf> p. 8-4.

Failure to Identify a Significant Health Risk Impact

As previously described, the DEIR estimates that the maximum incremental cancer risk posed to nearby, existing sensitive receptors as a result of Project construction and operation would be 7.4 and 6.8 in one million, respectively, neither of which individually exceed the MDAQMD significance threshold of 10 in one million (p. 4.2-32, Table 4.2-10, Table 4.2-11). However, as previously discussed, the DEIR should have evaluated the *combined* cancer risk of Project construction and operation. In order to correctly evaluate the Project's health risk impact, we summed the DEIR's construction-related and operational cancer risk estimates and found that the resulting cancer risk exceeds the MDAQMD threshold of 10 in one million (see table below).

DEIR Cumulative Cancer Risk	
HRA	Cancer Risk (in one million)
Construction	7.4
Operation	6.8
SWAPE	14.2
MDAQMD Threshold	10
<i>Exceeds?</i>	Yes

As demonstrated in the table above, the resulting combined cancer risk estimate exceeds the MDAQMD threshold of 10 in one million, thus indicating a potentially significant health risk impact not previously identified or addressed by the DEIR. As such, the DEIR is required under CEQA to implement all feasible mitigation to reduce impacts to a less-than-significant level. According to CEQA Guidelines § 15096(g)(2):

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

As a result, the proposed Project should not be approved until all feasible mitigation has been considered and incorporated where feasible, such as those suggested in the section of this letter titled “Feasible Mitigation Measures Available to Reduce Emissions.” As such, the DEIR fails to identify and adequately mitigate the Project's significant health risk impact and a revised EIR should be prepared, incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR estimates that the Project would result in net annual greenhouse gas (“GHG”) emissions of 28,264.95-metric tons of carbon dioxide equivalents per year (“MT CO₂e/year”) (see excerpt below) (p. 4.6-28, Table 4.6-5).

2B-25

2B-26

Table 4.6-5. Estimated Annual Operational GHG Emissions

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons per Year			
Area Source	0.07	<0.01	0.00	0.08
Energy Source	2,448.81	0.14	0.03	2,462.23
Mobile Sources	23,658.59	0.21	2.30	24,349.90
On-Site Equipment Sources	324.22	0.03	<0.01	325.82
Solid Waste	367.32	21.71	0.00	910.02
Water/Wastewater	81.36	1.02	0.02	114.07
<i>Annual construction-related emissions amortized over 30 years</i>				101.83
Total Project Emissions				28,264.95

Notes: GHG = greenhouse gas; CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; PDFs = Project design features.
See Appendix C-1 for complete results.

As such, the DEIR concludes that the Project would result in a significant-and-unavoidable GHG impact, stating:

“As shown in Table 4.6-5, with applicable regulatory requirements and PDFs, the Project would result in approximately 28,264 MT CO₂e per year, which would exceed the SCAQMD GHG threshold of 3,000 MT CO₂e per year. Therefore, the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and this would represent a cumulatively potentially significant impact. Mitigation measures would be required that would reduce Project-generated construction and operational GHG emissions. As presented in Section 4.2, Air Quality mitigation measures MM-AQ-1, MM-AQ-2 and MM-AQ-3 would have a co-benefit of reducing operation-related GHG emissions. However, the effectiveness of the required mitigation measures cannot be accurately quantified at this time. No other feasible mitigation is available to further reduce GHG emissions from the Project. Therefore, Project-generated GHG emissions would still exceed the applied threshold of 3,000 MT CO₂e per year and impact would be significant and unavoidable” (p. 4.6-28).

However, while we agree that the Project would result in a significant GHG impact, the DEIR’s assertion that this impact is significant-and-unavoidable is insufficient for two reasons.

- (1) The DEIR’s GHG analysis relies upon an incorrect and unsubstantiated air model; and
- (2) The DEIR fails to implement all feasible mitigation.

1) Incorrect and Unsubstantiated Quantitative Analysis of Emissions

As previously stated, the DEIR estimates that the Project would generate net annual GHG emissions of 28,264.95-MT CO₂e/year (p. 4.6-28, Table 4.6-5). However, the DEIR’s quantitative GHG analysis is unsubstantiated. As previously discussed, when we reviewed the Project’s CalEEMod output files, provided in the AQ & GHG Report as Appendix B-1 to the DEIR, we found that several of the values inputted into the models are not consistent with information disclosed in the DEIR. As a result, the models may underestimate the Project’s emissions, and the DEIR’s quantitative GHG analysis should not

2B-26
Cont.

2B-27

be relied upon to determine Project significance. A revised EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the environment

↑
2B-27
Cont.

2) Failure to Implement All Feasible Mitigation to Reduce GHG Emissions

As discussed above, the DEIR's GHG analysis relies upon an incorrect and unsubstantiated air model to determine the significance of the Project's GHG emissions. However, despite the DEIR's flawed air models, the DEIR concludes that the proposed Project's GHG emissions would be significant-and-unavoidable (p. 4.6-28). However, while we agree that the Project would result in a significant GHG impact, the DEIR's conclusion that this impact is "significant and unavoidable" is incorrect. As previously stated, according to CEQA Guidelines § 15096(g)(2):

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

2B-28

As demonstrated above, an impact can only be labeled as significant-and-unavoidable after all available, feasible mitigation is considered. Here, while the DEIR implements measures MM-AQ-1 through MM-AQ-3, the DEIR claims that no other feasible mitigation is available to further reduce GHG emissions from the Project. However, this is incorrect, and as such the DEIR's conclusion that Project's GHG emissions would be significant-and-unavoidable is unsubstantiated. To reduce the Project's GHG impacts to the maximum extent possible, additional feasible mitigation measures should be incorporated, such as those suggested in the section of this letter titled "Feasible Mitigation Measures Available to Reduce Emissions." Thus, the Project should not be approved until a revised EIR is prepared, including updated, accurate air modeling, as well as incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

The DEIR'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.¹¹ Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.

2B-29

¹¹ "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>.

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

2B-29
Cont.

- 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.

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.

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

2B-29
Cont.

2B-30

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.

2B-31

Sincerely,



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



Paul E. Rosenfeld, Ph.D.

Attachment A: Updated CalEEMod Output Files

Attachment B: Matt Hagemann CV

Attachment C: Paul Rosenfeld CV

2B-32

↓
to end

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

I-15 Industrial - With Regulation and RPS

Mojave Desert AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	508.94	1000sqft	12.22	508,940.00	0
Unrefrigerated Warehouse-No Rail	988.46	1000sqft	22.69	988,460.00	0
Unrefrigerated Warehouse-Rail	214.05	1000sqft	2.15	214,050.00	0
User Defined Industrial	138.57	User Defined Unit	1.00	138.57	0
Other Asphalt Surfaces	224.22	1000sqft	5.15	224,220.00	0
Parking Lot	789.00	Space	7.10	315,600.00	0
Parking Lot	1,272.00	Space	11.45	508,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	30
Climate Zone	10			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - Consistent with the DEIR's model.

Construction Phase - Consistent with the DEIR's model.

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

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

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

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

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

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

Trips and VMT - See SWAPE comment on "Unsubstantiated Changes to Worker and Vendor Trip Numbers."

Grading - Consistent with the DEIR's model.

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

Vehicle Trips - Consistent with the DEIR's model.

Area Coating - Consistent with the DEIR's model.

Energy Use - Consistent with the DEIR's model.

Water And Wastewater - Consistent with the DEIR's model.

Solid Waste - Consistent with the DEIR's model.

Fleet Mix - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	855,794.00	865,800.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,567,383.00	2,597,400.00
tblArchitecturalCoating	ConstArea_Parking	62,917.00	49,464.00
tblAreaCoating	Area_Nonresidential_Exterior	855794	865800
tblAreaCoating	Area_Nonresidential_Interior	2567383	2597400
tblAreaCoating	Area_Parking	62917	49464
tblConstructionPhase	NumDays	40.00	20.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	1,110.00	182.00
tblConstructionPhase	NumDays	75.00	88.00
tblConstructionPhase	NumDays	75.00	79.00
tblEnergyUse	LightingElect	0.00	2.93
tblEnergyUse	NT24E	0.00	5.02
tblEnergyUse	NT24NG	0.00	17.13
tblEnergyUse	T24E	0.00	1.97
tblEnergyUse	T24NG	0.00	15.20

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.45
tblFleetMix	HHD	0.02	0.44
tblFleetMix	LDA	0.53	0.69
tblFleetMix	LDA	0.53	1.00
tblFleetMix	LDA	0.53	1.00
tblFleetMix	LDA	0.53	0.69
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.26
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.26
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.24

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

tblFleetMix	LHD1	0.03	0.25
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.12
tblFleetMix	LHD2	7.6920e-003	0.13
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

tblFleetMix	MHD	6.1550e-003	0.19
tblFleetMix	MHD	6.1550e-003	0.18
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblGrading	MaterialExported	0.00	235,599.00
tblLandUse	LandUseSquareFeet	0.00	138.57
tblLandUse	LotAcreage	11.68	12.22
tblLandUse	LotAcreage	4.91	2.15
tblLandUse	LotAcreage	0.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	631.09	659.99
tblSolidWaste	SolidWasteGenerationRate	201.21	128.86
tblSolidWaste	SolidWasteGenerationRate	0.00	91.53

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CNW_TTP	0.00	100.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	6.42	7.80

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

tblVehicleTrips	ST_TR	1.74	2.13
tblVehicleTrips	ST_TR	1.74	2.13
tblVehicleTrips	ST_TR	0.00	4.96
tblVehicleTrips	SU_TR	5.09	6.18
tblVehicleTrips	SU_TR	1.74	2.13
tblVehicleTrips	SU_TR	1.74	2.13
tblVehicleTrips	SU_TR	0.00	4.96
tblVehicleTrips	WD_TR	3.93	4.96
tblVehicleTrips	WD_TR	1.74	2.13
tblVehicleTrips	WD_TR	1.74	2.13
tblVehicleTrips	WD_TR	0.00	4.96
tblWater	IndoorWaterUseRate	117,692,375.00	0.00
tblWater	IndoorWaterUseRate	228,581,375.00	30,976,820.00
tblWater	IndoorWaterUseRate	49,499,062.50	0.00

2.0 Emissions Summary

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0417	0.4745	0.2908	8.3000e-004	0.3201	0.0206	0.3407	0.1197	0.0190	0.1387	0.0000	75.6164	75.6164	0.0145	4.6400e-003	77.3610
2023	21.2237	6.0038	8.1183	0.0327	2.2153	0.1671	2.3823	0.6266	0.1565	0.7831	0.0000	3,032.3807	3,032.3807	0.1593	0.2467	3,109.8848
Maximum	21.2237	6.0038	8.1183	0.0327	2.2153	0.1671	2.3823	0.6266	0.1565	0.7831	0.0000	3,032.3807	3,032.3807	0.1593	0.2467	3,109.8848

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	0.0417	0.4745	0.2908	8.3000e-004	0.3201	0.0206	0.3407	0.1197	0.0190	0.1387	0.0000	75.6164	75.6164	0.0145	4.6400e-003	77.3609
2023	21.2237	6.0038	8.1182	0.0327	2.2153	0.1671	2.3823	0.6266	0.1565	0.7831	0.0000	3,032.3801	3,032.3801	0.1593	0.2467	3,109.8843
Maximum	21.2237	6.0038	8.1182	0.0327	2.2153	0.1671	2.3823	0.6266	0.1565	0.7831	0.0000	3,032.3801	3,032.3801	0.1593	0.2467	3,109.8843

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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	12-1-2022	2-28-2023	2.5370	2.5370
2	3-1-2023	5-31-2023	1.6262	1.6262
3	6-1-2023	8-31-2023	7.1764	7.1764
4	9-1-2023	9-30-2023	6.1086	6.1086
		Highest	7.1764	7.1764

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	8.7911	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787
Energy	0.1018	0.9253	0.7772	5.5500e-003		0.0703	0.0703		0.0703	0.0703	0.0000	2,448.8111	2,448.8111	0.1410	0.0332	2,462.2334
Mobile	2.1615	32.8907	33.1161	0.2515	17.6408	0.4187	18.0594	4.8123	0.3989	5.2112	0.0000	23,658.5896	23,658.5896	0.2143	2.3019	24,349.8988
Waste						0.0000	0.0000		0.0000	0.0000	367.3182	0.0000	367.3182	21.7079	0.0000	910.0154
Water						0.0000	0.0000		0.0000	0.0000	9.8275	71.5322	81.3597	1.0154	0.0246	114.0657
Total	11.0543	33.8163	33.9313	0.2571	17.6408	0.4891	18.1299	4.8123	0.4694	5.2817	377.1458	26,179.0067	26,556.1524	23.0787	2.3596	27,836.2919

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.7911	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787
Energy	0.1018	0.9253	0.7772	5.5500e-003		0.0703	0.0703		0.0703	0.0703	0.0000	2,448.8111	2,448.8111	0.1410	0.0332	2,462.2334
Mobile	2.1615	32.8907	33.1161	0.2515	17.6408	0.4187	18.0594	4.8123	0.3989	5.2112	0.0000	23,658.5896	23,658.5896	0.2143	2.3019	24,349.8988
Waste						0.0000	0.0000		0.0000	0.0000	367.3182	0.0000	367.3182	21.7079	0.0000	910.0154
Water						0.0000	0.0000		0.0000	0.0000	9.8275	71.5322	81.3597	1.0154	0.0246	114.0657
Total	11.0543	33.8163	33.9313	0.2571	17.6408	0.4891	18.1299	4.8123	0.4694	5.2817	377.1458	26,179.0067	26,556.1524	23.0787	2.3596	27,836.2919

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/28/2022	5	20	
2	Grading	Grading	12/29/2022	3/16/2023	5	56	
3	Building Construction	Building Construction	3/17/2023	11/27/2023	5	182	

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

4	Paving	Paving	8/1/2023	11/30/2023	5	88
5	Architectural Coating	Architectural Coating	8/1/2023	11/17/2023	5	79

Acres of Grading (Site Preparation Phase): 30**Acres of Grading (Grading Phase): 168****Acres of Paving: 23.7****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,597,400; Non-Residential Outdoor: 865,800; Striped Parking Area: 49,464 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Other Construction Equipment	1	8.00	172	0.42
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	29,450.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,159.00	452.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	232.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Site Preparation - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0355	0.3690	0.2372	4.4000e-004		0.0181	0.0181		0.0167	0.0167	0.0000	38.8674	38.8674	0.0126	0.0000	39.1816
Total	0.0355	0.3690	0.2372	4.4000e-004	0.1966	0.0181	0.2147	0.1010	0.0167	0.1177	0.0000	38.8674	38.8674	0.0126	0.0000	39.1816

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.9000e-004	7.6100e-003	2.0000e-005	2.5100e-003	1.0000e-005	2.5200e-003	6.7000e-004	1.0000e-005	6.8000e-004	0.0000	1.9745	1.9745	5.0000e-005	6.0000e-005	1.9929
Total	8.6000e-004	6.9000e-004	7.6100e-003	2.0000e-005	2.5100e-003	1.0000e-005	2.5200e-003	6.7000e-004	1.0000e-005	6.8000e-004	0.0000	1.9745	1.9745	5.0000e-005	6.0000e-005	1.9929

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					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0355	0.3690	0.2372	4.4000e-004		0.0181	0.0181		0.0167	0.0167	0.0000	38.8673	38.8673	0.0126	0.0000	39.1816
Total	0.0355	0.3690	0.2372	4.4000e-004	0.1966	0.0181	0.2147	0.1010	0.0167	0.1177	0.0000	38.8673	38.8673	0.0126	0.0000	39.1816

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	6.9000e-004	7.6100e-003	2.0000e-005	2.5100e-003	1.0000e-005	2.5200e-003	6.7000e-004	1.0000e-005	6.8000e-004	0.0000	1.9745	1.9745	5.0000e-005	6.0000e-005	1.9929
Total	8.6000e-004	6.9000e-004	7.6100e-003	2.0000e-005	2.5100e-003	1.0000e-005	2.5200e-003	6.7000e-004	1.0000e-005	6.8000e-004	0.0000	1.9745	1.9745	5.0000e-005	6.0000e-005	1.9929

3.3 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					0.1117	0.0000	0.1117	0.0154	0.0000	0.0154	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6200e-003	0.0388	0.0290	6.0000e-005		1.6300e-003	1.6300e-003		1.5000e-003	1.5000e-003	0.0000	5.4535	5.4535	1.7600e-003	0.0000	5.4976
Total	3.6200e-003	0.0388	0.0290	6.0000e-005	0.1117	1.6300e-003	0.1133	0.0154	1.5000e-003	0.0169	0.0000	5.4535	5.4535	1.7600e-003	0.0000	5.4976

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6200e-003	0.0659	0.0162	3.0000e-004	9.0800e-003	8.3000e-004	9.9100e-003	2.5000e-003	7.9000e-004	3.2900e-003	0.0000	29.1236	29.1236	7.0000e-005	4.5800e-003	30.4896
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	9.0000e-005	7.0000e-005	7.6000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1975	0.1975	1.0000e-005	1.0000e-005	0.1993
Total	1.7100e-003	0.0660	0.0170	3.0000e-004	9.3300e-003	8.3000e-004	0.0102	2.5700e-003	7.9000e-004	3.3600e-003	0.0000	29.3211	29.3211	8.0000e-005	4.5900e-003	30.6889

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					0.1117	0.0000	0.1117	0.0154	0.0000	0.0154	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6200e-003	0.0388	0.0290	6.0000e-005		1.6300e-003	1.6300e-003		1.5000e-003	1.5000e-003	0.0000	5.4535	5.4535	1.7600e-003	0.0000	5.4976
Total	3.6200e-003	0.0388	0.0290	6.0000e-005	0.1117	1.6300e-003	0.1133	0.0154	1.5000e-003	0.0169	0.0000	5.4535	5.4535	1.7600e-003	0.0000	5.4976

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6200e-003	0.0659	0.0162	3.0000e-004	9.0800e-003	8.3000e-004	9.9100e-003	2.5000e-003	7.9000e-004	3.2900e-003	0.0000	29.1236	29.1236	7.0000e-005	4.5800e-003	30.4896
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	9.0000e-005	7.0000e-005	7.6000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1975	0.1975	1.0000e-005	1.0000e-005	0.1993
Total	1.7100e-003	0.0660	0.0170	3.0000e-004	9.3300e-003	8.3000e-004	0.0102	2.5700e-003	7.9000e-004	3.3600e-003	0.0000	29.3211	29.3211	8.0000e-005	4.5900e-003	30.6889

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2682	0.0000	0.2682	0.1015	0.0000	0.1015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0897	0.9319	0.7574	1.6800e-003		0.0385	0.0385		0.0354	0.0354	0.0000	147.2451	147.2451	0.0476	0.0000	148.4356
Total	0.0897	0.9319	0.7574	1.6800e-003	0.2682	0.0385	0.3067	0.1015	0.0354	0.1369	0.0000	147.2451	147.2451	0.0476	0.0000	148.4356

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0355	1.5205	0.4356	7.9100e-003	0.2453	0.0201	0.2654	0.0674	0.0192	0.0867	0.0000	760.1605	760.1605	1.6800e-003	0.1195	795.8072
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	2.1500e-003	1.6300e-003	0.0187	6.0000e-005	6.7700e-003	3.0000e-005	6.8100e-003	1.8000e-003	3.0000e-005	1.8300e-003	0.0000	5.1593	5.1593	1.3000e-004	1.4000e-004	5.2048
Total	0.0376	1.5221	0.4543	7.9700e-003	0.2520	0.0201	0.2722	0.0692	0.0193	0.0885	0.0000	765.3198	765.3198	1.8100e-003	0.1196	801.0120

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					0.2682	0.0000	0.2682	0.1015	0.0000	0.1015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0897	0.9319	0.7574	1.6800e-003		0.0385	0.0385		0.0354	0.0354	0.0000	147.2449	147.2449	0.0476	0.0000	148.4354
Total	0.0897	0.9319	0.7574	1.6800e-003	0.2682	0.0385	0.3067	0.1015	0.0354	0.1369	0.0000	147.2449	147.2449	0.0476	0.0000	148.4354

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0355	1.5205	0.4356	7.9100e-003	0.2453	0.0201	0.2654	0.0674	0.0192	0.0867	0.0000	760.1605	760.1605	1.6800e-003	0.1195	795.8072
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	2.1500e-003	1.6300e-003	0.0187	6.0000e-005	6.7700e-003	3.0000e-005	6.8100e-003	1.8000e-003	3.0000e-005	1.8300e-003	0.0000	5.1593	5.1593	1.3000e-004	1.4000e-004	5.2048
Total	0.0376	1.5221	0.4543	7.9700e-003	0.2520	0.0201	0.2722	0.0692	0.0193	0.0885	0.0000	765.3198	765.3198	1.8100e-003	0.1196	801.0120

3.4 Building Construction - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1431	1.3090	1.4782	2.4500e-003		0.0637	0.0637		0.0599	0.0599	0.0000	210.9423	210.9423	0.0502	0.0000	212.1968
Total	0.1431	1.3090	1.4782	2.4500e-003		0.0637	0.0637		0.0599	0.0599	0.0000	210.9423	210.9423	0.0502	0.0000	212.1968

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0588	1.3922	0.7148	7.4400e-003	0.2487	0.0129	0.2616	0.0718	0.0124	0.0841	0.0000	709.1233	709.1233	3.2600e-003	0.0969	738.0671
Worker	0.4199	0.3189	3.6595	0.0110	1.3231	6.0800e-003	1.3292	0.3514	5.6000e-003	0.3569	0.0000	1,007.6849	1,007.6849	0.0250	0.0277	1,016.5544
Total	0.4786	1.7111	4.3743	0.0184	1.5717	0.0190	1.5907	0.4231	0.0180	0.4411	0.0000	1,716.8082	1,716.8082	0.0282	0.1245	1,754.6215

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	0.1431	1.3090	1.4782	2.4500e-003		0.0637	0.0637		0.0599	0.0599	0.0000	210.9421	210.9421	0.0502	0.0000	212.1966
Total	0.1431	1.3090	1.4782	2.4500e-003		0.0637	0.0637		0.0599	0.0599	0.0000	210.9421	210.9421	0.0502	0.0000	212.1966

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0588	1.3922	0.7148	7.4400e-003	0.2487	0.0129	0.2616	0.0718	0.0124	0.0841	0.0000	709.1233	709.1233	3.2600e-003	0.0969	738.0671
Worker	0.4199	0.3189	3.6595	0.0110	1.3231	6.0800e-003	1.3292	0.3514	5.6000e-003	0.3569	0.0000	1,007.6849	1,007.6849	0.0250	0.0277	1,016.5544
Total	0.4786	1.7111	4.3743	0.0184	1.5717	0.0190	1.5907	0.4231	0.0180	0.4411	0.0000	1,716.8082	1,716.8082	0.0282	0.1245	1,754.6215

3.5 Paving - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0454	0.4484	0.6417	1.0000e-003		0.0225	0.0225		0.0207	0.0207	0.0000	88.1182	88.1182	0.0285	0.0000	88.8307
Paving	0.0311					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0765	0.4484	0.6417	1.0000e-003		0.0225	0.0225		0.0207	0.0207	0.0000	88.1182	88.1182	0.0285	0.0000	88.8307

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Unmitigated Construction 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	2.6300e-003	2.0000e-003	0.0229	7.0000e-005	8.2800e-003	4.0000e-005	8.3200e-003	2.2000e-003	4.0000e-005	2.2300e-003	0.0000	6.3059	6.3059	1.6000e-004	1.7000e-004	6.3614
Total	2.6300e-003	2.0000e-003	0.0229	7.0000e-005	8.2800e-003	4.0000e-005	8.3200e-003	2.2000e-003	4.0000e-005	2.2300e-003	0.0000	6.3059	6.3059	1.6000e-004	1.7000e-004	6.3614

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	0.0454	0.4484	0.6417	1.0000e-003		0.0225	0.0225		0.0207	0.0207	0.0000	88.1181	88.1181	0.0285	0.0000	88.8306
Paving	0.0311					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0765	0.4484	0.6417	1.0000e-003		0.0225	0.0225		0.0207	0.0207	0.0000	88.1181	88.1181	0.0285	0.0000	88.8306

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	2.0000e-003	0.0229	7.0000e-005	8.2800e-003	4.0000e-005	8.3200e-003	2.2000e-003	4.0000e-005	2.2300e-003	0.0000	6.3059	6.3059	1.6000e-004	1.7000e-004	6.3614
Total	2.6300e-003	2.0000e-003	0.0229	7.0000e-005	8.2800e-003	4.0000e-005	8.3200e-003	2.2000e-003	4.0000e-005	2.2300e-003	0.0000	6.3059	6.3059	1.6000e-004	1.7000e-004	6.3614

3.6 Architectural Coating - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	20.3515					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5700e-003	0.0515	0.0715	1.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	10.0854	10.0854	6.0000e-004	0.0000	10.1004
Total	20.3591	0.0515	0.0715	1.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	10.0854	10.0854	6.0000e-004	0.0000	10.1004

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0365	0.0277	0.3180	9.5000e-004	0.1150	5.3000e-004	0.1155	0.0305	4.9000e-004	0.0310	0.0000	87.5558	87.5558	2.1700e-003	2.4000e-003	88.3265
Total	0.0365	0.0277	0.3180	9.5000e-004	0.1150	5.3000e-004	0.1155	0.0305	4.9000e-004	0.0310	0.0000	87.5558	87.5558	2.1700e-003	2.4000e-003	88.3265

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	20.3515					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5700e-003	0.0515	0.0715	1.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	10.0853	10.0853	6.0000e-004	0.0000	10.1004
Total	20.3591	0.0515	0.0715	1.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	10.0853	10.0853	6.0000e-004	0.0000	10.1004

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0365	0.0277	0.3180	9.5000e-004	0.1150	5.3000e-004	0.1155	0.0305	4.9000e-004	0.0310	0.0000	87.5558	87.5558	2.1700e-003	2.4000e-003	88.3265
Total	0.0365	0.0277	0.3180	9.5000e-004	0.1150	5.3000e-004	0.1155	0.0305	4.9000e-004	0.0310	0.0000	87.5558	87.5558	2.1700e-003	2.4000e-003	88.3265

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1615	32.8907	33.1161	0.2515	17.6408	0.4187	18.0594	4.8123	0.3989	5.2112	0.0000	23,658.5896	23,658.5896	0.2143	2.3019	24,349.8988
Unmitigated	2.1615	32.8907	33.1161	0.2515	17.6408	0.4187	18.0594	4.8123	0.3989	5.2112	0.0000	23,658.5896	23,658.5896	0.2143	2.3019	24,349.8988

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2,524.34	3,969.73	3145.25	15,889,814	15,889,814
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	2,105.42	2,105.42	2105.42	11,865,367	11,865,367
Unrefrigerated Warehouse-Rail	455.93	455.93	455.93	6,638,290	6,638,290
User Defined Industrial	687.31	687.31	687.31	10,007,193	10,007,193
Total	5,773.00	7,218.39	6,393.90	44,400,664	44,400,664

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	16.60	0.00	0.00	100.00	0.00	0.00	92	5	3
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	100.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	100.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	0.00	0.00	100.00	0.00	0.00	92	5	3

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-Rail	0.00	0.00	40.00	0.00	0.00	100.00	100	0	0
User Defined Industrial	0.00	0.00	40.00	0.00	0.00	100.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.690097	0.051857	0.258046	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.690097	0.051857	0.258046	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-Rail	0.000000	0.000000	0.000000	0.000000	0.240000	0.120000	0.190000	0.450000	0.000000	0.000000	0.000000	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.250000	0.130000	0.180000	0.440000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,441.5395	1,441.5395	0.1217	0.0148	1,448.9762
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,441.5395	1,441.5395	0.1217	0.0148	1,448.9762
NaturalGas Mitigated	0.1018	0.9253	0.7772	5.5500e-003		0.0703	0.0703		0.0703	0.0703	0.0000	1,007.2715	1,007.2715	0.0193	0.0185	1,013.2572
NaturalGas Unmitigated	0.1018	0.9253	0.7772	5.5500e-003		0.0703	0.0703		0.0703	0.0703	0.0000	1,007.2715	1,007.2715	0.0193	0.0185	1,013.2572

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.6454e+007	0.0887	0.8066	0.6775	4.8400e-003		0.0613	0.0613		0.0613	0.0613	0.0000	878.0497	878.0497	0.0168	0.0161	883.2675
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.9868e+006	0.0107	0.0974	0.0818	5.8000e-004		7.4000e-003	7.4000e-003		7.4000e-003	7.4000e-003	0.0000	106.0235	106.0235	2.0300e-003	1.9400e-003	106.6535
Unrefrigerated Warehouse-Rail	430240	2.3200e-003	0.0211	0.0177	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	22.9593	22.9593	4.4000e-004	4.2000e-004	23.0957
User Defined Industrial	4479.97	2.0000e-005	2.2000e-004	1.8000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2391	0.2391	0.0000	0.0000	0.2405
Total		0.1018	0.9253	0.7772	5.5500e-003		0.0703	0.0703		0.0703	0.0703	0.0000	1,007.2715	1,007.2715	0.0193	0.0185	1,013.2572

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.6454e+007	0.0887	0.8066	0.6775	4.8400e-003		0.0613	0.0613		0.0613	0.0613	0.0000	878.0497	878.0497	0.0168	0.0161	883.2675
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.9868e+006	0.0107	0.0974	0.0818	5.8000e-004		7.4000e-003	7.4000e-003		7.4000e-003	7.4000e-003	0.0000	106.0235	106.0235	2.0300e-003	1.9400e-003	106.6535
Unrefrigerated Warehouse-Rail	430240	2.3200e-003	0.0211	0.0177	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	22.9593	22.9593	4.4000e-004	4.2000e-004	23.0957
User Defined Industrial	4479.97	2.0000e-005	2.2000e-004	1.8000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2391	0.2391	0.0000	0.0000	0.2405
Total		0.1018	0.9253	0.7772	5.5500e-003		0.0703	0.0703		0.0703	0.0703	0.0000	1,007.2715	1,007.2715	0.0193	0.0185	1,013.2572

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	5.04868e +006	895.3618	0.0756	9.1600e- 003	899.9808
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	110460	19.5896	1.6500e- 003	2.0000e- 004	19.6907
Parking Lot	178080	31.5817	2.6700e- 003	3.2000e- 004	31.7446
Unrefrigerated Warehouse-No Rail	2.29323e +006	406.6936	0.0343	4.1600e- 003	408.7917
Unrefrigerated Warehouse-Rail	496596	88.0691	7.4300e- 003	9.0000e- 004	88.5234
User Defined Industrial	1374.61	0.2438	2.0000e- 005	0.0000	0.2450
Total		1,441.539 5	0.1217	0.0147	1,448.976 2

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	5.04868e+006	895.3618	0.0756	9.1600e-003	899.9808
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	110460	19.5896	1.6500e-003	2.0000e-004	19.6907
Parking Lot	178080	31.5817	2.6700e-003	3.2000e-004	31.7446
Unrefrigerated Warehouse-No Rail	2.29323e+006	406.6936	0.0343	4.1600e-003	408.7917
Unrefrigerated Warehouse-Rail	496596	88.0691	7.4300e-003	9.0000e-004	88.5234
User Defined Industrial	1374.61	0.2438	2.0000e-005	0.0000	0.2450
Total		1,441.5395	0.1217	0.0147	1,448.9762

6.0 Area Detail**6.1 Mitigation Measures Area**

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.7911	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787
Unmitigated	8.7911	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787

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	2.0352					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.7524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-003	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787
Total	8.7910	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0352					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.7524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.5000e-003	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787
Total	8.7910	3.4000e-004	0.0379	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0739	0.0739	1.9000e-004	0.0000	0.0787

7.0 Water Detail**7.1 Mitigation Measures Water**

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	81.3597	1.0154	0.0246	114.0657
Unmitigated	81.3597	1.0154	0.0246	114.0657

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	30.9768 / 0	81.3597	1.0154	0.0246	114.0657
Unrefrigerated Warehouse-Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		81.3597	1.0154	0.0246	114.0657

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	30.9768 / 0	81.3597	1.0154	0.0246	114.0657
Unrefrigerated Warehouse-Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		81.3597	1.0154	0.0246	114.0657

8.0 Waste Detail

8.1 Mitigation Measures Waste

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	367.3182	21.7079	0.0000	910.0154
Unmitigated	367.3182	21.7079	0.0000	910.0154

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	659.99	133.9720	7.9175	0.0000	331.9100
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	929.15	188.6091	11.1465	0.0000	467.2710
Unrefrigerated Warehouse-Rail	128.86	26.1574	1.5459	0.0000	64.8039
User Defined Industrial	91.53	18.5798	1.0980	0.0000	46.0306
Total		367.3182	21.7079	0.0000	910.0154

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	659.99	133.9720	7.9175	0.0000	331.9100
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	929.15	188.6091	11.1465	0.0000	467.2710
Unrefrigerated Warehouse-Rail	128.86	26.1574	1.5459	0.0000	64.8039
User Defined Industrial	91.53	18.5798	1.0980	0.0000	46.0306
Total		367.3182	21.7079	0.0000	910.0154

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

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Annual

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

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**I-15 Industrial - With Regulation and RPS****Mojave Desert AQMD Air District, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	508.94	1000sqft	12.22	508,940.00	0
Unrefrigerated Warehouse-No Rail	988.46	1000sqft	22.69	988,460.00	0
Unrefrigerated Warehouse-Rail	214.05	1000sqft	2.15	214,050.00	0
User Defined Industrial	138.57	User Defined Unit	1.00	138.57	0
Other Asphalt Surfaces	224.22	1000sqft	5.15	224,220.00	0
Parking Lot	789.00	Space	7.10	315,600.00	0
Parking Lot	1,272.00	Space	11.45	508,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	30
Climate Zone	10			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - Consistent with the DEIR's model.

Construction Phase - Consistent with the DEIR's model.

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

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

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

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

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

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

Trips and VMT - See SWAPE comment on "Unsubstantiated Changes to Worker and Vendor Trip Numbers."

Grading - Consistent with the DEIR's model.

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

Vehicle Trips - Consistent with the DEIR's model.

Area Coating - Consistent with the DEIR's model.

Energy Use - Consistent with the DEIR's model.

Water And Wastewater - Consistent with the DEIR's model.

Solid Waste - Consistent with the DEIR's model.

Fleet Mix - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	855,794.00	865,800.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,567,383.00	2,597,400.00
tblArchitecturalCoating	ConstArea_Parking	62,917.00	49,464.00
tblAreaCoating	Area_Nonresidential_Exterior	855794	865800
tblAreaCoating	Area_Nonresidential_Interior	2567383	2597400
tblAreaCoating	Area_Parking	62917	49464
tblConstructionPhase	NumDays	40.00	20.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	1,110.00	182.00
tblConstructionPhase	NumDays	75.00	88.00
tblConstructionPhase	NumDays	75.00	79.00
tblEnergyUse	LightingElect	0.00	2.93
tblEnergyUse	NT24E	0.00	5.02
tblEnergyUse	NT24NG	0.00	17.13
tblEnergyUse	T24E	0.00	1.97
tblEnergyUse	T24NG	0.00	15.20

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.45
tblFleetMix	HHD	0.02	0.44
tblFleetMix	LDA	0.53	0.69
tblFleetMix	LDA	0.53	1.00
tblFleetMix	LDA	0.53	1.00
tblFleetMix	LDA	0.53	0.69
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.26
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.26
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.24

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

tblFleetMix	LHD1	0.03	0.25
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.12
tblFleetMix	LHD2	7.6920e-003	0.13
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

tblFleetMix	MHD	6.1550e-003	0.19
tblFleetMix	MHD	6.1550e-003	0.18
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblGrading	MaterialExported	0.00	235,599.00
tblLandUse	LandUseSquareFeet	0.00	138.57
tblLandUse	LotAcreage	11.68	12.22
tblLandUse	LotAcreage	4.91	2.15
tblLandUse	LotAcreage	0.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	631.09	659.99
tblSolidWaste	SolidWasteGenerationRate	201.21	128.86
tblSolidWaste	SolidWasteGenerationRate	0.00	91.53

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CNW_TTP	0.00	100.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	6.42	7.80

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

tblVehicleTrips	ST_TR	1.74	2.13
tblVehicleTrips	ST_TR	1.74	2.13
tblVehicleTrips	ST_TR	0.00	4.96
tblVehicleTrips	SU_TR	5.09	6.18
tblVehicleTrips	SU_TR	1.74	2.13
tblVehicleTrips	SU_TR	1.74	2.13
tblVehicleTrips	SU_TR	0.00	4.96
tblVehicleTrips	WD_TR	3.93	4.96
tblVehicleTrips	WD_TR	1.74	2.13
tblVehicleTrips	WD_TR	1.74	2.13
tblVehicleTrips	WD_TR	0.00	4.96
tblWater	IndoorWaterUseRate	117,692,375.00	0.00
tblWater	IndoorWaterUseRate	228,581,375.00	30,976,820.00
tblWater	IndoorWaterUseRate	49,499,062.50	0.00

2.0 Emissions Summary

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.3861	101.1273	45.9953	0.3675	19.9125	2.4648	21.7418	10.1702	2.2980	11.8380	0.0000	38,336.8488	38,336.8488	2.0342	5.0492	39,892.3741
2023	525.8840	87.7207	98.6556	0.3573	20.7319	2.1701	22.2354	6.3426	2.0239	8.3665	0.0000	37,250.8019	37,250.8019	2.0204	4.8792	38,755.3119
Maximum	525.8840	101.1273	98.6556	0.3675	20.7319	2.4648	22.2354	10.1702	2.2980	11.8380	0.0000	38,336.8488	38,336.8488	2.0342	5.0492	39,892.3741

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	5.3861	101.1273	45.9953	0.3675	19.9125	2.4648	21.7418	10.1702	2.2980	11.8380	0.0000	38,336.8488	38,336.8488	2.0342	5.0492	39,892.3741
2023	525.8840	87.7207	98.6556	0.3573	20.7319	2.1701	22.2354	6.3426	2.0239	8.3665	0.0000	37,250.8019	37,250.8019	2.0204	4.8792	38,755.3119
Maximum	525.8840	101.1273	98.6556	0.3675	20.7319	2.4648	22.2354	10.1702	2.2980	11.8380	0.0000	38,336.8488	38,336.8488	2.0342	5.0492	39,892.3741

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

[illegible]

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Energy	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364
Mobile	16.1096	171.7482	242.0581	1.5393	112.1131	2.3562	114.4693	30.4343	2.2433	32.6776		159,184.1751	159,184.1751	1.4959	14.1058	163,425.1004
Total	64.8571	176.8220	246.7384	1.5698	112.1131	2.7431	114.8561	30.4343	2.6301	33.0644		165,269.0624	165,269.0624	1.6149	14.2173	169,546.2009

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	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Energy	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364
Mobile	16.1096	171.7482	242.0581	1.5393	112.1131	2.3562	114.4693	30.4343	2.2433	32.6776		159,184.1751	159,184.1751	1.4959	14.1058	163,425.1004
Total	64.8571	176.8220	246.7384	1.5698	112.1131	2.7431	114.8561	30.4343	2.6301	33.0644		165,269.0624	165,269.0624	1.6149	14.2173	169,546.2009

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/28/2022	5	20	
2	Grading	Grading	12/29/2022	3/16/2023	5	56	
3	Building Construction	Building Construction	3/17/2023	11/27/2023	5	182	
4	Paving	Paving	8/1/2023	11/30/2023	5	88	
5	Architectural Coating	Architectural Coating	8/1/2023	11/17/2023	5	79	

Acres of Grading (Site Preparation Phase): 30**Acres of Grading (Grading Phase): 168****Acres of Paving: 23.7****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,597,400; Non-Residential Outdoor: 865,800; Striped Parking Area: 49,464 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Other Construction Equipment	1	8.00	172	0.42
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	29,450.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,159.00	452.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	232.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.5461	36.8986	23.7180	0.0442		1.8116	1.8116		1.6667	1.6667		4,284.393 1	4,284.393 1	1.3857		4,319.034 6
Total	3.5461	36.8986	23.7180	0.0442	19.6570	1.8116	21.4687	10.1025	1.6667	11.7692		4,284.393 1	4,284.393 1	1.3857		4,319.034 6

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	0.1000	0.0629	0.9109	2.3600e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		238.4731	238.4731	5.8000e-003	5.9300e-003	240.3859
Total	0.1000	0.0629	0.9109	2.3600e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		238.4731	238.4731	5.8000e-003	5.9300e-003	240.3859

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.5461	36.8986	23.7180	0.0442		1.8116	1.8116		1.6667	1.6667	0.0000	4,284.393 1	4,284.393 1	1.3857		4,319.034 6
Total	3.5461	36.8986	23.7180	0.0442	19.6570	1.8116	21.4687	10.1025	1.6667	11.7692	0.0000	4,284.393 1	4,284.393 1	1.3857		4,319.034 6

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	0.1000	0.0629	0.9109	2.3600e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		238.4731	238.4731	5.8000e-003	5.9300e-003	240.3859
Total	0.1000	0.0629	0.9109	2.3600e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		238.4731	238.4731	5.8000e-003	5.9300e-003	240.3859

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 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					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			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	9.7948	1.6349	11.4297	3.7433	1.5041	5.2474		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	1.6613	62.2209	16.0428	0.3031	9.2268	0.8286	10.0555	2.5316	0.7928	3.3244		32,086.9652	32,086.9652	0.0842	5.0433	33,591.9723
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	0.1000	0.0629	0.9109	2.3600e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		238.4731	238.4731	5.8000e-003	5.9300e-003	240.3859
Total	1.7612	62.2838	16.9537	0.3055	9.4823	0.8299	10.3122	2.5994	0.7939	3.3933		32,325.4383	32,325.4383	0.0900	5.0492	33,832.3582

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 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					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			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	9.7948	1.6349	11.4297	3.7433	1.5041	5.2474	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	1.6613	62.2209	16.0428	0.3031	9.2268	0.8286	10.0555	2.5316	0.7928	3.3244		32,086.9652	32,086.9652	0.0842	5.0433	33,591.9723
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	0.1000	0.0629	0.9109	2.3600e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		238.4731	238.4731	5.8000e-003	5.9300e-003	240.3859
Total	1.7612	62.2838	16.9537	0.3055	9.4823	0.8299	10.3122	2.5994	0.7939	3.3933		32,325.4383	32,325.4383	0.0900	5.0492	33,832.3582

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.477 7	6,011.477 7	1.9442		6,060.083 6
Total	3.3217	34.5156	28.0512	0.0621	9.7948	1.4245	11.2193	3.7433	1.3105	5.0538		6,011.477 7	6,011.477 7	1.9442		6,060.083 6

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	1.3639	53.1500	15.9790	0.2929	9.2267	0.7445	9.9712	2.5316	0.7123	3.2439		31,008.60 36	31,008.60 36	0.0710	4.8738	32,462.75 62
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	0.0922	0.0551	0.8294	2.2800e-003	0.2555	1.1500e-003	0.2566	0.0678	1.0600e-003	0.0688		230.7206	230.7206	5.1700e-003	5.4400e-003	232.4722
Total	1.4561	53.2051	16.8084	0.2952	9.4822	0.7457	10.2278	2.5993	0.7134	3.3127		31,239.32 41	31,239.32 41	0.0762	4.8792	32,695.22 83

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.477 7	6,011.477 7	1.9442		6,060.083 6
Total	3.3217	34.5156	28.0512	0.0621	9.7948	1.4245	11.2193	3.7433	1.3105	5.0538	0.0000	6,011.477 7	6,011.477 7	1.9442		6,060.083 6

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	1.3639	53.1500	15.9790	0.2929	9.2267	0.7445	9.9712	2.5316	0.7123	3.2439		31,008.60 36	31,008.60 36	0.0710	4.8738	32,462.75 62
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	0.0922	0.0551	0.8294	2.2800e-003	0.2555	1.1500e-003	0.2566	0.0678	1.0600e-003	0.0688		230.7206	230.7206	5.1700e-003	5.4400e-003	232.4722
Total	1.4561	53.2051	16.8084	0.2952	9.4822	0.7457	10.2278	2.5993	0.7134	3.3127		31,239.32 41	31,239.32 41	0.0762	4.8792	32,695.22 83

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6735	14.4990	7.7094	0.0816	2.7730	0.1417	2.9147	0.7987	0.1356	0.9343		8,578.7124	8,578.7124	0.0402	1.1696	8,928.2628
Worker	5.3417	3.1954	48.0638	0.1323	14.8040	0.0668	14.8708	3.9259	0.0615	3.9874		13,370.2566	13,370.2566	0.2997	0.3155	13,471.7629
Total	6.0151	17.6944	55.7732	0.2139	17.5769	0.2085	17.7854	4.7246	0.1971	4.9217		21,948.9690	21,948.9690	0.3399	1.4851	22,400.0257

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6735	14.4990	7.7094	0.0816	2.7730	0.1417	2.9147	0.7987	0.1356	0.9343		8,578.7124	8,578.7124	0.0402	1.1696	8,928.2628
Worker	5.3417	3.1954	48.0638	0.1323	14.8040	0.0668	14.8708	3.9259	0.0615	3.9874		13,370.2566	13,370.2566	0.2997	0.3155	13,471.7629
Total	6.0151	17.6944	55.7732	0.2139	17.5769	0.2085	17.7854	4.7246	0.1971	4.9217		21,948.9690	21,948.9690	0.3399	1.4851	22,400.0257

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7384	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584 1	2,207.584 1	0.7140		2,225.433 6

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	0.0691	0.0414	0.6221	1.7100e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		173.0404	173.0404	3.8800e-003	4.0800e-003	174.3541
Total	0.0691	0.0414	0.6221	1.7100e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		173.0404	173.0404	3.8800e-003	4.0800e-003	174.3541

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7384	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6

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	0.0691	0.0414	0.6221	1.7100e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		173.0404	173.0404	3.8800e-003	4.0800e-003	174.3541
Total	0.0691	0.0414	0.6221	1.7100e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		173.0404	173.0404	3.8800e-003	4.0800e-003	174.3541

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****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	515.2278					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	515.4194	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	1.0693	0.6396	9.6211	0.0265	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,676.3585	2,676.3585	0.0600	0.0632	2,696.6773
Total	1.0693	0.6396	9.6211	0.0265	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,676.3585	2,676.3585	0.0600	0.0632	2,696.6773

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	515.2278					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	515.4194	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	1.0693	0.6396	9.6211	0.0265	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,676.3585	2,676.3585	0.0600	0.0632	2,696.6773
Total	1.0693	0.6396	9.6211	0.0265	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,676.3585	2,676.3585	0.0600	0.0632	2,696.6773

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.1096	171.7482	242.0581	1.5393	112.1131	2.3562	114.4693	30.4343	2.2433	32.6776		159,184.1751	159,184.1751	1.4959	14.1058	163,425.1004
Unmitigated	16.1096	171.7482	242.0581	1.5393	112.1131	2.3562	114.4693	30.4343	2.2433	32.6776		159,184.1751	159,184.1751	1.4959	14.1058	163,425.1004

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2,524.34	3,969.73	3145.25	15,889,814	15,889,814
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	2,105.42	2,105.42	2105.42	11,865,367	11,865,367
Unrefrigerated Warehouse-Rail	455.93	455.93	455.93	6,638,290	6,638,290
User Defined Industrial	687.31	687.31	687.31	10,007,193	10,007,193
Total	5,773.00	7,218.39	6,393.90	44,400,664	44,400,664

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	16.60	0.00	0.00	100.00	0.00	0.00	92	5	3

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	100.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	100.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	0.00	0.00	100.00	0.00	0.00	92	5	3
Unrefrigerated Warehouse-Rail	0.00	0.00	40.00	0.00	0.00	100.00	100	0	0
User Defined Industrial	0.00	0.00	40.00	0.00	0.00	100.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.690097	0.051857	0.258046	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.690097	0.051857	0.258046	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-Rail	0.000000	0.000000	0.000000	0.000000	0.240000	0.120000	0.190000	0.450000	0.000000	0.000000	0.000000	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.250000	0.130000	0.180000	0.440000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.982 4	6,083.982 4	0.1166	0.1115	6,120.136 4
NaturalGas Unmitigated	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.982 4	6,083.982 4	0.1166	0.1115	6,120.136 4

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	45079.5	0.4862	4.4196	3.7124	0.0265		0.3359	0.3359		0.3359	0.3359		5,303.4747	5,303.4747	0.1017	0.0972	5,334.9906
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5443.3	0.0587	0.5337	0.4483	3.2000e-003		0.0406	0.0406		0.0406	0.0406		640.3883	640.3883	0.0123	0.0117	644.1938
Unrefrigerated Warehouse-Rail	1178.74	0.0127	0.1156	0.0971	6.9000e-004		8.7800e-003	8.7800e-003		8.7800e-003	8.7800e-003		138.6754	138.6754	2.6600e-003	2.5400e-003	139.4995
User Defined Industrial	12.2739	1.3000e-004	1.2000e-003	1.0100e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		1.4440	1.4440	3.0000e-005	3.0000e-005	1.4526
Total		0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	45.0795	0.4862	4.4196	3.7124	0.0265		0.3359	0.3359		0.3359	0.3359		5,303.4747	5,303.4747	0.1017	0.0972	5,334.9906
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.4433	0.0587	0.5337	0.4483	3.2000e-003		0.0406	0.0406		0.0406	0.0406		640.3883	640.3883	0.0123	0.0117	644.1938
Unrefrigerated Warehouse-Rail	1.17874	0.0127	0.1156	0.0971	6.9000e-004		8.7800e-003	8.7800e-003		8.7800e-003	8.7800e-003		138.6754	138.6754	2.6600e-003	2.5400e-003	139.4995
User Defined Industrial	0.0122739	1.3000e-004	1.2000e-003	1.0100e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		1.4440	1.4440	3.0000e-005	3.0000e-005	1.4526
Total		0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364

6.0 Area Detail

6.1 Mitigation Measures Area

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Unmitigated	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641

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	11.1515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	36.9994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0389	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Total	48.1899	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.1515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	36.9994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0389	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Total	48.1899	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641

7.0 Water Detail**7.1 Mitigation Measures Water**

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**I-15 Industrial - With Regulation and RPS****Mojave Desert AQMD Air District, Winter****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	508.94	1000sqft	12.22	508,940.00	0
Unrefrigerated Warehouse-No Rail	988.46	1000sqft	22.69	988,460.00	0
Unrefrigerated Warehouse-Rail	214.05	1000sqft	2.15	214,050.00	0
User Defined Industrial	138.57	User Defined Unit	1.00	138.57	0
Other Asphalt Surfaces	224.22	1000sqft	5.15	224,220.00	0
Parking Lot	789.00	Space	7.10	315,600.00	0
Parking Lot	1,272.00	Space	11.45	508,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	30
Climate Zone	10			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - Consistent with the DEIR's model.

Construction Phase - Consistent with the DEIR's model.

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

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

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

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

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

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

Trips and VMT - See SWAPE comment on "Unsubstantiated Changes to Worker and Vendor Trip Numbers."

Grading - Consistent with the DEIR's model.

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

Vehicle Trips - Consistent with the DEIR's model.

Fleet Mix - Consistent with the DEIR's model.

Area Coating - Consistent with the DEIR's model.

Energy Use - Consistent with the DEIR's model.

Water And Wastewater - Consistent with the DEIR's model.

Solid Waste - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	855794	865800
tblAreaCoating	Area_Nonresidential_Interior	2567383	2597400
tblAreaCoating	Area_Parking	62917	49464
tblConstructionPhase	NumDays	40.00	20.00
tblConstructionPhase	NumDays	110.00	56.00
tblConstructionPhase	NumDays	1,110.00	182.00
tblConstructionPhase	NumDays	75.00	88.00
tblConstructionPhase	NumDays	75.00	79.00
tblEnergyUse	LightingElect	0.00	2.93
tblEnergyUse	NT24E	0.00	5.02
tblEnergyUse	NT24NG	0.00	17.13
tblEnergyUse	T24E	0.00	1.97
tblEnergyUse	T24NG	0.00	15.20
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.00

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

tblFleetMix	HHD	0.02	0.00
tblFleetMix	HHD	0.02	0.45
tblFleetMix	HHD	0.02	0.44
tblFleetMix	LDA	0.53	0.69
tblFleetMix	LDA	0.53	1.00
tblFleetMix	LDA	0.53	1.00
tblFleetMix	LDA	0.53	0.69
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.26
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.26
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.24
tblFleetMix	LHD1	0.03	0.25
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.00
tblFleetMix	LHD2	7.6920e-003	0.12
tblFleetMix	LHD2	7.6920e-003	0.13
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MH	5.4230e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.00
tblFleetMix	MHD	6.1550e-003	0.19
tblFleetMix	MHD	6.1550e-003	0.18
tblFleetMix	OBUS	4.8300e-004	0.00

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	OBUS	4.8300e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	SBUS	9.2800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblFleetMix	UBUS	1.5800e-004	0.00
tblGrading	MaterialExported	0.00	235,599.00
tblLandUse	LandUseSquareFeet	0.00	138.57
tblLandUse	LotAcreage	11.68	12.22
tblLandUse	LotAcreage	4.91	2.15
tblLandUse	LotAcreage	0.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	631.09	659.99
tblSolidWaste	SolidWasteGenerationRate	201.21	128.86
tblSolidWaste	SolidWasteGenerationRate	0.00	91.53
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TL	6.60	40.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CNW_TTP	0.00	100.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	16.60
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	6.42	7.80
tblVehicleTrips	ST_TR	1.74	2.13
tblVehicleTrips	ST_TR	1.74	2.13
tblVehicleTrips	ST_TR	0.00	4.96

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

tblVehicleTrips	SU_TR	5.09	6.18
tblVehicleTrips	SU_TR	1.74	2.13
tblVehicleTrips	SU_TR	1.74	2.13
tblVehicleTrips	SU_TR	0.00	4.96
tblVehicleTrips	WD_TR	3.93	4.96
tblVehicleTrips	WD_TR	1.74	2.13
tblVehicleTrips	WD_TR	1.74	2.13
tblVehicleTrips	WD_TR	0.00	4.96
tblWater	IndoorWaterUseRate	117,692,375.00	0.00
tblWater	IndoorWaterUseRate	228,581,375.00	30,976,820.00
tblWater	IndoorWaterUseRate	49,499,062.50	0.00

2.0 Emissions Summary

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.2750	104.5572	46.2667	0.3676	19.9125	2.4658	21.7429	10.1702	2.2991	11.8380	0.0000	38,348.93 30	38,348.93 30	2.0292	5.0555	39,906.19 36
2023	521.5415	90.8902	86.0449	0.3576	20.7319	2.1711	22.2359	6.3426	2.0248	8.3674	0.0000	37,286.76 14	37,286.76 14	2.0149	4.8890	38,794.06 37
Maximum	521.5415	104.5572	86.0449	0.3676	20.7319	2.4658	22.2359	10.1702	2.2991	11.8380	0.0000	38,348.93 30	38,348.93 30	2.0292	5.0555	39,906.19 36

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	5.2750	104.5572	46.2667	0.3676	19.9125	2.4658	21.7429	10.1702	2.2991	11.8380	0.0000	38,348.93 30	38,348.93 30	2.0292	5.0555	39,906.19 36
2023	521.5415	90.8902	86.0449	0.3576	20.7319	2.1711	22.2359	6.3426	2.0248	8.3674	0.0000	37,286.76 14	37,286.76 14	2.0149	4.8890	38,794.06 36
Maximum	521.5415	104.5572	86.0449	0.3676	20.7319	2.4658	22.2359	10.1702	2.2991	11.8380	0.0000	38,348.93 30	38,348.93 30	2.0292	5.0555	39,906.19 36

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

[illegible]

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Energy	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364
Mobile	13.5829	180.5767	201.6456	1.4716	112.1131	2.3572	114.4703	30.4343	2.2442	32.6785		152,344.3563	152,344.3563	1.4901	14.1561	156,600.1310
Total	62.3304	185.6505	206.3259	1.5020	112.1131	2.7440	114.8571	30.4343	2.6311	33.0654		158,429.2437	158,429.2437	1.6090	14.2677	162,721.2315

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	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Energy	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364
Mobile	13.5829	180.5767	201.6456	1.4716	112.1131	2.3572	114.4703	30.4343	2.2442	32.6785		152,344.3563	152,344.3563	1.4901	14.1561	156,600.1310
Total	62.3304	185.6505	206.3259	1.5020	112.1131	2.7440	114.8571	30.4343	2.6311	33.0654		158,429.2437	158,429.2437	1.6090	14.2677	162,721.2315

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/28/2022	5	20	
2	Grading	Grading	12/29/2022	3/16/2023	5	56	
3	Building Construction	Building Construction	3/17/2023	11/27/2023	5	182	
4	Paving	Paving	8/1/2023	11/30/2023	5	88	
5	Architectural Coating	Architectural Coating	8/1/2023	11/17/2023	5	79	

Acres of Grading (Site Preparation Phase): 30**Acres of Grading (Grading Phase): 168****Acres of Paving: 23.7****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,567,383; Non-Residential Outdoor: 855,794; Striped Parking Area: 62,917 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Other Construction Equipment	1	8.00	172	0.42
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	29,450.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,159.00	452.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	232.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.5461	36.8986	23.7180	0.0442		1.8116	1.8116		1.6667	1.6667		4,284.393 1	4,284.393 1	1.3857		4,319.034 6
Total	3.5461	36.8986	23.7180	0.0442	19.6570	1.8116	21.4687	10.1025	1.6667	11.7692		4,284.393 1	4,284.393 1	1.3857		4,319.034 6

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	0.0935	0.0646	0.7082	2.0900e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		211.6326	211.6326	5.6700e-003	6.0200e-003	213.5688
Total	0.0935	0.0646	0.7082	2.0900e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		211.6326	211.6326	5.6700e-003	6.0200e-003	213.5688

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.5461	36.8986	23.7180	0.0442		1.8116	1.8116		1.6667	1.6667	0.0000	4,284.393 1	4,284.393 1	1.3857		4,319.034 6
Total	3.5461	36.8986	23.7180	0.0442	19.6570	1.8116	21.4687	10.1025	1.6667	11.7692	0.0000	4,284.393 1	4,284.393 1	1.3857		4,319.034 6

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	0.0935	0.0646	0.7082	2.0900e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		211.6326	211.6326	5.6700e-003	6.0200e-003	213.5688
Total	0.0935	0.0646	0.7082	2.0900e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		211.6326	211.6326	5.6700e-003	6.0200e-003	213.5688

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 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					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			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	9.7948	1.6349	11.4297	3.7433	1.5041	5.2474		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	1.5567	65.6491	16.5170	0.3035	9.2268	0.8297	10.0565	2.5316	0.7938	3.3254		32,125.8899	32,125.8899	0.0793	5.0495	33,632.6089
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	0.0935	0.0646	0.7082	2.0900e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		211.6326	211.6326	5.6700e-003	6.0200e-003	213.5688
Total	1.6502	65.7137	17.2252	0.3056	9.4823	0.8310	10.3132	2.5994	0.7950	3.3943		32,337.5225	32,337.5225	0.0850	5.0555	33,846.1777

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

3.3 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					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.410 5	6,011.410 5	1.9442		6,060.015 8
Total	3.6248	38.8435	29.0415	0.0621	9.7948	1.6349	11.4297	3.7433	1.5041	5.2474	0.0000	6,011.410 5	6,011.410 5	1.9442		6,060.015 8

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	1.5567	65.6491	16.5170	0.3035	9.2268	0.8297	10.0565	2.5316	0.7938	3.3254		32,125.88 99	32,125.88 99	0.0793	5.0495	33,632.60 89
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	0.0935	0.0646	0.7082	2.0900e-003	0.2555	1.2300e-003	0.2567	0.0678	1.1300e-003	0.0689		211.6326	211.6326	5.6700e-003	6.0200e-003	213.5688
Total	1.6502	65.7137	17.2252	0.3056	9.4823	0.8310	10.3132	2.5994	0.7950	3.3943		32,337.52 25	32,337.52 25	0.0850	5.0555	33,846.17 77

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.477 7	6,011.477 7	1.9442		6,060.083 6
Total	3.3217	34.5156	28.0512	0.0621	9.7948	1.4245	11.2193	3.7433	1.3105	5.0538		6,011.477 7	6,011.477 7	1.9442		6,060.083 6

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	1.2458	56.3180	16.3526	0.2935	9.2267	0.7455	9.9722	2.5316	0.7132	3.2448		31,070.45 55	31,070.45 55	0.0655	4.8835	32,527.37 87
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	0.0865	0.0566	0.6461	2.0300e-003	0.2555	1.1500e-003	0.2566	0.0678	1.0600e-003	0.0688		204.8281	204.8281	5.0800e-003	5.5200e-003	206.6014
Total	1.3323	56.3746	16.9987	0.2955	9.4822	0.7466	10.2288	2.5993	0.7143	3.3136		31,275.28 36	31,275.28 36	0.0706	4.8890	32,733.98 01

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.7948	0.0000	9.7948	3.7433	0.0000	3.7433			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.477 7	6,011.477 7	1.9442		6,060.083 6
Total	3.3217	34.5156	28.0512	0.0621	9.7948	1.4245	11.2193	3.7433	1.3105	5.0538	0.0000	6,011.477 7	6,011.477 7	1.9442		6,060.083 6

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	1.2458	56.3180	16.3526	0.2935	9.2267	0.7455	9.9722	2.5316	0.7132	3.2448		31,070.45 55	31,070.45 55	0.0655	4.8835	32,527.37 87
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	0.0865	0.0566	0.6461	2.0300e-003	0.2555	1.1500e-003	0.2566	0.0678	1.0600e-003	0.0688		204.8281	204.8281	5.0800e-003	5.5200e-003	206.6014
Total	1.3323	56.3746	16.9987	0.2955	9.4822	0.7466	10.2288	2.5993	0.7143	3.3136		31,275.28 36	31,275.28 36	0.0706	4.8890	32,733.98 01

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1

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	0.6274	15.4435	7.9854	0.0819	2.7730	0.1422	2.9152	0.7987	0.1360	0.9348		8,605.065 5	8,605.065 5	0.0383	1.1752	8,956.220 0
Worker	5.0126	3.2811	37.4410	0.1174	14.8040	0.0668	14.8708	3.9259	0.0615	3.9874		11,869.78 92	11,869.78 92	0.2942	0.3202	11,972.55 10
Total	5.6399	18.7246	45.4263	0.1993	17.5769	0.2090	17.7859	4.7246	0.1975	4.9221		20,474.85 47	20,474.85 47	0.3325	1.4953	20,928.77 10

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6274	15.4435	7.9854	0.0819	2.7730	0.1422	2.9152	0.7987	0.1360	0.9348		8,605.0655	8,605.0655	0.0383	1.1752	8,956.2200
Worker	5.0126	3.2811	37.4410	0.1174	14.8040	0.0668	14.8708	3.9259	0.0615	3.9874		11,869.7892	11,869.7892	0.2942	0.3202	11,972.5510
Total	5.6399	18.7246	45.4263	0.1993	17.5769	0.2090	17.7859	4.7246	0.1975	4.9221		20,474.8547	20,474.8547	0.3325	1.4953	20,928.7710

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7384	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.584 1	2,207.584 1	0.7140		2,225.433 6

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	0.0649	0.0425	0.4846	1.5200e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		153.6211	153.6211	3.8100e-003	4.1400e-003	154.9511
Total	0.0649	0.0425	0.4846	1.5200e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		153.6211	153.6211	3.8100e-003	4.1400e-003	154.9511

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.7056					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7384	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6

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	0.0649	0.0425	0.4846	1.5200e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		153.6211	153.6211	3.8100e-003	4.1400e-003	154.9511
Total	0.0649	0.0425	0.4846	1.5200e-003	0.1916	8.6000e-004	0.1925	0.0508	8.0000e-004	0.0516		153.6211	153.6211	3.8100e-003	4.1400e-003	154.9511

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****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	511.3306					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	511.5222	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	1.0034	0.6568	7.4947	0.0235	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,376.006 1	2,376.006 1	0.0589	0.0641	2,396.576 2
Total	1.0034	0.6568	7.4947	0.0235	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,376.006 1	2,376.006 1	0.0589	0.0641	2,396.576 2

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	511.3306					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	511.5222	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	1.0034	0.6568	7.4947	0.0235	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,376.006 1	2,376.006 1	0.0589	0.0641	2,396.576 2
Total	1.0034	0.6568	7.4947	0.0235	2.9634	0.0134	2.9767	0.7859	0.0123	0.7982		2,376.006 1	2,376.006 1	0.0589	0.0641	2,396.576 2

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.5829	180.5767	201.6456	1.4716	112.1131	2.3572	114.4703	30.4343	2.2442	32.6785		152,344.3563	152,344.3563	1.4901	14.1561	156,600.1310
Unmitigated	13.5829	180.5767	201.6456	1.4716	112.1131	2.3572	114.4703	30.4343	2.2442	32.6785		152,344.3563	152,344.3563	1.4901	14.1561	156,600.1310

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2,524.34	3,969.73	3145.25	15,889,814	15,889,814
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	2,105.42	2,105.42	2105.42	11,865,367	11,865,367
Unrefrigerated Warehouse-Rail	455.93	455.93	455.93	6,638,290	6,638,290
User Defined Industrial	687.31	687.31	687.31	10,007,193	10,007,193
Total	5,773.00	7,218.39	6,393.90	44,400,664	44,400,664

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	16.60	0.00	0.00	100.00	0.00	0.00	92	5	3

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	100.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	100.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	0.00	0.00	100.00	0.00	0.00	92	5	3
Unrefrigerated Warehouse-Rail	0.00	0.00	40.00	0.00	0.00	100.00	100	0	0
User Defined Industrial	0.00	0.00	40.00	0.00	0.00	100.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.690097	0.051857	0.258046	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.690097	0.051857	0.258046	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-Rail	0.000000	0.000000	0.000000	0.000000	0.240000	0.120000	0.190000	0.450000	0.000000	0.000000	0.000000	0.000000	0.000000
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.250000	0.130000	0.180000	0.440000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.982 4	6,083.982 4	0.1166	0.1115	6,120.136 4
NaturalGas Unmitigated	0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.982 4	6,083.982 4	0.1166	0.1115	6,120.136 4

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	45079.5	0.4862	4.4196	3.7124	0.0265		0.3359	0.3359		0.3359	0.3359		5,303.4747	5,303.4747	0.1017	0.0972	5,334.9906
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5443.3	0.0587	0.5337	0.4483	3.2000e-003		0.0406	0.0406		0.0406	0.0406		640.3883	640.3883	0.0123	0.0117	644.1938
Unrefrigerated Warehouse-Rail	1178.74	0.0127	0.1156	0.0971	6.9000e-004		8.7800e-003	8.7800e-003		8.7800e-003	8.7800e-003		138.6754	138.6754	2.6600e-003	2.5400e-003	139.4995
User Defined Industrial	12.2739	1.3000e-004	1.2000e-003	1.0100e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		1.4440	1.4440	3.0000e-005	3.0000e-005	1.4526
Total		0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	45.0795	0.4862	4.4196	3.7124	0.0265		0.3359	0.3359		0.3359	0.3359		5,303.4747	5,303.4747	0.1017	0.0972	5,334.9906
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	5.4433	0.0587	0.5337	0.4483	3.2000e-003		0.0406	0.0406		0.0406	0.0406		640.3883	640.3883	0.0123	0.0117	644.1938
Unrefrigerated Warehouse-Rail	1.17874	0.0127	0.1156	0.0971	6.9000e-004		8.7800e-003	8.7800e-003		8.7800e-003	8.7800e-003		138.6754	138.6754	2.6600e-003	2.5400e-003	139.4995
User Defined Industrial	0.0122739	1.3000e-004	1.2000e-003	1.0100e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		1.4440	1.4440	3.0000e-005	3.0000e-005	1.4526
Total		0.5577	5.0700	4.2588	0.0304		0.3853	0.3853		0.3853	0.3853		6,083.9824	6,083.9824	0.1166	0.1115	6,120.1364

6.0 Area Detail

6.1 Mitigation Measures Area

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Unmitigated	48.1898	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641

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	11.1515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	36.9994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0389	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Total	48.1899	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.1515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	36.9994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0389	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641
Total	48.1899	3.8300e-003	0.4215	3.0000e-005		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		0.9050	0.9050	2.3600e-003		0.9641

7.0 Water Detail**7.1 Mitigation Measures Water**

I-15 Industrial - With Regulation and RPS - Mojave Desert AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation



Technical Consultation, Data Analysis and
Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

Matt Hagemann, P.G., C.Hg.
(949) 887-9013
mhagemann@swape.com

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 – 2014, 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, Colorado.

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 representatives, 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., Fukunaga, 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.



Technical Consultation, Data Analysis and
Litigation Support for the Environment

SOIL WATER AIR PROTECTION ENTERPRISE

2656 29th Street, Suite 201
Santa Monica, California 90405
Attn: Paul Rosenfeld, Ph.D.
Mobil: (310) 795-2335
Office: (310) 452-5555
Fax: (310) 452-5550

Email: prosenfeld@swape.com

Paul Rosenfeld, Ph.D.

Principal Environmental Chemist

Chemical Fate and Transport & Air Dispersion Modeling

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 H₂O 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 Aermid 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., Sellev, 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). Perfluorooctanoic Acid (PFOA) and Perfluorooctane 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 Conference*. 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 Cuntly 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 Agrosiences, 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 NO. 14-C-30000
Rosenfeld Deposition, June 2015

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

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case 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

Appendix C

Carbon Sequestration of Joshua Tree Woodland

Carbon Sequestration Potential of Joshua Tree Woodland

Mitigation Site	Total Area		Joshua Tree Woodland Area		Mean Joshua Tree Density (Includes dead)		Estimated total Joshua Trees within Joshua Tree Woodland	Annual MT of CO2 sequestered	MT CO2 sequestered over 30 years
	Total Acres	Total hectares	Acres	Hectares	Mean JT/acre	Mean JT/ha			
Site 1	648	262	385	156	4.7	11.6	1,810	203	6,076
Site 2	474	192	347	140	7.9	19.5	2,741	183	5,477
COMBINED	1122	454	732	296	N/A		4,551	385	11,553

1 acre = 0.404686 hectares

Annual Metric Tons
of CO2 per hectare
in Joshua Tree NP 1.3

Source: National Park Service. 2014. *Terrestrial Carbon Sequestration in National Parks, Values for the Conterminous United States*.

Table B, "Average Annual Net Ecosystem Balance (metric tons of CO2) per hectare by NPS Unit". Available: <https://irma.nps.gov/DataStore/DownloadFile/522689>

Quantifying Net Carbon Balance on NPS Lands

The USGS has conducted a national carbon sequestration assessment as required by Congress under the Energy Independence and Security Act (EISA) of 2007. The main objectives of this assessment are to estimate the amount of carbon stored in ecosystems, the capacity of the ecosystems to sequester carbon, and the effects of natural and anthropogenic processes that control ecosystem carbon balances. The USGS has completed this assessment for the conterminous United States (see Zhu et al., 2011; Zhu and Reed, 2012; Zhu and Reed, 2014) and is nearing completion for Alaska and Hawaii. This research uses a combination of models, statistical methods, remote sensing data, and field input data to estimate carbon stock (how much carbon is stored for a given land unit), net carbon balance (either sink or source as the rate of annual change in carbon stock), and various emissions, such as that of wildfires. The methodology framework and constraints are described in detail in Zhu et al. (2010). The majority of the data produced in the USGS national carbon assessment are presented as digital maps (250 meter spatial resolution) derived over a baseline (2001-2005) and projected (through 2050) time dimension for major terrestrial ecosystems, such as forests, agricultural lands, wetlands, and grasslands.

ecosystems have the ability to store much more carbon dioxide than previously thought (Evans et al., 2014; Wohlfahrt et al., 2008). In addition, the results in Figure 2 are influenced by the total size of the park unit. Table B in Appendix 2 presents a **normalized, per hectare net quantity of CO₂ stored or released by park unit**. In general, these results show that park units with a predominantly desert environment have relatively low sequestration per hectare compared to some of the more forested parks.